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THE IKEA EFFECT IN HUMAN-AI COLLABORATION: DOES THE EFFECT EXIST FOR NON-PHYSICAL PRODUCTS? PART I.

According to the IKEA effect, people are willing to pay more for a product they have created through their own perceived effort than they would for an off-the-shelf product. In our research, we investigated whether the IKEA effect would exist (1) if ChatGPT were also involved in creating the product and (2) if the final product is textual content. We conducted a randomized controlled trial that included all the background factors known to jointly trigger the IKEA effect.

Our results show that the IKEA effect can be detected in human-AI collaboration when the product is non-physical content. We have demonstrated that participants (1) produced a superior product based on their subjective preferences and (2) would purchase it at a higher price. However, in our research, (3) the IKEA effect applied not only to the end product, but also to the instrument: members of the IKEA group were more satisfied with ChatGPT and would pay more for the application in terms of the product they created.

Thus, by including all known background factors that jointly trigger the IKEA effect, we have successfully refuted previous studies that were unable to prove the IKEA effect in the field of text generation.

Artificial intelligence is a technological opportunity that allows shoppers to personalize products or select and access them more quickly. The IKEA effect could be exploited in this area. Our paper contributes to the practical identification of the boundary conditions necessary to trigger the effect.

1 Introduction ——— **1.1 The importance of the topic** ——— In the field of online marketing, it is also of paramount importance to identify the factors that can improve sales results, whether it is the willingness to buy or the average basket value. This is where the IKEA effect comes into play: if a company has the right target group knowledge, it can leverage the effect to achieve spectacular improvements in sales results. Research has shown that customers are 63% more likely to pay when the IKEA effect is present (Norton et al. 2012). Exploring and analyzing the relationship and synergies between the effect and AI can be of significant value from a sales perspective, as multiple implementations of human-AI collaboration are likely to emerge in the future.

1.2 The IKEA effect ——— In 2012, Norton et al. identified and named the IKEA effect in their research, defining it as an increased consumers' valuation of products assembled by themselves, in terms of both liking and willingness to pay, compared to an objectively similar but pre-assembled product. The effect takes its name from the Swedish furniture chain IKEA, which sells furniture that requires significant assembly.

As Norton et al. note, the effect is based on a psychological phenomenon called effort justification, which Festinger (1957) demonstrated in his work on cognitive dissonance: the more effort you put into something, the more you value it. So, the phenomenon itself, in its general form and not in a business context, has been known for almost seventy years.

1.3 Research history ——— In the Norton et al. (2012) study cited above, customers assembled IKEA products, folded origami, and built Lego sets. úFinally, (3) the boundary conditions of the IKEA effect were examined, i.e., whether the complete completion of handmade products is necessary to trigger the effect, and whether the existence of the effect is influenced by the customer's perception of himself as a do-it-yourselfer. A randomized control group method with 20-20 participants was used, i.e. the participants were randomly divided into „builder" and „non-builder" groups and the results of the two groups were compared: how much they would pay for the product and how much they liked the product on a scale of 1-7. The non-builder group was also given the opportunity to examine the product in more detail before bidding/evaluating. The results showed that the builders bid 63% higher for their product and their rating was significantly higher. When testing the need for full completion of the tasks, builders and incomplete builders were compared, with 39 participants involved. Need for completion of the tasks was demonstrated for both price and preference. However, no effect was observed for engagement in labor.

Sarstedt et al. (2016) replicated and extended the studies by Norton et al. (2012) and Mochon et al. (2012) on the IKEA effect, finding that psychological ownership (the feeling that „this is my creation") was the main driver behind why people value self-assembled products more. (Sarstedt et al. 2016). Radtke et al. (2019) found that the IKEA effect also applies in the context of meal planning and preparation involving children in this process led to a positive relationship with vegetable intake (Radtke et al. 2019). Thus, IKEA effect exists not only in case of consumer goods which was examined by Norton et al. (2012).

While Norton et al. (2012) focused on tangible products, other studies have examined the IKEA effect in relation to intangible products, resulting in mixed results. For instance, Brunner et al. (2023) found no IKEA effect in financial decisions, (Brunner et al. 2023) while Mehler et al. (2024) observed the effect in the context of image creation (Mehler et al. 2024). These divergent findings suggest that the IKEA effect may be context-dependent.

In human-AI collaboration, Schecter and Richardson (2025) investigated the role of generative AI in shaping perceptions of value. They explored two roles of AI in human collaboration (driver and advisor) and found that the role assigned to AI significantly influenced how people perceived both its value and their own contribution. Although AI enhances creativity, workers often fear that AI-assisted work may be devalued due to concerns around authenticity. Interestingly, openly acknowledging AI's contribution was found to increase the perceived value of the work. Additionally, task type mattered: AI had a clearer positive effect on creative tasks, but less so on objective tasks like summarizing (Schecter and Richardson 2025).

Further exploring human-AI collaboration, Jacquemin et al. (2025) examined the emotional dynamics among developers. They found that generative AI significantly improved coding task performance and speed without negatively affecting users' emotions. Although emotional responses didn't differ between AI-assisted and non-assisted tasks, positive feelings were still correlated with better task outcomes (Jacquemin et al. 2025).

Weinert et al. (2020) study examined the role of AI-based methods in personnel selection and employer branding, providing first empirical evidence that using modern AI methods in HR positively affects perceived employer attractiveness and showed that highlighting AI use in recruiting materials can enhance perceptions of the employer, regardless of an applicant's individual level of technology acceptance (Weiner et al. 2020).

The presence of the IKEA effect in human-AI collaborations was investigated in a recent study by Mehler et al. (2024). The research focused on image and text generation, building on the Stable Diffusion and ChatGPT applications. It was conducted with 174 participants in an online format, with participants collaborating with AI to produce a piece of content with high or low workload. As a text, participants had to create a text about a company mission statement. The researchers were able to detect the IKEA effect for image creation, but not for text generation. In other words, it was shown that (1) the IKEA effect does not only exist for physical products, it can also be detected when generating visual content (2) the IKEA effect also exists when working together with generative AI. The researchers also investigated whether (3) the intention to use modern technology increases when participants make an effort to collaborate with AI, and they were able to detect this effect in the IKEA group.

Thus, Mehler et al. (2024) were unable to demonstrate the existence of the IKEA effect for collaboration with ChatGPT but could for collaboration with Stable Diffusion image generation software. As a reason for this, the authors assumed, based on feedback from participants, that reading and interpreting text is more exhausting than looking at and interpreting images. Conversely, our assumption was that if the IKEA effect could be detected in image generation, then it also exists in text generation, it was just that the task itself was not well chosen to detect the IKEA effect. Participants in the Mehler et al. study (2024) had to generate a mission statement for a company, which we hypothesized was not an appropriate task to detect the IKEA effect. Note that Norton et al.'s research (2012) focused on activities that do not require specialized knowledge and the success of the product can be easily judged (origami folding, Lego and furniture assembly), whereas the creation of a mission statement is a task that requires professional knowledge and cannot be judged by a layperson. Thus, the task was not actually completed, the experience of success was lost, and we saw that when the task was only half completed, Norton et al. (2012) were unable to detect the IKEA effect.

Based on the above literature review, our hypothesis is that, contrary to the findings of Mehler et al. (2024), the IKEA effect also exists in the case of textual products and AI-human collaboration, if the experiment is designed under all the conditions that jointly trigger the IKEA effect (see Morton et al. 2012).

1.4 Main goal of our study ——— The main goal of our study was to prove that the IKEA effect still exists (1) when the participants create a non-physical, textual product and (2) when the participants perform the work in collaboration with human artificial intelligence, specifically ChatGPT, (3) provided that the creation of the product does not require special knowledge, but (4) requires substantial perceived effort, and (5) the quality of the product can be easily assessed. (6) We also aimed to measure the magnitude of the effect.

When measuring the magnitude of the effect, following the original method of Norton et al. (2012), product quality was defined in terms of subjective satisfaction and the price that participants were willing to pay for it. We also investigated whether participation in such a collaboration positively changes the perception of AI.

In more detail, the following aspects were taken into account when designing our research:

1. the task should elicit a perceived effort from the participants, so we expected longer texts to be generated,
2. research participants can judge the output of the task and thus perceive success,
3. the task should be carried out through the collaboration of human and artificial intelligence,
4. the task should not require specific knowledge (neither technological nor professional), because if the research participants cannot do the task, the task will be abandoned and the IKEA effect will dissipate.

END OF PART I.

Poznámky | *Notes* ——— [1] All research questionnaires can be found in the online appendix. Available at: <https://www.researchgate.net/publication/392862672_Research_documentation_for_the_paper_entitled_The_IKEA_effect_in_human-AI_collaboration_-Does_the_effect_exist_for_non-_physical_products_published_in_Marketing_Science_Inspirations_June_2025> | [2] The control group also included an unrealistically high price of HUF 50,000 per month, this outlier was excluded from the analysis (as a presumed typo).

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Kľúčové slová | Key Words ——— IKEA effect, artificial intelligence, ChatGPT, human and artificial intelligence collaboration | *IKEA efekt, umelá inteligencia, ChatGPT, spolupráca ľudskej a umelej inteligencie*

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Résumé ——— ***IKEA efekt v spolupráci človeka s umelou inteligenciou: Existuje tento efekt aj v prípade nefyzických výrobkov? Časť I.***

Podľa IKEA efektu sú ľudia ochotní zaplatiť viac za výrobok, ktorý vytvorili vlastným úsilím, ako za hotový výrobok. V našom výskume sme zisťovali, či bude IKEA efekt existovať (1), ak sa na tvorbe produktu podieľa aj ChatGPT a (2), ak je konečným produktom textový obsah. Vykonali sme randomizovanú kontrolovanú štúdiu, ktorá zahŕňala všetky základné faktory, o ktorých je známe, že spoločne vyvolávajú IKEA efekt.

Naše výsledky ukazujú, že IKEA efekt možno zistiť pri spolupráci človeka a umelej inteligencie, ak je produktom nefyzický obsah. Preukázali sme, že účastníci (1) na základe svojich subjektívnych preferencií vyrobili lepší produkt a (2) kúpili by ho za vyššiu cenu. V našom výskume sa však (3) IKEA efekt uplatnil nielen na konečný produkt, ale aj na nástroj: členovia skupiny IKEA boli s aplikáciou ChatGPT spokojnejší a zaplatili by za ňu viac z hľadiska vytvoreného produktu.

Zahrnutím všetkých známych základných faktorov, ktoré spoločne vyvolávajú IKEA efekt, sme teda úspešne vyvrátili predchádzajúce štúdie, ktoré neboli schopné dokázať IKEA efekt v oblasti tvorby textu.

Umelá inteligencia je technologická príležitosť, ktorá umožňuje kupujúcim personalizovať výrobky alebo rýchlejšie si ich vybrať a dostať sa k nim. V tejto oblasti by sa mohol využiť IKEA efekt. Náš článok prispieva k praktickej identifikácii hraničných podmienok potrebných na spustenie efektu.

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OPTIMISING MARKETING COMMUNICATION PROCESSES IN CULTURAL TOURISM

Marketing communication is becoming a crucial factor in the competitiveness and sustainability of heritage sites. This article aims to analyse and optimise marketing communication processes in selected heritage institutions, focusing on strategies that enhance visitor engagement and long-term audience development. The research adopts a qualitative approach through semi-structured interviews with managers responsible for communication. Results reveal notable differences in the levels of personalisation, interactivity, and digital tool usage across the sites studied. While some institutions mainly rely on social media and interactive formats, others continue to focus on traditional channels and local partnerships. The analysis further demonstrates that strategies rooted in visual appeal, personalisation, and interactive communication are more effective in fostering loyalty and encouraging repeat visits. Additionally, a lack of adaptation to foreign audiences has been identified, highlighting the need for multilingual services and accessible digital content. The article offers recommendations for enhancing marketing communication management to boost competitiveness and secure the sustainable position of heritage sites within the international cultural tourism market.

1 Introduction ——— Marketing communication plays a crucial role in modern cultural tourism by ensuring the visibility, competitiveness, and sustainability of heritage sites. Castles and châteaux, as symbolic symbols of national history and cultural identity, are no longer simply places for conserving historical memory but active institutions that must engage with diverse groups of visitors. The swift digital transformation of recent decades has fundamentally altered how cultural organisations develop and execute their communication strategies, compelling them to blend traditional methods with innovative, data-driven, and interactive solutions.

Professional literature highlights that heritage institutions can no longer depend solely on their symbolic or cultural significance. Instead, they must actively shape their image and public engagement strategies to stay relevant in an increasingly competitive tourism environment. In this context, marketing management is seen as the craft and science of selecting target audiences, fostering relationships with visitors, and effectively communicating value (Butkouskaya et al. 2024; Xiao et al. 2024). For heritage sites, this involves not only offering a quality programme but also knowing how to communicate it to the target audience in a way that fosters trust, engagement, and long-term loyalty among visitors.

At the same time, it seems that the aims of marketing communication in cultural tourism extend beyond purely economic measures such as sales or visitor num-

bers. Strategic aims related to the institution's image, increasing awareness, visitor satisfaction, and enhancing educational and social functions also hold significant importance. A multidimensional approach underlines the value of integrated communication strategies that both support the cultural mission of heritage sites and ensure their economic sustainability (Mele, Filieri and Decarlo 2023).

The main objective of the article is to analyse and optimise marketing communication processes in selected heritage institutions, with an emphasis on identifying strategies that promote visitor engagement and long-term development of the target audience.

2 Literature review ——— Marketing communication is a vital element of the success of heritage sites (Arrigo, Liberati and Mariani 2021). Its importance has increased significantly in recent decades as heritage institutions face a growing need to reach wider audiences, boost their visibility, and adapt to changing visitor behaviours (Liu, Wu and Wang 2020). It is no longer enough for heritage sites to rely solely on their historical or cultural significance (Royle and Laing 2013). Today, it is essential that they actively manage the image they project externally (Parameswaran 2023). This approach aligns with the ideas of Butkouskaya et al. (2024), who argue that marketing management is the art and science of choosing target groups, establishing and developing relationships with customers through the creation, delivery, and communication of value (Xiao et al. 2024). In the context of heritage sites, this involves not only providing a high-quality programme but also knowing how to communicate it effectively and present it to a specific audience of visitors in a way that stimulates their interest and builds trust (Akgün, Keskin and Ayar 2014). Management has a variety of tools at its disposal, from traditional advertising to public relations and digital marketing to analytical methods (Liu, et al. 2018), enabling precise measurement of the reach and effectiveness of individual activities (Pauwels, Aksehirli and Lackman 2016).

An important part of planning involves setting marketing communication goals (Kilichov and Olšavský 2023). These should be clearly defined, measurable, and aligned with the organisation's strategic direction (Pisula, Florek and Homski 2023). The effectiveness of marketing communication is then evaluated based on whether these goals are achieved. As Patil and Szocs (2024) highlight, communication goals do not necessarily have to be purely economic, such as increasing revenue, visitor numbers, or souvenir sales (Marisova and Smolkova 2020). Goals related to the organisation's image, public awareness, visitor satisfaction, or fostering long-term relationships with the community are equally vital (Lukáč and Matušíková 2022). For example, a heritage site might decide to communicate specifically with schools and families with children (Kováříková, Dzilská and Pollák 2025). The campaign's aim may not be to boost sales immediately but to develop relationships with young audiences and their parents, enhance the educational role of the site, and increase its social significance in the long run (Mele, Filieri and Decarlo 2023). Though the results of this strategy may not be immediately visible, over time, they can substantially contribute to the organisation's stability and sustainability (Dwivedi 2020). From this, it is clear that effective marketing communication is a vital element in managing heritage sites (Köves and Király 2021). It not only helps meet visitor quotas but also plays a crucial role in cultivating cultural value, enhancing perceptions of quality, and strengthening relations with the public (Hu and Luo 2024).

3 Methodology ——— The study focuses on employees at four heritage sites. Participation requires consent to be interviewed, active involvement at the site, and anonymity. Semi-structured interviews are conducted with employees who hold decision-making or managerial roles within the institutions under examination. These primarily include directors, castellan, marketing managers, and PR specialists, or individuals directly responsible for marketing decisions, collectively referred to as marketing managers in the text. Respondents are approached individually, either face-to-face, by telephone, or via e-mail. The interviews follow a pre-prepared script, with all participants spending roughly the same amount of time on the discussion. The main aim is to gather answers to key research questions, such as whether a visitor database exists and how it is used in visitor analysis in line with selection and profiling theories. Additionally, the study explores whether specific marketing campaign objectives are set within the facilities, if communication effectiveness is evaluated, how the target market is identified and analysed, what messages are conveyed to visitors, and which communication channels are employed for this purpose.

The research examines institutions classified as historical monuments, specifically castles and chateaux situated in the Visegrad Group countries (Slovakia, the Czech Republic, Hungary and Poland). These are h**ighly appealing cultural destinations** attracting both domestic and international visitors. The main criterion for selection was the availability of relevant and secondary data. From a comparative perspective, the analysed sites share several characteristics: a similar number of employees, comparable organisational structures, significant roles in national history and identity, roughly comparable seasonal visitor numbers, exhibitions focused on history and architecture, and usage of websites, social media, and other digital platforms for public engagement. The differences among the sites primarily lie in how marketing communication is managed. Various management approaches and methodological procedures are employed, affecting marketing strategies and communication activities aimed at visitors. To ensure data confidentiality, management required anonymity for participation, leading to the sites being referred to neutrally in the text as Object I. – IV. This requirement stems from the fact that the research involves sensitive information regarding internal management mechanisms, decision-making processes, and communication strategy effectiveness. Anonymity also encourages more open responses from participants and enhances the objectivity and credibility of the data collected.

This research has several limitations that should be acknowledged. First, the empirical data were collected from a limited number of heritage sites located in the Visegrad Group countries. Although these sites share similar characteristics, the findings cannot be fully generalised to all cultural tourism institutions in different geopolitical or socio-economic contexts. Second, the study primarily relies on qualitative semi-structured interviews with marketing managers. While this method offers in-depth insights, it may also be influenced by respondents' subjective perceptions and institutional priorities. Third, the research mainly concentrates on managerial perspectives and does not include extensive quantitative data from visitors, which could provide a more balanced understanding of communication effectiveness. Additionally, the study reflects a specific period, and marketing communication strategies may evolve over time due to technological advancements and changing

visitor behaviour. Finally, language adaptation and multilingual strategies were examined only at a descriptive level, leaving room for future quantitative analysis of their impact on international visitors engagement.

4 Results ——— Adapting marketing communication to target groups is a key factor in effective marketing for cultural sites. The analysis shows that the sites examined tailor their communication strategies based on their visitors' structure, with notable differences in the use of modern digital tools and personalisation. While some sites focus on visually engaging communication and active use of social media, others rely more on traditional channels such as websites, printed materials, and collaborations with regional institutions. A shared trend is the effort to increase interactivity and broaden offerings for families and school groups, which are crucial for visitor growth. The findings also suggest that ensuring the sustainability of marketing communication in the cultural tourism sector requires more systematic adaptation to international visitors through multilingual services and digital content, which can greatly boost competitiveness in the global market.

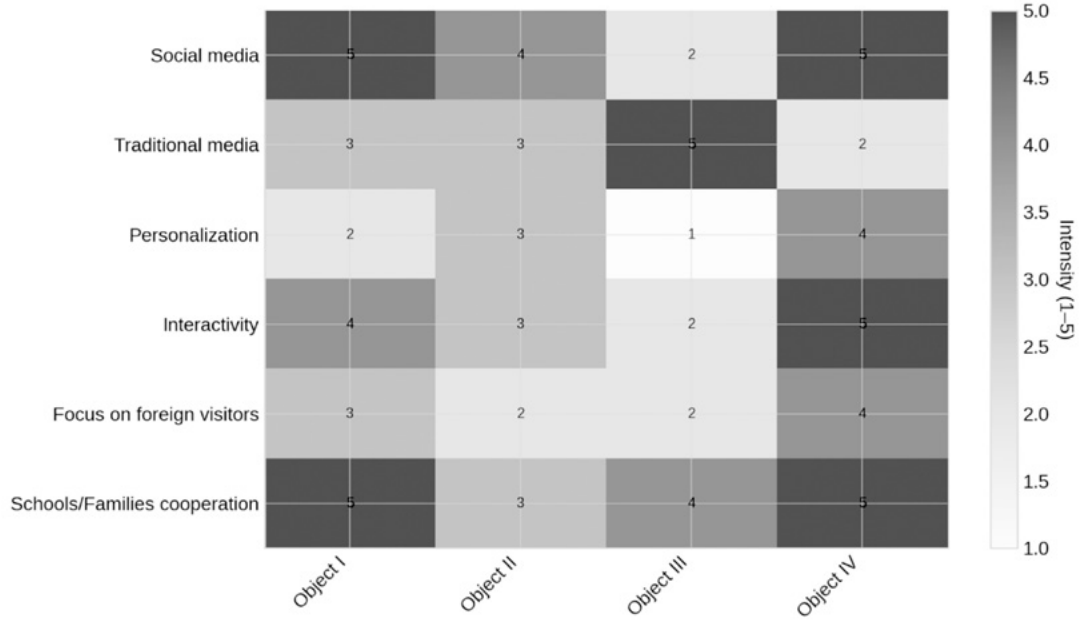


FIGURE 1: ADAPTATION OF MARKETING COMMUNICATION OF TARGET GROUPS
SOURCE: AUTHORS

Object I. mainly focuses on communication through social networks and regional media. Marketing depends on a strong visual identity and event planning that mainly appeals to young visitors. Personalised communication is currently in the pilot stage and being tested via a newsletter. Managers report successful cooperation with schools, which has led to a 25% increase in visitor numbers. Interactivity is growing through QR codes and touch screens. The facility is also developing a multilingual audio guide, an important step towards attracting foreign tourists.

In Object II., targeted activities include events and competitions on social networks, with the visual quality of the campaigns receiving positive reviews. Communication methods are flexible, adapting to current needs and budget constraints. Remarketing via Google Ads is being tested, but results are still unclear. The Object plans to offer educational programmes and introduce digital games for children, aiming to reach families. Regarding communication with the professional public, they intend to collaborate with universities. The challenge remains to sustain interest outside the main season.

Object III. focuses less on social media, relying primarily on websites and printed materials in tourist centres. Interaction with schools and local museums helps to target specific groups, such as students or experts. Interactive elements are being gradually introduced. A mobile app with educational content is planned. Personalised emails are not yet used, but management is contemplating testing them. Communication mainly targets the domestic market, with only marginal outreach to foreign audiences.

Object IV. employs modern, dynamic methods such as live broadcasts via social networks, personalised email invitations, and interactive zones. Communication is highly visual, focusing on originality and experience, to attract a broad audience, including families. Digital tools help improve visitor management. The facility aims to become a year-round attraction, which requires diverse communication strategies and systematic outreach to new target groups.

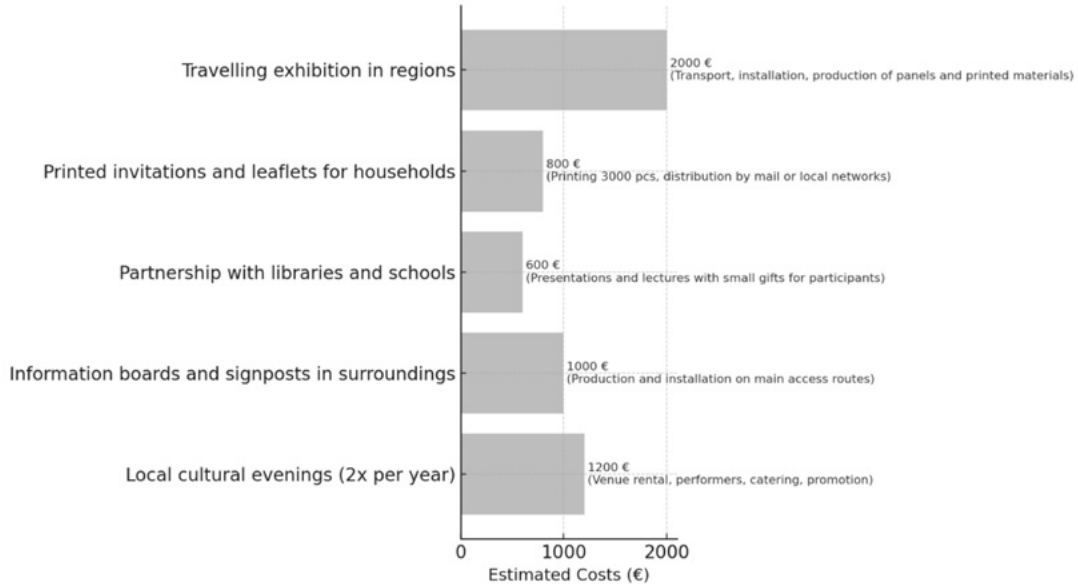
The data obtained indicates that all facilities tailor their marketing communication to some degree based on the nature of their visitors, with a strong emphasis on the domestic market. Objects I. and IV. actively collaborate with schools and families, while Object III. targets middle-aged men and employs more traditional tools. Object II. adopts an approach that balances modern methods with traditional media. There is also a notable difference in which communication channels motivate visitors to return. Object I. benefits most from social media and offline communication, while Objects II. and IV. utilise a variety of forms, with visitors also valuing personal contact and the uniqueness of the offer. The data demonstrates that communication strategies that are more personalised, visually appealing, and interactive can effectively reach different target groups. Simultaneously, there is a need for greater adaptation to foreign audiences, for example through multilingual services and accessible digital content.

5 Discussion ——— Research conducted at Objects I. – IV. demonstrates that the brand identity of the heritage site is not sufficiently established in the wider region, and visits are often random rather than targeted. Many respondents stated that they learned about the buildings indirectly, and only a minority perceive the building as part of the region's permanent cultural infrastructure. Therefore, another proposal involves creating an offline publishing platform and organising a public event with a market character, which would take place directly on the monument's premises. The aim is to develop a local brand for the site through regular communication with the public, based on the stories, traditions, and values it represents.

The main pillar is the launch of a printed magazine called „Voice of History“, which would be published twice a year. Its content would include historical articles, interviews with prominent regional figures, invitations to forthcoming events, be-

hind-the-scenes insights, and visitor experiences. The magazine would be distributed to regional schools, libraries, cultural centres, and municipal facilities, ensuring a broad reach even outside the online space.

At the same time, two themed weekend markets will be organised each year, focusing on crafts, folklore, food, and cultural performances. The goal is not only to sell goods but also to foster a cultural atmosphere and re-establish the historic building as a vibrant public space. Additionally, we propose introducing collectible tickets and postcards featuring original artwork, which would serve both practical and souvenir purposes. These items would help strengthen visitors' memories or act as presentation pieces. Organising these activities requires professional and editorial support, which is why the proposal includes funding for a coordinator and a team of editors responsible for the magazine's quality and the markets' dramaturgy. The total budget for the proposal is approximately €5,600.



Note: The costs were established through an indicative market survey, publicly available price lists, consultations with experts, and comparisons with similar projects in the cultural tourism sector.
FIGURE 2: PROPOSED COMMUNICATION ACTIVITIES AND THEIR COST
SOURCE: AUTHORS

The proposal strengthens the view of Objects I. – IV. as part of regional cultural identity and also establishes a unique offline channel to communicate the value and experience associated with visiting. By combining a printed publication with a public cultural space, the object becomes an active community element, not just a passive destination.

6 Conclusion ——— The research results confirm that effective marketing communication is essential for the sustainability and competitiveness of heritage sites in the cultural tourism sector. The castles and chateaux examined in the V4 countries display common features in terms of organisational structure and focus on the domestic market, but they differ considerably in how they implement communication strategies. While some sites heavily utilise social media, interactivity, and personalised communication methods, others remain more reliant on traditional channels and local collaboration.

The research indicated that visual appeal, personalisation, and interactive tools have the greatest potential to foster visitor loyalty and encourage repeat visits. Simultaneously, it has been identified that a significant weakness is the limited focus on foreign tourists, which could hinder the long-term growth and internationalisation of heritage sites. This highlights the need for more systematic adaptation through multilingual services, digital content, and innovative communication methods that extend beyond traditional approaches. The article also offers recommendations for managing heritage institutions, which can serve as a foundation for developing comprehensive and integrated communication strategies. Their implementation will not only enhance the standing of the sites studied within the domestic context, but also boost their appeal in the international cultural tourism market.

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Kľúčové slová | Key Words ——— visitor engagement, digital communication, tourism, heritage, audience segmentation | *zapojenie návštevníkov, digitálna komunikácia, turizmus, kultúrne dedičstvo, segmentácia publika*

JEL klasifikácia | *JEL Classification* ——— H11, H79, M12, M31

Résumé ——— ***Optimalizácia procesov marketingovej komunikácie v kultúrnom turizme***

Marketingová komunikácia sa stáva rozhodujúcim faktorom konkurencieschopnosti a udržateľnosti pamiatkových objektov. Hlavným cieľom článku je analyzovať a optimalizovať procesy marketingovej komunikácie vo vybraných pamiatkových inštitúciách s dôrazom na identifikáciu stratégií, ktoré podporujú angažovanosť návštevníkov a dlhodobý rozvoj cieľového publika. Výskum je postavený na kvalitatívnom prístupe prostredníctvom pološtruktúrovaných rozhovorov s manažérmi zodpovednými za komunikačné procesy. Výsledky poukazujú na výrazné rozdiely v miere personalizácie, interaktivity a využívania digitálnych nástrojov medzi skúmanými objektmi. Kým niektoré inštitúcie sa opierajú najmä o sociálne médiá a interaktívne formáty, iné zostávajú orientované na tradičné kanály a lokálnu spoluprácu. Analýza zároveň ukazuje, že stratégie založené na vizuálnej atraktivite, personalizácii a interaktívnej komunikácii efektívnejšie podporujú lojalitu a opakovanú návštevnosť. Súčasne sa identifikovala nedostatočná adaptácia na zahraničné publikum, čo poukazuje na potrebu viacjazyčných služieb a prístupného digitálneho obsahu. Článok prináša odporúčania na zlepšenie riadenia marketingovej komunikácie s cieľom zvýšiť konkurencieschopnosť a zabezpečiť udržateľné postavenie pamiatkových objektov na medzinárodnom trhu kultúrneho turizmu.

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WHO IS THE POTENTIAL AUDIENCE FOR CLASSICAL MUSIC? THE CASE OF THE CZECH REPUBLIC.

This article aims to identify and segment the potential but non-attending audiences of classical music in the Czech Republic – individuals who express a positive attitude towards classical music but have not attended any concert or festival in the past year. Drawing on representative data from MML-TGI 2021 (N = 3,610, representing one-fifth of the total Czech population), the study applies factor and cluster analysis to identify five distinct segments: Reserved, Musicians, Emotional Cultural Traditionalists, Culturally Engaged Supporters, and Anti-Consumerist Art Lovers. Key findings demonstrate that non-attendance is not a homogeneous phenomenon but reflects diverse barriers, ranging from low cultural engagement and lack of habit to organizational constraints or mismatches between program offerings and personal values. Compared with existing literature on active audiences, the study shows that cultural capital and musical competence alone do not ensure attendance, as some culturally competent segments remain absent due to programme-related or contextual factors. The results provide a basis for segment-specific strategies within the 4P marketing mix and offer practical guidance for cultural management, audience development, and cultural policy.

1 Introduction

Research on classical music audiences in both the European and North American contexts has traditionally focused on analyzing the profiles, motivations, and cultural habits of those who already attend concerts (Bennett et al. 2009; Dobson and Pitts 2011; Savage and Gayo 2011). These studies consistently confirm that the core of the active audience is composed of older individuals with higher formal education, above-average socioeconomic status, and substantial cultural capital (Bourdieu 1984; Bradley 2017).

In the Czech context, however, only a limited number of empirical studies of this type exist, and no one has concentrated on the so-called potential but non-attending audience – those who express a positive attitude toward classical music but have not attended any concert or festival of classical music in the past year. This shift in perspective is crucial both for cultural policy (aiming to increase participation) and for the strategic management of cultural institutions (ensuring sustainability and building a new audience base).

Within the Czech population aged 12-79, this group – hereafter referred to as PAC-MC (potential attendees of classical music concerts) – represents approximately 1.950 million individuals, or nearly one-quarter of the population aged 12-79 (Koudelka and Vítová 2024). This is therefore a clearly substantial market space. These individuals

state that they like classical music, yet also report that they have not attended any concert or festival of classical music in the past twelve months.

This study, which is part of an ongoing, long-term research on concert audiences, aims to provide a detailed profile of this group based on cultural values, attitudes, and lifestyle, using multivariate statistical methods (factor and cluster analysis). Its objectives are to: 1) describe the internal structure of the PACMC in the Czech Republic; 2) identify barriers and possible triggers for their conversion into active audiences; 3) formulate practical recommendations for orchestral management and concert organizers. This approach combines sociological analysis (the role of cultural capital, lifestyle, barriers to participation) with marketing strategies (segmentation, targeted offerings, opinion leadership).

In accordance with our intention, we formulated 3 research questions:

- RQ1: What distinct patterns of attitudes, values, and lifestyles can be observed among different PACMC segments in the Czech Republic?
- RQ2: What potential barriers and triggers of participation can be identified for these segments based on their profiles?
- RQ3: How can cultural institutions and concert organizers utilize the segmentation of PACMC to design effective strategies for acquiring new audiences?

2 Theoretical framework ——— The theoretical foundation of this study lies at the intersection of four main perspectives: cultural capital and musical socialization, lifestyle and cultural omnivorousness, barriers to cultural participation, and diffusion of innovations. Each of these perspectives contributes to understanding the motivations and barriers of PACMC and to interpreting the results of segmentation.

Cultural capital and musical socialization ——— The theory of cultural capital (Bourdieu 1984) explains cultural participation as the outcome of accumulated knowledge, skills, and dispositions, transmitted primarily through family and the educational system. In the field of music, cultural capital encompasses knowledge of repertoire, familiarity with musical styles, the ability to appreciate interpretative nuances, and overall musical literacy.

Empirical studies (Dobson and Pitts 2011; Pitts and Spencer 2008; Tröndle et al. 2025) show that formal music education and early exposure to classical music significantly increase the likelihood of later consumption. Conversely, the absence of such socialization can act as a barrier to entry, particularly when concert-going is associated with unwritten norms and expectations (e.g., dress code, conventions of applause).

Lifestyle and cultural omnivorousness ——— The sociology of lifestyle and leisure emphasizes that cultural participation is closely linked to broader patterns of leisure activities, social networks, and value orientations (Chan and Goldthorpe 2007; Savage and Gayo 2011). Cultural omnivorousness (Peterson 1992) describes audiences who combine highbrow and popular cultural forms. At the opposite end of the spectrum are cultural univores, whose activities are limited to a narrow repertoire.

These differences can be crucial for the segmentation of PACMC: omnivores may be reached through hybrid or crossover formats (e.g., blending classical music with other genres), while specialists require programming and communication precision.

Barriers to cultural participation ——— Barriers to cultural participation (Kawashima 2000; O'Sullivan 2009) can be divided into three categories: 1. Structural – time and financial constraints, physical accessibility of the venue; 2. Institutional – the nature of programming, communication style, pricing policy;

3. Psychosocial and symbolic – perceived exclusivity, cultural norms and expectations, the feeling that „this is not for me".

Different PACMC segments are likely to face different combinations of these barriers. For example, for culturally educated Musicians, the barrier may be unsuitable programming, while for Reserved it may be the absence of cultural habits.

Diffusion of innovations and audience conversion ——— The theory of diffusion of innovations (Rogers 2003) and cultural marketing (Colbert 2014) provide a framework for considering how various segments of potential audiences can be converted into active attendees. A key factor is the ability to identify opinion leaders in the cultural field who can act as bridges between institutions and less engaged individuals.

For PACMC, this concept can be used to target communication and programming through influential persons who shape the cultural behavior of their social circles. Kurbanov (2023) underscores that audience development in cultural institutions benefits from segment-sensitive strategies grounded in consumer behaviour insights. This aligns with our focus on identifying non-attending yet culturally inclined segments and tailoring interventions to their barriers and triggers.

Building on these theoretical insights, the empirical survey design draws directly on key findings from prior studies to inform its measures and segmentation approach. For instance, evidence that formal music education and early exposure to classical music significantly increase the likelihood of later concert attendance led us to capture respondents' musical training and socialization backgrounds. Similarly, the concept of cultural omnivorousness – whereby individuals embrace both „highbrow" and popular cultural forms – guided our analysis of participants' broader cultural tastes to distinguish eclectic „omnivores" from narrower specialists. We also accounted for established categories of non-attendance barriers (structural, institutional, and psychosocial) when interpreting why each PACMC segment might remain unengaged despite interest in classical music. Furthermore, diffusion of innovations theory, which highlights the role of opinion leaders in spreading new behaviors, informed our consideration of how certain culturally engaged non-attenders could catalyze concert-going within their social networks. By synthesizing these perspectives, the study addresses a clear gap in the literature: while previous research has predominantly examined active classical concert audiences, far less attention has been paid to those who appreciate classical music yet do not attend. Focusing on this under-researched cohort of culturally inclined non-attendees – and explicitly linking sociological frameworks of cultural consumption with marketing-based audience segmentation strategies – our approach provides a novel interdisciplinary lens to understand and engage potential audiences.

3 Data and methods ——— The main objective of the study is to develop a detailed typology of the PACMC population in the Czech Republic using data-driven segmentation techniques. The analysis aims to uncover internal group structures, understand barriers to attendance, and provide strategic insights for audience development ini-

tiatives. The analysis draws on data from MML-TGI 2021 (Median), a continuous marketing and media survey representative of the Czech population aged 12-79. The 2021 sample comprised 16,346 respondents, for whom socio-demographic characteristics, lifestyle indicators, media consumption, cultural preferences, and attendance at cultural events were recorded.

Target population ——— For the purposes of this study, the target group of PACMC (potential attenders of classical music) was defined using a two-step procedure: 1) preference – respondents who indicated on a five-point scale that they „like" or „rather like" classical music, and 2) attendance – simultaneously, they reported that in the past twelve months they had not attended any concert or festival of classical music. This intersection yielded a subsample of N = 3,610 respondents, representing an estimated 1.944 million individuals in the Czech population aged 12-79 (19.7%).

Brief socio-demographic profile of PACMC shows:

- a slight predominance of women (54%),
- an above-average share of individuals aged 50+ (42%),
- higher levels of formal education (29% with tertiary education),
- greater concentration in cities with over 100,000 inhabitants (38%),
- more frequent representation of higher and middle social classes (A, B and C1 according to MML-TGI).

Variable selection ——— Segmentation was based on attitudes and preferences related to art, culture, and lifestyle, measured through 25 items rated on a five-point Likert scale („strongly agree" – „strongly disagree", higher values expressed stronger agreement with the positively or segment-relevant statements), available in MML-TGI data. These items included, for example, the importance of art and culture in life, attitudes toward traditions and rituals, views on consumerism, self-perceived creativity, reading habits, active musical engagement and education.

Factor analysis ——— The suitability of the data for factor analysis was verified by Kaiser-Meyer-Olkin (KMO): 0.84 (excellent level according to Hair et al. 2010), and Bartlett's test of sphericity: $\chi^2 = 12{,}459.3$; $df = 300$; $p < 0.001$ (sufficient level of intercorrelation among items). An exploratory factor analysis (principal components method with Varimax rotation) was conducted. The criteria for extraction were: eigenvalue > 1, and interpretability of the factor solution.

Seven factors were extracted, explaining 57.86% of the total variance. These factors were interpreted as:

Art – significance of art and culture in life, following cultural events in the media.

Spirituality & Tradition – emphasis on spiritual values, traditions, and rituals.

Creativity – self-perception as a creative personality, interest in personal artistic production.

Literature Inclinations & Formality – interest in literature, preference for formal social activities.

Musical Inclinations – active musical practice, musical education.

Anti-consumerism & Passivity – rejection of consumerism, lower orientation toward active leisure.

Emotions – emotional engagement with art and life more broadly.

Cluster analysis ——— Segmentation was performed using the K-means clustering method applied to factor scores. Models with four to six clusters were tested. Evaluation criteria included:

- Silhouette score: best compromise between cluster compactness and separation was achieved with five clusters (0.42),
- Calinski–Harabasz index: confirmed the quality of the five-cluster solution,
- Cluster sizes: relative balance across groups,
- Interpretability: clarity and meaningfulness of the resulting segments.

Although the primary segmentation presented in this study was produced using the K-means clustering algorithm based on factor scores, additional models were tested to assess the robustness and interpretability of the results. Ward's hierarchical clustering method was employed as an internal validation tool, yielding a comparable five-cluster solution. However, due to its exploratory nature and higher complexity, Ward's method was not used for final segmentation. Similarly, exploratory latent class analysis (LCA) was conducted, confirming similar group structures but at the cost of lower parsimony and more demanding model assumptions. These supplementary analyses reinforced the decision to retain the K-means solution, which offered both statistical robustness and interpretive clarity.

The design of the analysis directly reflects the study's three research questions. RQ1 (What distinct patterns of attitudes, values, and lifestyles can be observed among different PACMC segments in the Czech Republic?) is addressed through factor analysis and subsequent K-means clustering, which together identify meaningful audience typologies. RQ2 (What potential barriers and triggers of participation can be identified for these segments based on their profiles?) is explored by interpreting the socio-demographic, cultural, and behavioral attributes of each segment. Finally, RQ3 (How can cultural institutions and concert organizers utilize the segmentation of PACMC to design effective strategies for acquiring new audiences?) is answered through the application of the segmentation results in the context of audience development, using the 4P marketing framework. These questions collectively structure the analytical and interpretive logic of the study and provide the basis for linking empirical results to practical recommendations.

4 Results ——— The analysis of factor scores and subsequent clustering revealed five distinct segments within PACMC. Segment sizes are relatively balanced, ranging from 17.8% to 22.3% of the total group:

Reserved – 19.0% of PACMC (approx. 302,000 individuals), slight predominance of men, median age 45, 22% with tertiary education, 33% residing in cities with over 100,000 inhabitants, complete family with children or single parent with child(ren).

Musicians – 17.4% (275,000), both sexes balanced, median age 30, 31% with tertiary education, 39% in large cities, students or young parents.

Emotional cultural traditionalists – 18.8% (298,000), predominance of women, median age 65, 27% with tertiary education, 35% in large cities, divorced/separated or widow/widower.

Culturally engaged supporters – 21.8% (346,000), slight predominance of women, median age 23, 35% with tertiary education, 42% in large cities, students, marital status – single.

Anti-consumerist art lovers – 23.0% (364,000), predominance of women, median age 70, 29% with tertiary education, 37% in medium-sized towns, married/ living with a partner or widowed.

Given the research questions, three key dimensions were examined for individual segments: socio-demographic profile, cultural orientation, and cultural behavior, and the implications arising from them (Tab. 1).

	Socio-demographic profile	Cultural orientation	Cultural behaviour	Implications
Reserved	Predominantly men aged 40-49, employed in managerial positions, middle socio-economic classes, often in complete families with children.	Limited interest in art, classical music, literature, architecture, or foreign cultures; stronger orientation towards material status and social recognition.	Minimal cultural participation; little to no spending on books, concerts, or cultural events; not engaged in music ensembles; rarely listen to music or read literature in their leisure time.	The main barrier is their general disinterest in culture and classical music. Opportunities may lie in addressing traditional values and family identity through mass media channels with broad reach.
Musicians	Younger individuals (20-39 years), students or young parents, often with higher education but lower income, living in smaller towns or rural areas; self-identifying with the upper middle class.	Strong orientation towards music, particularly classical music; weaker affinity for visual arts, architecture, or film. Central values include family, health, and personal fulfilment.	High level of active music-making and ensemble participation; frequent concert and theatre attendance; regular reading; active use of online platforms for music access.	Their musical expertise and role as opinion leaders offer significant opportunities for engagement. The main barrier is their selective cultural focus. Digital channels and streaming platforms are effective means of outreach.
Culturally engaged supporters	Young people aged 12-29, predominantly students, single, with low or no income, concentrated in large urban centres, often from single-parent households.	Openness to diverse cultural expressions, rejection of traditional norms, orientation towards achievement, social interaction, and personal attractiveness.	High cultural activity, including frequent artistic practice, ensemble participation, and attendance at concerts, theatres, and cinemas; significant cultural expenditure; intensive use of the internet and social media for cultural information and communication.	Their active engagement and strong role as cultural opinion leaders represent a major opportunity. Barriers may stem from fragmented interests and weaker attachment to traditional institutions. Digital media and social networks are the most effective communication channels.
Emotional cultural traditionalists	Primarily women aged 60-69, divorced or widowed, lower education and income, often living alone or in small households, mostly in rural areas.	Strong attachment to art and culture combined with traditional values, religious belief, and spiritual orientation.	Declared affinity for music, visual arts, and theatre; frequent consumption of cultural content via television and radio; relatively limited participation in live cultural events and modest spending on tickets.	Opportunities arise from their cultural sensitivity and value orientation. Barriers include financial limitations, restricted mobility, and very low internet use. Effective communication requires reliance on traditional media such as television, radio, and print.
Anti-consumerist art lovers	Older individuals (60-79 years), university-educated retirees, belonging to higher socio-economic strata, residing in metropolitan or regional centres, typically living alone or in two-person households.	Strong interest in classical music, literature, poetry, visual arts, and high culture in general; orientation towards education, tradition, and cultural values.	Daily reading and frequent viewing of cultural programmes; regular discussions about art within close social circles; low levels of active artistic production and lower attendance at concerts; minimal use of digital technologies or streaming platforms.	Their strong cultural orientation and high educational background are opportunities for engagement. The main barriers are low participation in live events and reluctance to adopt dig. channels. Communication is most effective through quality television, print, and other traditional media.

TABLE 1: SEGMENT PROFILES
SOURCE: AUTHORS' OWN ELABORATION BASED ON DATA FROM MML-TGI 2021 (MEDIAN). SEGMENT PROFILES WERE DERIVED USING FACTOR AND CLUSTER ANALYSIS AS DESCRIBED IN SECTION 3.

The segment profiles presented in Table 1 were derived from the five-cluster solution generated by the K-means clustering method, applied to standardized factor scores. This method was chosen for its capacity to handle large datasets and its interpretive transparency. Compared to hierarchical approaches such as Ward's method – which was used solely for internal validation – K-means offered more balanced cluster sizes and clearer distinctions between segments. Its relative simplicity and consistency across repeated initializations made it the most suitable technique for generating actionable audience typologies.

5 Discussion ——— Comparison with literature on active audiences ——— International empirical studies consistently demonstrate that active classical music audiences display stable demographic and cultural characteristics: higher age, above-average formal education, elevated socio-economic status, predominantly white ethnic composition (in Western countries), and strong cultural capital (Bennett et al. 2009; Kolb 2001; Savage and Gayo 2011). Musical literacy, acquired either through formal education or intensive musical socialization, is among the primary predictors of participation

(Dobson and Pitts 2011). Moreover, cultural engagement often extends into a broader repertoire of activities, including frequent visits to theatres, museums, and galleries, and the reading of demanding literature (Chan and Goldthorpe 2007).

Our findings, however, indicate that these characteristics cannot be mechanically transferred to the potential but non-attending audience. For example, the Culturally Engaged Supporters segment shares with active audiences a high level of cultural engagement and education, yet their non-attendance of classical music concerts is not the result of insufficient cultural capital but rather of organizational and programmatic barriers. Similarly, the Musicians segment possesses significant musical literacy and cultural knowledge but remains absent from concert halls, likely due to a mismatch between the existing repertoire and their preferences. These „paradoxical" profiles confirm that cultural predispositions alone do not guarantee attendance – there must also be a programmatic and format-based alignment (Colbert 2014).

Literature on potential and non-attending audiences ——— Compared to active audiences, research into non-attending audiences of classical music remains relatively underdeveloped. International studies (Kawashima 2000; Bunting et al. 2008; O'Sullivan 2009) identify diverse reasons for non-attendance: from low cultural interest and absence of cultural habit (so-called disengaged segments), through perceived exclusivity („this is not for me"), to logistical and financial constraints.

Our segmentation of PACMC confirms these patterns while expanding them with value-based dimensions captured by factor analysis. The Reserved segment corresponds to the profile of „low-engagement non-attenders" (Kawashima 2000), where the barrier lies in the absence of cultural habit and low salience of culture in everyday life. By contrast, the Anti-Consumerist Art Lovers resemble „cultural purists" (Bennett et al. 2009), who participate in cultural production selectively and avoid commercial formats.

A novel contribution of this study lies in distinguishing two highly culturally competent segments (Musicians and culturally engaged supporters) who refrain from attending concerts for reasons other than disinterest or lack of access – namely for reasons that may be relatively quickly addressed through appropriate programming, format innovations, or scheduling.

Barriers and triggers by segment ——— Our results confirm that barriers to participation differ both in nature and intensity across segments:

Reserved – main barrier is the absence of cultural habit and low salience of culture; low-threshold formats with a strong social motivation and micro-experiences in familiar settings may be effective triggers.

Musicians – barrier lies in a mismatch between supply and preferences; opportunities include specialized formats and programming, participatory formats.

Emotional cultural traditionalists – barrier may stem from perceiving classical concerts as too formal and unapproachable; suitable formats include events in sacral or heritage spaces with a ritual or thematic framing.

Culturally engaged supporters – barriers are primarily time, organizational and programme-related; after-work concerts and cross-genre projects may prove effective.

Anti-consumerist art lovers – barrier lies in aversion to commercial formats and mass production; small venues and close contact with performers are preferred.

These findings reinforce the argument that audience development strategies must be tailored to segment-specific conditions rather than relying on generalized approaches.

6 Practical implications for cultural management and marketing ——— The use of PACMC segmentation for strategic planning requires targeted and differentiated approaches that reflect distinct value orientations, levels of cultural capital, and participation barriers. While the classical 4P marketing mix (Product, Price, Place, Promotion) remains an appropriate framework, it must be applied in a segment-specific manner.

Overview of segment strategies ——— Recommended strategies for the five PACMC segments are summarized within the 4P framework:

Reserved – Product: Low-threshold, shorter formats with a strong social component. Price: Low admission, possibly free. Place: Local community venues (schools, libraries). Promotion: Personal invitations, local media, neighborhood networks.

Musicians – Product: Specialized programming, workshops, „side-by-side" projects. Price: Standard admission, discounts for active musicians. Place: Venues with high acoustic quality, opportunities to attend rehearsals. Promotion: Music forums, professional networks, trade journals.

Emotional cultural traditionalists – Product: Concerts with ritual framing, thematic events in sacral venues. Price: Moderate, non-exclusive. Place: Churches, historic halls, open-air heritage sites. Promotion: Church bulletins, cultural calendars, local radio.

Culturally engaged supporters – Product: Cross-genre projects, after-work (or after-school) concerts. Price: Flexible price tiers, bundled packages. Place: City centers, cultural hubs, cafés. Promotion: Social media, event platforms, collaborations with libraries.

Anti-Consumerist art lovers – Product: Chamber concerts with minimal marketing. Price: Moderate, with emphasis on value of experience. Place: Small halls, alternative venues. Promotion: Personal recommendations, cultural associations, informal gatherings.

Product (Programming) ——— Personalization: Programming can be designed to align with segment-specific preferences. For example, Musicians value specialized repertoire (contemporary or chamber projects), while Reserved are more receptive to introductory formats with strong social contexts.

Hybrid formats: Fusions of classical music with other genres or media may appeal to Culturally engaged supporters and partially to Musicians.

Curated cycles: For Anti-consumerist art lovers, carefully curated series with minimal commercial overtones are recommended.

Price ——— Consistent with findings from the creative industries context (Kmety Bartekova 2021), pricing should be calibrated to segment-specific perceptions of value and willingness to pay, avoiding one-size-fits-all discounts and favouring targeted bundles and loyalty schemes.

Flexible pricing: Lower admission fees may motivate Reserved to attend initial events, though perceptions of low value should be avoided.

Bundles and loyalty programs: For culturally active segments (Culturally engaged supporters), packages can encourage higher return rates and frequency of attendance.

Place (Venues) ——— Proximity and familiarity: Reserved and Emotional cultural traditionalists prefer events in nearby, familiar environments.

Alternative spaces: Anti-consumerist art lovers are drawn to unconventional venues with intimate atmospheres.

Prestigious acoustic halls: Musicians place emphasis on high-quality sound and professional facilities.

Promotion ——— Segment-specific communication: Communication channels must align with the media habits of each segment – from local print outlets (Reserved) to online event platforms (Culturally engaged supporters).

Opinion leaders: For Musicians and Culturally engaged supporters, cultural influencers and professionals can serve as effective mediators.

Storytelling and emotional framing: Emotional cultural traditionalists respond well to narratives that emphasize tradition, place, and values.

Implications for cultural policy ——— Beyond institutional practice, these strategies hold significance for cultural policy at both national and regional levels: 1) Support for segmentation in funding schemes – encouraging organizers to apply data-driven and targeted approaches; 2) Accessibility of cultural infrastructure – ensuring that offerings extend beyond major urban centers; 3) Integration of cultural and community projects – For low-engagement segments, connections with other areas of civic life (e.g., education, community events) are essential.

7 Conclusion ——— This study examined the potential but non-attending audience of classical music in the Czech Republic – individuals who express a positive attitude toward classical music but who have not attended any concert or festival of this genre in the past twelve months. Based on factor and cluster analysis, five distinct segments were identified:

- Reserved – low cultural engagement, absence of cultural habit.
- Musicians – high musical literacy, mismatch between supply and preferences.
- Emotional cultural traditionalists – strong emotional ties to tradition, need for ritual.
- Culturally engaged supporters – high cultural engagement, primarily organizational barriers.
- Anti-consumerist art lovers – strong cultural orientation, aversion to mass formats.

The analysis demonstrates that non-attendance is not a homogeneous phenomenon; it encompasses a range of factors, from low cultural capital to mismatches between supply and value orientations. These differences are crucial for strategic planning by cultural institutions and for policy measures aimed at expanding participation.

The study extends audience research in classical music by systematically mapping non-attending audiences and segmenting them according to values, attitudes, and lifestyle. It complements existing literature, which has predominantly focused on active audiences (Bennett et al. 2009; Dobson and Pitts 2011). The combination of factor analysis and clustering made it possible to identify nuanced differences between segments and to provide cultural institutions with a practically applicable tool. Segment-specific recommendations were formulated within the framework of the 4P marketing mix and translated into concrete tactics for programming, pricing, venue choice, and communication.

A partial limitation of the study is that data were collected in 2021, during the period of residual pandemic restrictions, which may have influenced reported attendance and cultural habits. Future studies will focus on longitudinal monitoring of segment stability in the post-pandemic context, regional analyses linking cultural preferences with accessibility, and qualitative approaches to uncover motivations and barriers. Moreover, experimental designs may test targeted interventions, while comparative research could situate Czech PACMC segments within a broader Central and Eastern European framework.

The segmentation of PACMC underscores that a „one-size-fits-all" approach is unsustainable in the current cultural environment. Institutions capable of adapting their programming, marketing, and operational strategies to the specific needs of audience segments are more likely not only to attract new audiences but also to sustain their long-term loyalty.

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Kľúčové slová | Key Words ——— classical music audiences, classical concert non-attendance, audience segmentation, cultural participation barriers, arts marketing | *publikum klasické hudby; neúčast na koncertech klasické hudby; segmentace publika; bariéry kulturní participace; marketing umění*

JEL klasifikácia | *JEL Classification* ——— D11, M31, Z10

Résumé ——— ***Kdo je potenciálním publikem klasické hudby? Případ České republiky.***

Tento článek si klade za cíl identifikovat a segmentovat potenciální, avšak neúčastnící se publikum klasické hudby v České republice – tedy jedince, kteří vyjadřují pozitivní postoj ke klasické hudbě, ale v uplynulém roce nenavštívili žádný koncert či festival tohoto žánru. Na základě reprezentativních dat z výzkumu MML-TGI 2021 (N = 3 610, což představuje přibližně jednu pětinu celkové české populace) studie využívá faktorovou a shlukovou analýzu k identifikaci pěti odlišných segmentů: Zdrženliví, Hudebníci, Emotivní kulturní tradicionalisté, Aktivnější příznivci kultury a Antikonzumní milovníci umění. Klíčová zjištění ukazují, že neúčast na koncertech není homogenním jevem, ale odráží různé typy bariér – od nízké kulturní angažovanosti a absence kulturního návyku až po organizační omezení či nesoulad mezi nabídkou programu a osobními hodnotami. Ve srovnání s dosavadní literaturou o aktivním publiku studie dokládá, že samotný kulturní kapitál a hudební kompetence nezaručují účast na koncertech, jelikož některé kulturně kompetentní segmenty zůstávají neaktivní z důvodů spojených s programem nebo kontextem. Výsledky poskytují základ pro tvorbu segmentově specifických strategií v rámci marketingového mixu 4P a nabízejí praktická doporučení pro kulturní management, budování publika a kulturní politiku.

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IDENTIFICATION OF SATISFACTION AND DISSATISFACTION FACTORS OF HOTEL CUSTOMERS USING NATURAL LANGUAGE PROCESSING TECHNIQUES

This paper proposes a novel approach to identifying the factors that influence satisfaction and dissatisfaction among Algerian hotel customers through the analysis of online customer reviews. Unlike traditional quantitative methods such as questionnaires, this study employs advanced natural language processing techniques to uncover key insights into customer experiences. The study employs natural language processing techniques to extract and analyze data from online customer reviews. This method aims to identify significant concerns and satisfaction factors mentioned by Algerian hotel customers, offering an innovative alternative to conventional survey-based approaches. The analysis revealed that satisfaction factors are specific, tangible aspects of the customer's experience, which can be easily conceptualized. In contrast, dissatisfaction factors are more abstract and challenging to define, which makes them more difficult to comprehend. The paper introduces an innovative approach by leveraging natural language processing to analyze customer reviews, offering a fresh perspective on understanding customer satisfaction and dissatisfaction. This methodology provides valuable insights into customer experiences and highlights the differences in how satisfaction and dissatisfaction are perceived and articulated by customers.

1 Introduction

The Internet has become one of the main channels for offering and demanding services across all sectors. With the advent of Web 2.0 and the emphasis on competition and e-reputation, it has become vital for businesses to have an exemplary image and offer in order to retain their clients and attract new ones. The tourism industry, and particularly the hospitality sector, is no exception to this rule (Yassin 2022). Indeed, the use of specialized travel platforms such as TripAdvisor, Expedia, and Booking.com has become a deeply ingrained habit among tourists for optimizing their travel planning. However, the use of these platforms is not limited to booking flights and hotel rooms; it also extends to other activities such as sharing reviews and experiences (Sangkaew and Zhu 2020; Xin et al. 2023), as well as recommending hotels (Nilashi et al. 2018). These activities are collectively referred to as Online Customer Reviews (OCR).

OCRs are part of what is commonly referred to as user-generated content (Krumm et al. 2008). This concept, in the context of big data terminology, refers to

the phenomenon of engaging the public as active participants in the voluntary creation of subjective online content (Li et al. 2018). This contrasts with the traditional approach, where online content is generated, created, and disseminated solely by companies in a one-sided manner.

OCRs have progressively emerged as an important source of information, significantly influencing consumers' decision-making in hospitality purchases (Sparks and Browning 2011; Vermeulen and Seegers 2009). Due to their open format, OCRs enable customers to thoroughly and accurately capture their consumption experiences and perceptions (Xiang et al. 2015). When travelers write an online review about a hotel they stayed at, they subjectively and explicitly describe their experiences, whether positive or negative, detailing what they liked or disliked during their stay (He et al. 2017). Additionally, they can assign a score, which generally reflects their level of satisfaction or dissatisfaction (Geetha et al. 2017; Zhu et al. 2020). These ratings are often influenced by specific attributes, with some factors tending to increase ratings and others tending to lower them (Gunasekar and Sudhakar 2019). According to Park et al. (2018), feedback from repeat visitors tends to contain longer sentences and express more pronounced positive or negative sentiments compared to one-time visitors. In contrast, reviews from first-time visitors often include more analytical and anxious language, reflecting a different evaluative approach than that of repeat guests.

In the hospitality context, OCRs provide operators with a rich source of information that can be exploited and analyzed in an automated and continuous manner, unlike traditional approaches such as opinion surveys based on questionnaires, where data collection is a time-consuming and resource-intensive task (Fernández et al. 2016). However, with the exponential increase in their volume, it is inconceivable to process OCRs in their raw form. For these reasons, an increasing number of researchers in the hospitality and tourism fields are turning to innovative techniques from the domain of machine learning, particularly Natural Language Processing (NLP) (Kang et al. 2020), which is an area of research and application in artificial intelligence that explores how computers can be used to understand and manipulate natural language text or speech to do useful things (Hirschberg and Manning 2015). Application of NLP includes several fields of studies (Chowdhury 2003) such as sentiment analysis (Medhat et al. 2014), automatic translation (Wang et al. 2022), and topic modeling (Vayansky and Kumar 2020).

Our research problem is framed within this context. In this paper, we propose an NLP-based approach to uncover the factors driving satisfaction and dissatisfaction among customers of Algerian hotels, leveraging online reviews as our primary data source. To ensure a comprehensive and robust analysis, we integrate NLP techniques, including sentiment analysis, text preprocessing (Anandarajan et al. 2019), topic modeling, and keyword extraction (Firoozeh et al. 2020). These techniques enable us to structure and interpret the data effectively, uncovering key themes and terms that shape customer experiences. By combining these techniques, we aim to provide a deeper and more nuanced understanding of the drivers of customer satisfaction and dissatisfaction in the Algerian hospitality context, addressing the following research questions:

- Research question 1: Does the sentiment expressed by customers in their online reviews explain their overall satisfaction?
- Research question 2: What are the most important factors mentioned by customers in their online reviews?
- Research question 3: Is there a relationship between these factors and the customer's overall satisfaction?

2 Theoretical background ——— OCRs have become a critical resource in the hospitality industry for understanding customer perceptions and identifying factors that influence satisfaction and dissatisfaction (Park et al. 2018; Padma and Ahn 2020). Unlike traditional methods such as face-to-face interviews or surveys, OCRs provide a scalable and dynamic means of capturing customer feedback, enabling researchers and practitioners to uncover nuanced insights into guest experiences (Zhao et al. 2019). However, the exponential growth of user-generated content and the advent of Big Data have made manual analysis of OCRs impractical, necessitating the use of advanced Natural Language Processing (NLP) techniques to process and extract meaningful insights from this data (Álvarez-Carmona et al. 2022; Khurana et al. 2023).

To address these challenges, researchers have employed various NLP techniques to analyze customer satisfaction in the hospitality industry. For instance, Arindra et al. (2024) analyzed 12,949 user reviews from TripAdvisor using an NLP approach to identify key factors influencing stay experience and satisfaction. Their findings highlight that ease of booking plays a crucial role in enhancing satisfaction, while issues related to service, facilities/amenities, and the overall stay experience are primary contributors to customer dissatisfaction. Luo et al. (2020) conducted a comprehensive analysis of 363,723 reviews from Chinese economy hotels using deep learning-based sentiment analysis. Their findings revealed that positive sentiments are most frequently associated with location, followed by facilities, service, price, image, and reservation experience.

Conversely, negative sentiments were primarily linked to issues such as sound insulation, air conditioning, bedding, toilets, and other hotel amenities. Similarly, Cheng and Jin (2019) found that noise was a major source of dissatisfaction among Airbnb users, highlighting the universal challenge of environmental factors in guest experiences. Complementing these findings, Saraswati et al. (2024) identified room replacement policies as another critical area requiring improvement, while Aakash and Aggarwal (2020) emphasized that high-quality standards in rooms, service, cleanliness, location, and value are essential determinants of overall hotel performance and guest satisfaction.

However, it is important to recognize that the factors influencing customer satisfaction and dissatisfaction are not static and can vary significantly depending on several criteria (Xu and Li. 2016). For example, customer satisfaction and expectations are influenced by factors such as origin (domestic vs. international) and hotel star ratings, which moderate the impact of hotel attributes on satisfaction (Li et al. 2020). Furthermore, satisfaction levels can vary depending on the trip mode, even for the same traveler, as highlighted by Liu et al. (2013). These variations underscore the complexity of guest experiences and the need for tailored approaches to address diverse customer needs and preferences. Expanding on this, Roy (2023) examined online reviews across different hotel tiers using the Theory of Lodging (ToL), revealing that guests in luxury hotels tend to focus on subjective evaluations, such as personalized service and ambiance, whereas guests in low-tier hotels rely more on objective evaluations, such as cleanliness and value for money.

In addition to these factors, geographic and regional variations in customer sentiment have also been explored, offering further insights into the contextual influences on customer satisfaction. The study conducted by Bulkrock and Alsharman (2024) revealed a significant geographic variation in guest sentiment across cities, states, and countries. Similarly, Carvalho et al. (2024) investigated customer satisfaction in mountain hotels within UNESCO's Global Geoparks, analyzing 5,590 online reviews from 20 hotels in the Estrela UNESCO Global Geopark. Their study identified factors such as seasonality, nationality, and travel experience as significant influences on satisfaction, with pool and spa facilities emerging as particularly important determinants of guest satisfaction.

Beyond geographic and contextual factors, recent research have also examined the role of technology and sensory experiences in shaping customer satisfaction, further enriching our understanding of the hospitality landscape. Özen and Katlav (2023) analyzing 12,396 reviews evaluate customer satisfaction with technology-supported products in hotels. Their findings indicated that technology integration positively impacts guest satisfaction, particularly when it enhances basic services like room lighting and bedding at an affordable cost. However, Cherdouh et al. (2022) found that while information and communication technologies (ICT) contribute to customer satisfaction in Algerian hotels, their impact is less significant compared to non-ICT services. Building on these insights, Lee et al. (2019) emphasize the critical role of multisensory experiences in enhancing customer satisfaction. Their findings suggest that multisensory experiences facilitate the evaluation process, with positive multisensory experiences amplifying positive affect, thereby significantly increasing customer satisfaction. In a similar vein, Luo et al. (2021) highlight the growing role of robots and artificial intelligence in the hospitality industry, emphasizing their potential to enhance customer satisfaction. By analyzing online reviews, their research identifies a positive correlation between guests' sentiments toward robotic services and their overall hotel satisfaction.

In our study, we aim to achieve our goals by combining different NLP techniques. First, we seek to determine whether the sentiment expressed by customers in their online reviews explains their overall satisfaction. Second, we aim to identify the most important factors mentioned by customers in their online reviews. Third, we investigate whether there is a relationship between these factors and customers' overall satisfaction.

Our approach differs from traditional topic modeling by clustering words based on their semantic similarity rather than simple co-occurrence, and from ABSA methods by exploring themes and their correlation with satisfaction without relying on automated sentiment analysis tools. Indeed, sentiment analysis tools were only used as a validation tool to verify the consistency between the user's rating and the sentiment expressed in the review.

In the following sections, we will first present the methodology adopted in this study. Subsequently, we will present the key results obtained and discuss their significance. Finally, we will examine the theoretical and practical implications of our findings.

3 Methodology ——— **3.1 Data collection** ——— To conduct our study, we utilized TripAdvisor as our primary data source. Established in the early 2000s, TripAdvisor is

one of the largest and most widely used platforms for OCRs. By early 2022, the number of OCRs on TripAdvisor had surpassed one billion (Statista 2022). The platform enables users to post, comment on, and share travel recommendations, as well as rate hotels, restaurants, and destinations. Each review on TripAdvisor includes several key pieces of information, such as the review title, body, publication date, hotel name, star rating, hotel location (city and country), and the customer's rating (on a scale of 1 to 5).

The data collection process in our study consisted of three successive steps. First, we developed a Python program to extract reviews from TripAdvisor. This program takes a list of hotel URLs as input and generates a file containing all the extracted reviews. We manually collected the URLs of the top 144 Algerian hotels listed on TripAdvisor, sorted in descending order of their ratings. After gathering the reviews from these hotels, we retained only those written in French and English, as reviews in other languages (e.g., Arabic, Italian, Chinese) were extremely limited in number. Including these reviews would have compromised the reliability of our results. Among the collected reviews, the most recent one dates from December 2024, and the oldest one dates from September 2015. Additionally, since most sentiment analysis libraries are optimized for English text, we translated all French reviews into English to ensure consistency and accuracy in our analysis.

Fields	Value
Hotel name	Sheraton Annaba hotel
Hotel location	Annaba, Algeria
Hotel category	5 Star
Rating	5
Online customer review title	Pleasant stay
Online customer review text	Very comfortable room with good bed and linen, nice and pleasant. Very friendly and welcoming staff, who were very helpful. Great location, nice bar and restaurant. pity the swimming pool was not open.
Date	October 2018
Reason of stay	Business
URL of the customer review	https://www.tripadvisor.com/ShowUserReviews-g1071600-d12063561-r630501781-Sheraton_Annaba_Hotel-Annaba_Annaba_Province.html

TABLE 1: ONLINE CUSTOMER REVIEWS STRUCTURE
SOURCE: TRIPADVISOR

The translation was performed automatically using a Python program that employs the T5 translation model developed by Google (Raffel et al. 2020), which is one of the most downloaded text translation models on the Hugging Face Model Hub (HuggingFace 2022). Additionally, recent studies have shown that T5 achieves a significantly lower Translation Error Rate compared to other translation models, indicating excellent performance in multilingual translation tasks (Zhu et al. 2025). This platform is

a repository that hosts state-of-the-art machine learning models dedicated to natural language processing (NLP), created and maintained by leading artificial intelligence researchers and major tech companies such as Google, Facebook, and Microsoft (Wolf et al. 2020). Once the translation is complete, all reviews are collected and stored in a single file containing relevant information about each review, such as the title, text, reason for the stay, review URL, and more. Table 1 illustrates the structure of a review.

3.2 Data cleaning and preprocessing ——— A total of 11,957 reviews were initially collected from users across various hotels. However, to conduct a reliable statistical analysis of the data, we only retained 11,310 reviews concerning 3, 4, and 5-star hotels and containing more than three words, from the 11,957 user reviews. The 1 and 2-star hotels were excluded from the study because the number of their reviews represented only 5% of the total number of reviews collected. This small proportion was deemed insufficient to provide meaningful insights or to significantly influence the overall analysis. By concentrating on higher-rated hotels, we aimed to capture a more representative and consistent sample that would allow for a robust examination of user feedback. Table 2 describes the characteristics of the sample of hotel reviews that we collected.

Characteristics	Values	Frequency	Percentage
Hotel category	3 stars	3618	31.99%
	4 stars	2923	25.84%
	5 stars	4769	42.17%
Reason of stay	Business	6098	53.92%
	Family stay	1822	16.11%
	Couple stay	1346	11.90%
	Solo stay	713	6.30%
	Friends stay	644	5.69%
	Other	687	6.07%
Assigned score	★☆☆☆☆	936	8.28%
	★★☆☆☆	940	8.31%
	★★★☆☆	1815	16.05%
	★★★★☆	3248	28.72%
	★★★★★	4371	38.65%
Region of the hotel	East	2244	19.84%
	West	2979	26.34%
	North	6017	53.20%
	South	70	0.62%

TABLE 2: PROFILE CHARACTERISTICS
SOURCE: AUTHORS

4 Results ——— **4.1 Research question 1** ——— To address research question 1, which examines the sentiment expressed by the customer in their review and its effect on the rating they gave to the hotel, we defined and calculated the following functions for each collected review:

- score(OCR): indicates the score assigned to the hotel by the client. Its value is an integer ranging from 1 (very dissatisfied) to 5 (very satisfied). This score reflects the overall satisfaction of the client with regard to the hotel.
- sentimentlib(OCR): denotes th implementation, machine learning-based libraries require significantly more execution time than lexicon-based libraries.

To provide a comprehensive answer to research question 1, we used four different sentiment analysis libraries: TextBlob (Loria 2020), Vader (Hutto and Gilbert 2014), Flair (Akbik et al. 2019), and Transformers (Wolf et al. 2020). TextBlob and Vader are both Python sentiment analysis libraries based on a lexicon, meaning that for these two libraries, the sentiment of a given text is an aggregate of weights assigned to the words in that text. For example, the words „good," „great," and „happy" have a positive weight, while the words „horrible," „difficult," and „unhappy" have a negative weight. Flair and Transformers, on the other hand, are two Python libraries based on machine learning for sentiment analysis. That is, both use supervised learning models trained on large text corpora. Machine learning-based sentiment analysis libraries generally offer better accuracy than lexicon-based libraries because they operate not directly on the text itself, but on a tree representation of the text that captures the intensity of the relationships between words. However, due to the computational and memory requirements for their implementation, machine learning-based libraries require significantly more execution time than lexicon-based libraries.

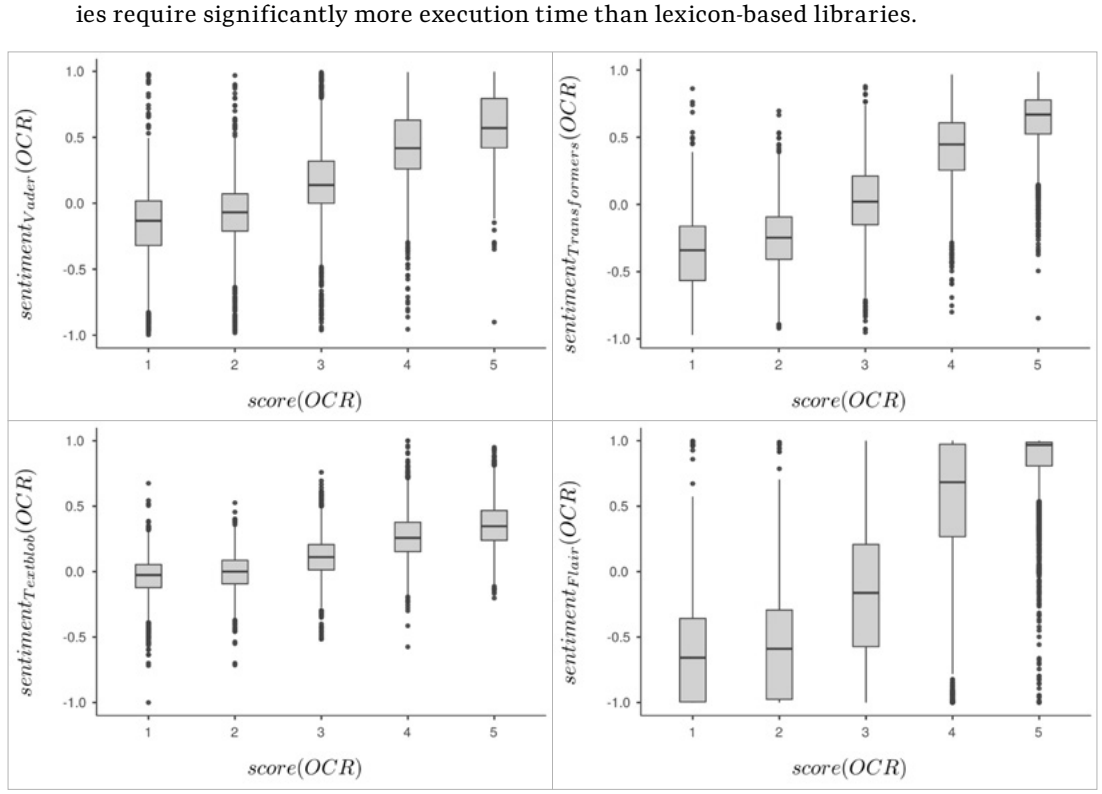

FIGURE 1: BOXPLOTS DESCRIBING THE DISTRIBUTION OF SENTIMENT SCORES
SOURCE: AUTHORS

To examine the potential influence of customer sentiment expressed in their online reviews (OCR) on their overall satisfaction with the hotel, we visually analyzed the distribution of the sentimentlib(OCR) function values across the five levels of overall satisfaction, as measured by the score(OCR) function. Figure 1 presents this analysis using box plot charts for each sentiment analysis library.

At first glance, the four charts indicate that there is a positive correlation between the sentiment expressed by the client in their OCR and the score they assigned to the hotel. However, considering the respective width of the boxes, which indicates data dispersion, it is surprisingly noted that lexicon-based sentiment analysis libraries appear to be more accurate than those based on machine learning.

To validate our response to research question 1, we conducted a correlation analysis between the values of the two functions, sentimentlib(OCR) and score(OCR), by measuring the Pearson correlation coefficient *r*. Table 3 presents the results of the correlation test for the four sentiment analysis libraries.

		Score(OCR)
$Sentiment_{Textblob}(OCR)$	Pearson's r	0.634***
	p-value	0.000
$Sentiment_{Vader}(OCR)$	Pearson's r	0.680***
	p-value	0.000
$Sentiment_{flair}(OCR)$	Pearson's r	0.771***
	p-value	0.000
$Sentiment_{Transformers}(OCR)$	Pearson's r	0.802***
	p-value	0.000

*Notes: *** p<0.0001*
TABLE 3: CORRELATION TEST
SOURCE: AUTHORS

The results of the correlation test in Table 3 validate our initial finding and show a significant positive correlation (p-value <0.001) between sentimentlib(OCR) and score(OCR) for all four sentiment analysis libraries, with r=0.634 for TextBlob, r=0.680 for Vader,r=0.771 for Flair, and r=0.802 for Transformers. Furthermore, it is worth noting the superiority of machine learning-based libraries over lexicon-based ones in terms of accuracy.

In conclusion, based on the results obtained, we can answer research question 1 and assert that the sentiment expressed by the client in their OCR explains their overall satisfaction.

4.2 Research question 2 ——— Research question 2 focuses on identifying the most important factors mentioned by clients of Algerian hotels in their OCRs. To address this question, we performed a lexical analysis of the text from all collected OCRs to identify the key themes around which client concerns are centered. For this purpose, we utilized the Python natural language processing library NLTK (Bird et al. 2009) to extract a list of all words and their frequency of occurrence from the text of the collected OCRs.

It is important to note that our program was configured to retain only common nouns. Specifically, we excluded proper nouns (e.g., „Sonia," „Hilton," „Algiers"), as well as verbs, adjectives, adverbs, and stop words such as „a," „the," „is," „then," and „of." Additionally, all plural common nouns were converted to their singular forms. The resulting list contains 7,892 unique words, ranging from highly frequent terms like „hotel" (appearing in 8,817 OCRs) and „room" (appearing in 7,161 OCRs) to words that occur only once, such as „clandestine" and „millimeter." Figure 2 illustrates the distribution of these words in descending order of frequency.

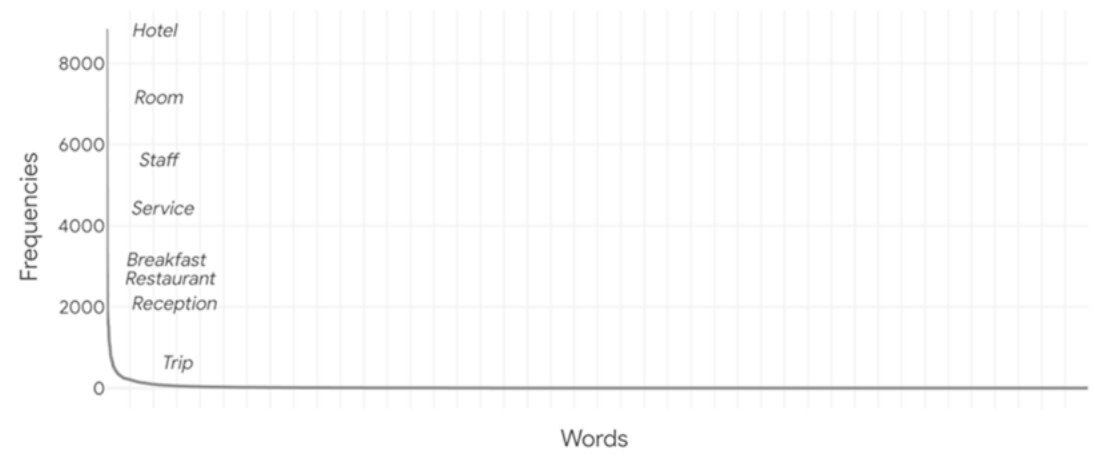

FIGURE 2: WORD FREQUENCY DISTRIBUTION
SOURCE: AUTHORS

To identify the most important factors mentioned by clients in their OCRs, we used a hierarchical clustering algorithm to further reduce the number of words by grouping those with very similar semantic fields. To measure the similarity between the semantic fields of two words, we used the Topic modeling Python library Gensim (Rehurek and Sojka 2011).

The hierarchical clustering algorithm is an unsupervised classification algorithm (meaning that the number of groups to be formed is not known in advance) that is based on the notion of similarity and proceeds incrementally at each iteration by either grouping the two most semantically similar words together and/or including a word into one of the already formed groups that is closest to it semantically. The result obtained is called a dendrogram. It is a hierarchical structure where each level provides a candidate classification.

As we move up each level, the number of groups decreases and the number of words per group increases. It should be noted that the choice of the level to retain for classification can be guided by identifying large increases in the fusion level, as such jumps indicate that dissimilar clusters are being merged and that the preceding level represents a meaningful partition of the data (Everitt et al. 2011). We chose the classification illustrated in Figure 3 and manually assigned an appropriate theme to each formed word group, namely:

| Food: the quality and price of the dining, the free breakfast.
| Staff: the helpfulness and friendliness of the employees and managers.
| Room: the cleanliness, layout, amenities, and quality of the room.

| Location: the area where the hotel is located and its proximity to points of interest
| Family: the hotel's suitability for a family setting.
| Stay: the overall stay experience.
| Work: the suitability of the hotel for a family setting
| Service: the overall quality of the service.

We can then answer research question 2 and conclude, based on the previous results, that these eight themes constitute the most important factors mentioned by clients of Algerian hotels in their OCRs.

Order	Word	Frequency	%	Order	Word	Frequency	%
1	room	7161	63.31%	20	place	1079	9.54%
2	staff	5617	49.66%	21	bathroom	1066	9.43%
3	service	4421	39.08%	22	business	1031	9.12%
4	breakfast	3043	26.90%	23	buffets	1011	8.94%
5	restaurant	2816	24.90%	24	star	920	8.13%
6	reception	2071	18.31%	25	airport	852	7.53%
7	night	1867	16.51%	26	floor	809	7.15%
8	time	1846	16.32%	27	family	801	7.08%
9	stay	1766	15.61%	28	sea	789	6.98%
10	price	1717	15.18%	29	work	761	6.73%
11	view	1692	14.96%	30	dinner	727	6.43%
12	quality	1591	14.07%	31	welcome	720	6.37%
13	city	1552	13.72%	32	water	666	5.89%
14	day	1528	13.51%	33	manager	651	5.76%
15	food	1495	13.22%	34	wife	644	5.69%
16	team	1282	11.34%	35	trip	642	5.68%
17	center	1204	10.65%	36	minute	611	5.40%
18	location	1161	10.27%	37	professionalism	605	5.35%
19	bar	1107	9.79%	38	bed	601	5.31%

TABLE 4: MOST FREQUENT WORDS IN THE COLLECTED OCR
SOURCE: AUTHORS

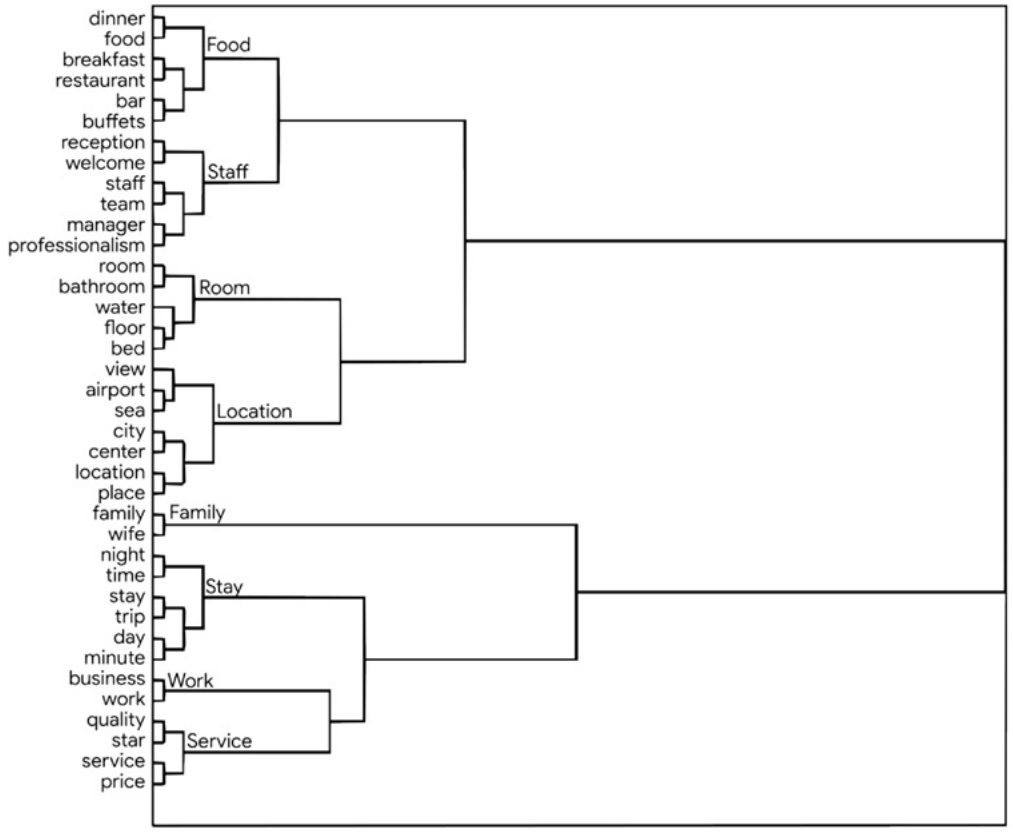

FIGURE 3: DENDROGRAM OBTAINED FROM THE HIERARCHICAL CLUSTERING ALGORITHM
SOURCE: AUTHORS

4.3 Research question 3 ——— After identifying the most concerning factors for clients of Algerian hotels, this section focuses on examining whether there is a relationship between these factors and the score the client assigns to the hotel in their OCR. To answer this question, we first used the results from research question 2 to associate to each OCR the list of relevant factors based on the words it contains. Then, we generated a heatmap to visualize the distribution of these factors across different scores. The heatmap illustrates the frequency of each factor in OCRs corresponding to specific scores, as shown in Figure 4.

Given the color scale used (ranging from dark red to dark green) to emphasize differences in factor frequencies, only the cells with colors ranging from light green to dark green are of interest to us. The green color indicates the dominance of a specific factor compared to the others. It is important to note that the heatmap should be read vertically, column by column, to identify the most dominant factors for each score level. However, since the aim of this paper is to identify the factors of satisfaction and dissatisfaction among Algerian hotel customers, the left side of the heatmap highlights the dominant factors contributing to client dissatisfaction, namely: the room, the stay, and the service. On the other hand, the right side of the heatmap reveals the dominant factors associated with client satisfaction, namely: the room, the staff, the food, and the location.

Although it is evident from the previous paragraph that there is a relationship between the factors mentioned by clients in their feedback and the scores they assign to the hotel, it is necessary to confirm this using a statistical test. In our context, given the categorical nature of the two variables being analyzed, a contingency table analysis accompanied by a chi-square test of independence is the most appropriate approach, as illustrated in Table 5.

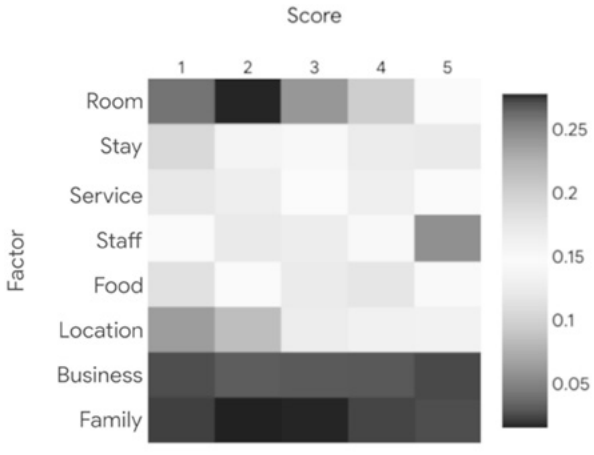

FIGURE 4: HEATMAP OF THE DISTRIBUTION OF FACTORS ON THE SCORE
SOURCE: AUTHORS

Score						
Factor	**1**	**2**	**3**	**4**	**5**	**Total**
Room	1706	1995	3171	4292	3695	14859
Family	148	109	216	489	636	1598
Location	415	610	1644	3464	3254	9387
Food	739	1033	2240	3760	3732	11504
Service	1154	1199	1925	2741	3683	10702
Staff	981	872	1672	3222	6078	12825
Stay	1261	1142	1860	2639	3033	9935
Work	167	217	393	615	610	2002
Total	6571	7177	13121	21222	24721	72812
X^2 2916						
p-value <0.001						
95% for Cramer's V [0.097, 0.104]						
Variance explained 0.040						

TABLE 5: CONTINGENCY TABLE BETWEEN FACTORS AND SCORES
SOURCE: AUTHORS

Although the effect size was relatively small (Cramer's V=0.10, 95% CI [0.097, 0.104], referring to the chi-square distribution table, the results suggest the presence of a weak but meaningful dependence as we can observe that the chi-square value obtained in our analysis exceeds the critical chi-square value (p-value <0.001). As a result, we reject the null hypothesis which states that the two variables are independent and conclude that there is a statistically significant relationship between the factors mentioned by clients in their feedback and the score they assign to the hotel.

5 Discussion ——— The results of this study demonstrate that when clients write online reviews, they implicitly express sentiments, either positive or negative, toward the hotel. These sentiments are not only evident in the tone and language used but are also strongly correlated with the final score that the client assigns to the hotel. These findings are consistent with (Geetha et al. 2017), who identified a clear alignment between customer ratings and expressed sentiments across both premium and budget hotel categories. This correlation highlights the importance of analyzing both the quantitative scores and the qualitative content of reviews to gain a comprehensive understanding of customer satisfaction.

Furthermore, the findings reveal that there are eight main factors of concern for clients of Algerian hotels: food, staff, room, the hotel's location, its suitability for a family setting, the overall stay experience, its suitability for work purposes, and, finally, the quality of service. These factors collectively shape the client's perception of their stay, but their relative importance varies. Some of these factors are more important than others in explaining satisfaction and dissatisfaction. Indeed, we found that the main factors contributing to client satisfaction are the room, the staff, the food, and the location. For example, clients often praise spacious and well-maintained rooms, attentive and friendly staff, delicious and varied food options, and convenient locations close to tourist sites or business districts. On the other hand, the main factors contributing to dissatisfaction are the room, the stay experience, and the service. Dissatisfied clients frequently mention issues such as uncomfortable beds, poor cleanliness, unprofessional staff behavior, or a lack of responsiveness to their needs. Interestingly, the „room" factor appears in both categories, suggesting that it plays a dual role in shaping the client's overall experience.

We can observe that, with the exception of the room factor, the dissatisfaction factors are more abstract than the satisfaction factors. Indeed, stay experience and service relate to broad aspects of the client's time at the hotel, making them harder to define or visualize. On the other hand, the reasons for satisfaction are more concrete. Staff, food, and location refer to specific, tangible parts of the customer's experience that are easy to picture. In comparison, the reasons for dissatisfaction are much harder to visualize, as they often reflect a general sense of disappointment rather than a specific issue. These results are consistent with those of (Kim et al. 2016), who found that most satisfiers in the full-service hotel segment were associated with tangible features, while most dissatisfiers tended to be linked to intangible features.

This suggests that, in general, when clients are unhappy with their stay, they tend to express their dissatisfaction using vague or general terms. This could be due to the emotional nature of negative experiences, which often lead to broader, less specific complaints. On the other hand, when clients are satisfied, they often use more detailed and descriptive language to highlight the specific things they enjoyed. This

difference in language reflects the way positive experiences are more likely to be associated with specific, memorable details, while negative experiences are often summarized in broader terms.

6 Conclusion ——— **6.1 Theoretical contributions and implications** ——— In this paper, we explored how innovative techniques from machine learning, particularly NLP, can be used to analyze customer satisfaction in Algerian hotels. By leveraging advanced algorithms, we were able to extract meaningful insights from unstructured text data, such as online reviews, which traditional methods often struggle to process efficiently. Like other studies, our approach shows that using Big Data is not only a viable alternative to traditional data collection methods but also offers a more scalable and cost-effective solution. From a theoretical perspective, our work contributes to the growing body of research on evaluating customer satisfaction in the hospitality industry. Specifically, it highlights the potential of NLP techniques to uncover hidden patterns in customer feedback, which can lead to more accurate and actionable insights. We hope this approach will provide a strong basis for future studies, encouraging researchers to explore new ways of integrating machine learning into customer experience analysis.

Moreover, the approach we used and the way we combined different NLP libraries to analyze online hotel reviews can be applied more broadly. For instance, the framework we developed is not limited to the hospitality sector; it can be adapted to other industries where customer feedback plays a critical role, such as retail, healthcare, or even education. It can serve as a foundation for other researchers in the field, offering a step-by-step guide on how to preprocess, analyze, and interpret textual data. Additionally, our method can be adapted to other emerging contexts in developing countries, such as renting houses, apartments, private rooms, or other properties. This flexibility makes it particularly valuable for regions where traditional data collection methods are less feasible due to resource constraints. Furthermore, it can help to evaluate satisfaction factors for different customer segments, such as families, solo travelers, or business professionals, providing tailored insights for each group.

From a managerial perspective, the results of this research offer valuable insights for hotel managers in Algeria about their clients' preferences. For example, by identifying the most frequently mentioned factors in positive and negative reviews, managers can prioritize areas for improvement, such as enhancing the quality of food or training staff to deliver better service. They can also help managers better understand what clients expect, enabling them to design more targeted marketing campaigns and personalized experiences. Moreover, these findings can be useful for policymakers and hotel managers in other developing countries with tourism potential similar to Algeria's. By adopting a data-driven approach, they can make informed decisions about infrastructure development, service standards, and customer engagement strategies. Ultimately, this research not only benefits the hospitality industry but also contributes to the broader goal of promoting sustainable tourism growth in developing regions.

6.2 Limitations ——— Algeria is a country where most tourist attractions and hotels are located in the northern region, operating within a cultural and sometimes religious context unique to the country. As a result, the findings of this study should be interpreted with caution, taking into account the specific context of Algeria. Additionally, due to the limited number of online reviews for 1-star and 2-star hotels, our analysis focused solely on 3-, 4- and 5-star hotels. This limitation arises because lower-category hotels are less likely to be reviewed online, either because their clients are less inclined to share feedback or because these establishments are less visible on digital platforms. Consequently, the results of this study may not fully represent the experiences of clients staying in budget accommodations. Therefore, it would not be appropriate to assume that these results apply to other hotel categories or types of accommodations, such as guest houses, hostels or eco-lodges, which may cater to different customer segments with distinct priorities.

It is also important to note that more than half of the online hotel reviews analyzed were written by business travelers, whose needs and expectations differ from those of other customer segments (Zhang et al. 2018; Kim et al. 2020). In the context of Algeria, where tourism is still emerging compared to other destinations, online reviews predominantly reflect the experiences of business travelers, especially in major cities and commercial hubs. This imbalance in the dataset could skew the results, making them less representative of the broader population of hotel guests. Future studies could address this limitation by collecting a more balanced sample of reviews from diverse customer segments. Moreover, reviews may exhibit seasonal or temporal variation, with business travel peaking during weekdays or certain months, while leisure travel may concentrate during holidays and summer periods, further affecting the representativeness of the dataset. Future studies could address this limitation by collecting a more balanced sample of reviews from different customer segments and across various regions and seasons, ensuring a more comprehensive understanding of hotel satisfaction in the Algerian context.

Finally, the textual nature of online reviews and the languages in which they are written present certain limitations. Sentiment analysis remains a complex field, as machines still struggle to fully grasp nuances of natural language, such as irony, humor, and sarcasm. Additionally, reviews in Algerian hotels are often written in multiple languages, including French, Arabic, and English, each with its own linguistic subtleties. This multilingual aspect adds another layer of complexity to the analysis, as sentiment analysis models trained on one language may not perform equally well on others. These challenges highlight the need for continued advancements in NLP to improve the accuracy and reliability of sentiment analysis tools.

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Kľúčové slová | Key Words ——— online customer review, natural language processing, satisfaction factors, dissatisfaction factors, hotels | *online recenzie zákazníkov, spracovanie prirodzeného jazyka, faktory spokojnosti, faktory nespokojnosti, hotely*

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Résumé ——— ***Identifikácia faktorov spokojnosti a nespokojnosti hotelových zákazníkov pomocou techník spracovania prirodzeného jazyka***

Tento článok navrhuje nový prístup k identifikácii faktorov, ktoré ovplyvňujú spokojnosť a nespokojnosť alžírskych hotelových zákazníkov prostredníctvom analýzy online recenzií zákazníkov. Na rozdiel od tradičných kvantitatívnych metód, ako sú dotazníky, táto štúdia využíva pokročilé techniky spracovania prirodzeného jazyka, aby odhalila kľúčové poznatky o skúsenostiach zákazníkov. Štúdia využíva techniky spracovania prirodzeného jazyka na extrakciu a analýzu údajov z online recenzií zákazníkov. Cieľom tejto metódy je identifikovať významné obavy a faktory spokojnosti, ktoré spomínajú alžírski hoteloví zákazníci, a ponúknuť inovatívnu alternatívu k tradičným prístupom. Analýza odhalila, že faktory spokojnosti sú špecifické, hmatateľné aspekty skúseností zákazníkov, ktoré sa dajú ľahko konceptualizovať. Naopak, faktory nespokojnosti sú abstraktnejšie a ťažšie definovateľné, čo sťažuje ich pochopenie. Článok predstavuje inovatívny prístup, ktorý využíva spracovanie prirodzeného jazyka na analýzu recenzií zákazníkov a ponúka nový pohľad na pochopenie spokojnosti a nespokojnosti zákazníkov. Táto metodika poskytuje cenné informácie o skúsenostiach zákazníkov a zdôrazňuje rozdiely v tom, ako zákazníci vnímajú a vyjadrujú spokojnosť a nespokojnosť.

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LEVERAGING AI-POWERED SOCIAL MEDIA PLATFORMS TO ENHANCE CUSTOMER ENGAGEMENT AND DRIVE SALES GROWTH IN UGANDA'S SMES

In the digital age, Artificial Intelligence (AI) has transformed social media platforms into powerful marketing tools, particularly for small and medium-sized enterprises (SMEs) seeking to improve customer engagement and drive sales. This study investigates the role of AI-powered features such as chatbots, content recommendation algorithms, targeted advertising, and predictive analytics on platforms like Facebook, WhatsApp, TikTok, and Instagram in enhancing brand visibility and influencing sales performance among SMEs in Uganda. In an extended Technology Acceptance Model (TAM), the study employed a mixed-methods approach, collecting survey data from 155 SMEs operators across Kampala, Gulu, Mbale, and Mbarara. Using multiple regression analysis, the findings reveal that attitude towards AI tools and customer engagement are the strongest predictors of sales growth, followed by perceived usefulness and ease of use. The study highlights the growing relevance of AI in the Ugandan SME ecosystem and underscores the need for digital skills development, localized AI tools, and inclusive policy support to maximize AI's impact on business growth. This study concludes with practical recommendations and proposes future research directions to bridge digital disparities and expand understanding of AI's transformative potential in emerging markets.

1 Introduction ——— In the era of digital transformation, social media has emerged as a critical marketing tool for businesses of all sizes, especially small and medium-sized enterprises (SMEs). In Uganda, where traditional advertising is often costly and less effective for reaching younger, tech-savvy consumers, social media platforms such as Facebook, WhatsApp, Instagram, and TikTok have revolutionized the marketing landscape (Ransbotham, Gerbert, and Reeves 2021). These platforms allow businesses to connect directly with customers, build relationships, and increase visibility in ways previously unimaginable (Kapoor and Nerur 2022). SMEs, which form over 90% of Uganda's private sector and are vital for employment and economic growth, increasingly rely on digital marketing to overcome resource constraints and expand market reach (Uganda Investment Authority 2023).

A recent shift has seen the integration of Artificial Intelligence (AI) into these social media platforms, further amplifying their impact. AI-driven tools such as content recommendation, algorithms, predictive analytics, automated chatbots, and intelligent ad targeting allow for a deeper level of engagement with customers. According to Chatterjee et al. (2021), these AI features can improve marketing efficiency by personalizing content delivery and responding to customer behaviour in real time. Through automating complex tasks and offering data-driven insights, AI empowers SMEs to make smarter decisions, optimize their marketing strategies, and reduce operational costs. The influence of AI-powered social media is especially significant for SMEs operating in developing economies like Uganda, where marketing budgets are limited, and customer acquisition can be challenging. AI-enhanced personalization allows businesses to deliver the right message to the right audience at the right time, which is critical for conversion and retention (Kumar et al. 2022). For instance, AI algorithms on Facebook and Instagram can analyse a user's behaviour and show them ads that match their interests, increasing the likelihood of purchase.

Similarly, WhatsApp Business APIs can automate customer service conversations, improving responsiveness and customer satisfaction (Murphy et al. 2021). Research by Mehta et al. (2022) highlights that AI chatbots improve engagement quality and can mimic human interaction to a level where customers are often unaware, they're interacting with a machine. For Ugandan SMEs, where staffing is lean, such tools present a cost-effective alternative to support and allow small businesses to compete with larger firms. Despite the potential, the adoption and integration of AI-powered social media tools among Ugandan SMEs remain uneven. Barriers such as digital illiteracy, infrastructure limitations, and cost-related concerns persist (UNCTAD 2022). Moreover, many SMEs still lack awareness of how to leverage AI tools effectively. This study contributes to a growing body of knowledge aimed at supporting digital inclusion and economic growth in the region (Tuten and Solomon 2021). By analysing the use of key AI functionalities like targeted advertising, chatbots, content recommendation systems, and predictive analytics across popular platforms like Facebook, WhatsApp, TikTok, and Instagram, this study seeks to provide practical insights for entrepreneurs, marketers, and policymakers. The findings are expected to inform strategies that can foster wider adoption of AI-powered digital marketing tools, ultimately contributing to the competitiveness and sustainability of SMEs in Uganda.

The goal of this article is to analyse the role of Artificial Intelligence (AI)-powered social media marketing tools in enhancing sales performance among small and medium-sized enterprises (SMEs) in Uganda. The study focuses on how AI-driven mechanisms such as chatbots, predictive analytics, targeted advertising, and content recommendation algorithms affect customer engagement and ultimately improve SME sales outcomes.

2 Literature review ——— **2.1 Artificial intelligence in social media marketing** ——— Artificial Intelligence (AI) has emerged as a transformative force in marketing, particularly in social media, where it facilitates hyper-personalized, data-driven interactions between businesses and consumers. Social media platforms like Facebook, Instagram, TikTok, and WhatsApp integrate AI technologies such as machine learning, natural language processing, and image recognition to automate content delivery, understand user intent, and optimize marketing outcomes (Kapoor et al. 2022; Kietzmann et al. 2018). These platforms leverage AI to analyse vast amounts of user-generated data in real-time, enabling businesses to engage customers more effectively and respond to trends instantly. For example, Facebook's AI engine uti-

lizes behavioural tracking to recommend relevant ads and content to users, enhancing both visibility and engagement (Meta Business 2022). TikTok's For You Page algorithm uses deep learning to push highly tailored video content, significantly increasing the potential for virality and brand exposure, even for small and medium-sized enterprises (SMEs) with limited budgets (Montag et al. 2021). In Uganda, where mobile penetration is rising and social platforms are increasingly used for business, these AI-driven tools offer affordable and innovative marketing solutions, helping SMEs compete with larger players (Ndagire and Bwire 2023).

Kocisova and Starchon (2023), social media metrics such as reach, impressions, engagement rate, and sentiment analysis serve as key indicators for assessing marketing performance and optimizing future campaigns. They argue that integrating quantitative metrics with qualitative insights enhances strategic decision-making and helps marketers justify the return on investment (ROI) from digital campaigns. It therefore underscores the need for a structured measurement framework that connects marketing activities with tangible business outcomes such as customer retention and sales growth. Building on this foundation, the present study explores how artificial intelligence-powered tools can further strengthen social media measurement by offering predictive analytics and automation features that refine performance tracking among SMEs in emerging markets.

2.2 Customer engagement and personalization through AI ——— Customer engagement refers to the quality and frequency of interactions between a brand and its consumers, often determining the level of customer loyalty and eventual sales outcomes. AI-powered social media tools significantly enhance engagement by enabling real-time, personalized communication. Chatbots, for instance, have become a vital customer service tool on WhatsApp Business and Facebook Messenger, providing instant responses to common queries, resolving issues promptly, and even guiding users through the sales funnel (Davenport et al. 2020; Chatterjee et al. 2021). These AI assistants operate 24/7, increasing responsiveness and reducing customer service costs for SMEs. Moreover, recommendation algorithms personalize the user experience by suggesting content and products that match individual preferences, which is proven to boost click-through rates and conversion (Tuten and Solomon 2021). Studies by Osei-Frimpong et al. (2020) indicate that personalized customer experiences driven by AI contribute significantly to emotional engagement and purchasing decisions, particularly in Sub-Saharan Africa, where digital trust is growing. Additionally, predictive analytics help businesses anticipate consumer behaviour and tailor messages, promotions, and product recommendations, accordingly, making marketing more proactive rather than reactive (Chen et al. 2021).

2.3 AI tools driving sales performance ——— The integration of AI into social media marketing also contributes directly to enhanced sales performance, especially for SMEs. AI tools such as targeted advertising algorithms, predictive customer scoring, and sentiment analysis enable businesses to focus their marketing budgets more effectively and reach high-intent buyers. On platforms like Facebook and Instagram, SMEs can use AI-based ad managers to segment audiences by demographics, interests, behaviour, and even purchasing intent, resulting in highly efficient campaigns (Dwivedi et al. 2021). According to a report by McKinsey & Company (2022), AI-enabled marketing can increase sales productivity by up to 20% through better lead targeting and message timing. In Uganda, many SMEs use AI-driven insights to make data-informed decisions regarding which products to promote, when to launch campaigns, and which audience segments to prioritize (Nabukeera and Namubiru 2022).

Artificial intelligence (AI) tools such as chatbots, recommendation algorithms, and predictive analytics have transformed how businesses engage with consumers on digital platforms. These technologies enhance customer experiences by providing real-time interaction, personalized content, and seamless service delivery. Belhamri and Belboula (2024) highlight that the perceived anthropomorphism of conversational agents significantly influences users' sense of social presence, emotional connection, and behavioural intention toward a brand. Their findings suggest that the more human-like and responsive AI systems appear, the greater the likelihood of fostering customer trust and engagement. This aligns with contemporary perspectives in digital marketing, where AI-powered tools not only automate interactions but also strengthen brand relationships and customer loyalty. The article examines how AI-driven social media marketing tools influence customer engagement and sales performance among SMEs in Uganda, emphasizing their potential to humanize digital communication and enhance behavioural outcomes.

Measuring the effectiveness of social media marketing has become a critical aspect of modern marketing performance analysis. Effective measurement allows firms to evaluate engagement, brand visibility, and conversion outcomes derived from online interactions. According to Kocisova and Starchon (2023), developing comprehensive marketing metrics is essential for assessing social media strategies, as it enables organizations to connect digital engagement indicators such as reach, impressions, and user interaction with overall marketing objectives and business growth. Their study emphasizes that a systematic evaluation of online performance metrics strengthens data-driven decision-making and helps marketers justify investments in social media campaigns within competitive markets.

While Marketing Science & Inspirations (MSI) has published research on social media metrics (Kocisova and Starchon 2023) and on the role of AI conversational agents in shaping user engagement and behavioural intention (Belhamri Belboula 2024), there remains a notable gap in understanding how these digital innovations function within small and medium-sized enterprises (SMEs), particularly in emerging economies. This study extends the field by examining the application of AI-powered social media marketing tools such as automated chatbots, predictive analytics, and recommendation algorithms in the context of Ugandan SMEs. Specifically, it explores how attitudes toward AI adoption and levels of customer engagement mediate the relationship between AI-driven marketing initiatives and sales performance.

With focus on an emerging market setting, this research article contributes to filling the contextual void in MSI literature, which has largely centered on developed economies (Nahan-Suomela 2020). Furthermore, it advances theoretical discourse by integrating perspectives from technology adoption and relationship marketing theories to explain how digital intelligence tools influence consumer behaviour and organizational outcomes. The findings are expected to enrich MSI's body of knowledge by providing empirical evidence that highlights the transformative role of AI in enhancing marketing efficiency, customer relationships, and overall business growth among SMEs from developing economies.

2.4 Theoretical framework ——— The framework of this study is rooted in the Technology Acceptance Model (TAM), extended to incorporate AI-driven capabilities in digital marketing, particularly as they relate to social media platforms. The model hypothesizes that AI-powered tools influence customer engagement, which in turn drives sales growth. Specifically, four interrelated AI tools are central to the framework: (1) Chatbots that improve customer service responsiveness and satisfaction; (2) Content recommendation algorithms that enhance relevance and engagement; (3) Predictive analytics that optimize campaign timing and product promotion; and (4) Targeted advertising systems that improve audience reach and conversion rates. Each of these tools is expected to enhance brand visibility, personalize customer interactions, and increase sales. Building on the work of Venkatesh and Davis (2000) and more recent models adapted for AI and digital platforms (Ramsbotham et al. 2021), the framework creates a direct path from AI integration to sales performance. In Ugandan context, where SMEs often face constraints in human resources and financial capital, AI-powered platforms offer cost-effective marketing tools that are likely to build strong customer relationships and achieve sales growth.

3 Research methodology ——— **3.1 Study design** ——— The study adopted a quantitative cross-sectional research design to examine how AI-powered features on social media platforms influence customer engagement and sales performance among small and medium-sized enterprises (SMEs) in Uganda. This design was selected due to its effectiveness in capturing the current adoption levels, usage patterns, and perceived outcomes of AI-driven social media marketing strategies. A structured survey method was employed to collect standardized data from a wide respondent base, allowing for statistical analysis and generalizability (Saunders et al. 2019; Alzougool 2021).

The study population consisted of registered SMEs in Uganda actively using social media platforms such as Facebook, Instagram, WhatsApp, or TikTok for marketing purposes. Using data from the Uganda Registration Services Bureau (URSB) and recent reports from the Uganda Communications Commission (UCC), SMEs were purposively selected from urban business hubs including Kampala, Gulu, Mbale, and Mbarara, where social media usage is relatively high (UCC 2023). The targeted sample size was 155 SMEs, and a stratified purposive sampling technique was used to ensure representation across sectors such as retail, hospitality, fashion, and agribusiness.

3.2 Instrument development ——— Data was collected using a self-administered structured questionnaire comprising of closed-ended items rated on a five-point Likert scale (1=Strongly disagree to 5=Strongly agree). The questionnaire had five sections: (1) Demographics (size, sector, years of operation), (2) Adoption of AI-powered tools (use of chatbots, targeted ads), (3) Customer engagement indicators (response time, personalization), (4) Sales performance metrics (sales growth, repeat purchase rate), (5) Perceived effectiveness of AI features.

Measurement items were adapted from validated scales in prior studies including Dwivedi et al. (2021) on digital marketing adoption, Chatterjee et al. (2021) on AI-enabled consumer engagement, and Tuten and Solomon (2021) on social media marketing performance. To ensure contextual relevance, the instrument was pre-tested with 10 SME owners and 3 academic experts in marketing and digital technologies in Uganda. To ensure the validity and reliability of the questionnaire, Content validity was established through expert review, while construct validity was evaluated using exploratory factor analysis (EFA) during data analysis. Cronbach's alpha was calculated for internal consistency reliability, with a threshold of 0.70 considered acceptable (Hair et al. 2019).

Items falling below acceptable factor loadings (0.40) or internal consistency were dropped or revised accordingly.

Constructs and items	References
Adoption of AI-powered tools	Chatterjee et al. (2021), Tuten and Solomon (2021)
Customer engagement indicators	Dwivedi et al. (2021)
Sales performance metrics	Dwivedi et al. (2021)
Perceived effectiveness of AI features	Chatterjee et al. (2021), Tuten and Solomon (2021)

TABLE 1: SHOWING CONSTRUCT ITEMS AND THEIR REFERENCES
SOURCE: AUTHORS

3.3 Sample and data collection ——— The survey was conducted over eleven weeks period (April to June 2025). Data collectors distributed printed questionnaires and administered digital versions using Google Forms to accommodate respondent preferences. Before participation, respondents received a consent form explaining the research purpose, anonymity assurance, and voluntary nature of participation. Only SMEs with at least one year of experience in social media marketing were included. For this study, we employed a convenience (non-random) sampling method to gather data on AI-powered social media platforms and how they enhance customer engagement and drive sales growth in Uganda's SMEs. A total of 155 questionnaires were distributed to respondents at several SMEs points and locations from April to June 2025. Out of these, 148 responses were collected. Seven questionnaires were deemed invalid due to incomplete responses. Therefore, only 148 questionnaires were analysed with a response rate of 95%. The data collection targeted individuals aged 18 and older, ensuring a diverse representation of leveraging AI-powered social media platforms to enhance customer engagement and drive sales growth in Uganda's SMEs. The questionnaires were distributed in four cities: Kampala, Gulu, Mbale and Mbarara, to capture a broad regional perspective. Participants were thoroughly informed about the study's objectives and their rights, including the option to decline participation or withdraw at any stage. The completion time for each questionnaire was approximately ten minutes, allowing respondents to provide thoughtful and considered answers. This approach aimed to ensure a reliable and representative sample while accommodating participants' convenience and privacy. Collected data was coded and entered to SPSS version 27 and analysed using both descriptive and inferential statistics. Descriptive analysis summarized demographic characteristics, AI tool usage frequency, and general perceptions. Inferential analysis employed multiple regression analysis to test the relationship between the adoption of AI-powered social media features (independent variables) and two key dependent variables: customer engagement and sales performance. Assumptions of normality, linearity, and multicollinearity were tested using skewness/kurtosis statistics, variance inflation factors (VIFs), and tolerance values (Hair et al. 2019; Field 2022).

3.4 Importance of the hypotheses to be tested ——— Formulating hypotheses is an essential component of empirical research as it provides a clear, testable statement that connects theoretical constructs to observable phenomena. In this study, hypotheses are used to examine the relationship between AI-driven social media marketing tools and the sales performance of SMEs. They guide the analysis by translating the conceptual framework into measurable propositions that can be statistically verified. Testing these hypotheses helps determine whether the theoretical assumptions drawn from the Technology Acceptance Model (TAM) and innovation diffusion theory hold true in the Ugandan SME context.
Specifically, the hypotheses help to:

- a) Establish causal relationships between AI use, customer engagement, and sales outcomes.
- b) Validate whether perceived usefulness and ease of use influence SMEs' adoption of AI-powered marketing tools.
- c) Provide empirical evidence to support or refute claims about the effectiveness of AI in improving sales performance.

3.5 Formulation of research hypotheses ——— Based on the theoretical background and literature review, the following hypotheses are formulated for testing:

- Ha1: Adoption of Artificial Intelligence (AI)-powered tools in social media marketing has a significant positive effect on SME sales performance in Uganda.
- Ha2: Perceived usefulness of AI tools positively influences SME operators' attitude towards using AI in social media marketing.
- Ha3: Perceived ease of use of AI-powered marketing tools significantly enhances SMEs' willingness to adopt AI-driven social media strategies.
- Ha4: Customer engagement mediated by AI applications (such as chatbots, targeted advertising, and predictive analytics) significantly improves sales growth among SMEs.
- Ha5: The attitude of SME operators towards AI use positively mediates the relationship between AI tool adoption and sales performance.

3.6 Hypothesis testing procedure ——— The hypotheses were tested using multiple regression and mediation analysis. Statistical significance was evaluated at a 5% level ($p<0.05$). The dependent variable is Sales Performance, while the independent variables include AI Adoption, Perceived Usefulness, Ease of Use, Customer Engagement, and Attitude toward AI. Mediation effects were examined using Baron and Kenny's (1986) approach or Hayes' PROCESS Macro in SPSS. The testing validated that the theoretical relationships proposed by the Technology Acceptance Model (TAM) and prior AI-marketing literature hold in Uganda's SME context.

4 Empirical results ——— **4.1 Descriptive statistics** ——— The study involved a total of 155 SME participants operating in urban centres of Uganda, specifically Kampala, Gulu, Mbale and Mbarara. The demographic data revealed that 54.7% of the respondents were male and 45.3% female. The majority (36%) were aged between 31 and 40 years, while 28% fell in the 41-50 age group. Most respondents held at least a diploma (42%), followed by bachelor's degree holders (34%), and only 10% had postgraduate qualifications. Regarding business size, 63% of the SMEs employed fewer than 20 workers, aligning with Uganda's official SME classification. Descriptive analysis showed high adoption of AI-powered social media tools. 73% of businesses reported using at least one AI feature on Facebook or Instagram, while 49% reported using WhatsApp Business chatbots. The mean score for perceived usefulness of AI tools in marketing was 3.84 (SD=0.76), perceived ease of use was 3.69 (SD=0.72), attitude toward AI-powered tools was 3.91 (SD=0.81), and perceived customer engagement outcomes averaged 3.88 (SD=0.67). The overall sales growth score over the past 12 months (self-reported) averaged 3.55 (SD=0.89) on a 5-point scale, indicating a moderate to high influence of AI on performance. Cronbach's alpha values ranged from 0.83 to 0.91, confirming internal reliability.

4.2 Hypothesis testing and regression results ——— To test the proposed hypotheses, multiple linear regression analysis was conducted using SPSS version 27. The dependent variable was sales growth, while the independent variables were perceived usefulness, perceived ease of use, attitude toward AI tools, and perceived customer engagement. The model was statistically significant ($F(4, 145)=32.87$, $p<0.001$) with an adjusted $R^2=0.61$, indicating that approximately 61% of the variance in sales growth can be explained by the predictors. The regression coefficients are summarized below.

Predictor	β	Std. Error	t	Sig.
Perceived usefulness	0.216	0.051	4.24	.000
Perceived ease of use	0.174	0.048	3.63	.001
Attitude toward AI-powered tools	0.295	0.054	5.46	.000
Customer engagement	0.241	0.057	4.09	.000

TABLE 2: SHOWING THE COEFFICIENTS OF THE REGRESSION MODEL
SOURCE: AUTHORS

All four predictors had positive effects on sales growth. The strongest predictor was attitude toward AI tools, followed by customer engagement, suggesting that SMEs that perceive AI tools favourably and actively engage customers via these platforms tend to experience higher sales performance.

4.3 Discussion ——— The findings from this study confirm that AI-powered social media tools play a pivotal role in driving customer engagement and enhancing sales performance among SMEs in Uganda. The significant and positive relationship between perceived usefulness and sales aligns with the foundational assumptions of the Technology Acceptance Model (TAM), which states that users are more likely to adopt technologies they believe will enhance performance (Venkatesh and Bala 2008). In this context, Ugandan SMEs appear to recognize that AI tools such as predictive advertising, automated messaging, and real-time insights can offer tangible business value. These tools enable cost-effective targeting and communication, particularly in environments where traditional marketing budgets are limited. Thus, AI allows resource-constrained firms to achieve scale and efficiency previously only accessible to larger corporations. Interestingly, perceived usefulness and ease of use were both significant, aligning with the Technology Acceptance Model (Davis 1989),

but they were not as strong as attitudinal or behavioural factors. This suggests that while the functional value of AI tools matters, the belief systems and proactive use behaviours of SME owners may play an even larger role in translating technology into growth. These results offer actionable insights for both SMEs and policymakers: enhancing awareness, digital skills, and positive narratives around AI can substantially accelerate its impact in Uganda's SME sector. Moreover, attitude emerged as the strongest predictor of sales growth, underlining the importance of managerial perception and openness toward emerging technologies. This reinforces findings by Ransbotham et al. (2021), who argued that technology adoption success often hinges less on the tool itself and more on the mindset of those implementing it. In Uganda, where formal digital training opportunities for SME operators remain sparse, a positive attitude toward AI can act as a catalyst for experimentation and self-directed learning. It suggests that policymakers and private stakeholders must invest in shaping positive narratives and offering real-world success stories of AI-driven growth within local business communities. Creating a community of early adopters or AI ambassadors among SMEs could help normalize usage and reduce psychological resistance, which is often a barrier in technologically underserved contexts. The significance of customer engagement as a driver of sales confirms existing global studies that view engagement as a bridge between brand exposure and transactional outcomes (Chatterjee et al. 2021; Tuten and Solomon 2021). In Uganda's highly competitive and fragmented market environment, where consumer trust and loyalty are still developing in the digital space, AI-enabled engagement tactics such as automated replies, personalized product suggestions, and emotion-aware content may serve as critical differentiators. These tools help SMEs build relationships that feel authentic and responsive, which is especially important for first-time digital buyers or rural customers unfamiliar with online transactions. Moreover, by analysing customer sentiment and behavioural data, AI helps businesses continuously refine their marketing messages and offerings, making campaigns more adaptive and responsive to emerging consumer trends. Additionally, the study reveals that perceived ease of use also contributes significantly to AI adoption and sales outcomes, although it is not the dominant factor. This finding reflects the growing technological familiarity among Ugandan SME operators, especially in urban regions where digital infrastructure is improving. However, ease of use could become a more pressing barrier in rural areas or among businesses led by older entrepreneurs with limited digital exposure. This points to the need for context-sensitive training programs that simplify the onboarding process for AI-based platforms. Tools must be accessible not just linguistically, but also in terms of user interface and backend complexity. Thus, designers of AI marketing tools should prioritize localized, simplified interfaces and provide vernacular-based tutorials that resonate with Ugandan entrepreneurs. Finally, these results have broader implications for SME resilience and competitiveness in Sub-Saharan Africa. As consumer preferences shift toward mobile-first, socially mediated buying behaviours, businesses that fail to adapt will likely be marginalized. AI tools are no longer futuristic luxuries but necessary instruments for competitive positioning, customer retention, and sales forecasting. With proper institutional support, SMEs in Uganda could leverage AI not just for marketing, but for strategic decision-making across inventory management, customer service, and product development. Therefore, AI adoption through social media platforms can serve as a strategic equalizer, reducing the digital divide and giving local entrepreneurs a stronger foothold in both domestic and global markets.

5 Recommendations ——— Based on the findings, the government, in collaboration with universities, private tech firms, and development partners, should design subsidized, sector-specific digital literacy programs to strengthen SME owners' and managers' capacity to adopt and effectively use AI-powered marketing tools. Such programs should focus on practical skills data analytics, social media automation, and AI ethics and be integrated into existing entrepreneurship development initiatives. The Ministry of ICT and innovation hubs should promote collaboration between global technology providers and local SMEs to co-create affordable, contextually relevant AI solutions. These partnerships should encourage knowledge transfer, shared innovation labs, and the development of vernacular-based chatbots and localized AI interfaces that reflect Uganda's market realities. This approach would ensure that AI tools are not only technologically sophisticated but also culturally and economically suitable for local business environments. Finally, policymakers should develop national guidelines and standards for ethical, transparent, and inclusive AI marketing practices, ensuring that data privacy, algorithmic fairness, and consumer protection are prioritized. A national AI oversight body could be mandated to monitor compliance, promote responsible innovation, and prevent exploitative or biased use of automated marketing systems. Clear governance mechanisms would enhance public trust and encourage sustainable AI integration in digital business ecosystems.

5.1 Conclusion ——— This study set out to examine the role of AI-powered social media platforms in enhancing customer engagement and driving sales growth among SMEs in Uganda. Drawing from the extended Technology Acceptance Model (TAM) and empirical insights from 155 SME operators, the research confirmed that AI features such as chatbots, content recommendation systems, predictive analytics, and targeted advertising significantly improve business outcomes. The regression analysis revealed that attitude toward AI tools and customer engagement are the strongest predictors of sales growth, followed by perceived usefulness and ease of use. These findings suggest that while technological functionality is essential, the beliefs, behaviours, and adaptability of business owners play an equally critical role in the successful integration of AI into SME operations. The study also highlights the unique opportunity AI offers for SMEs in Uganda to overcome resource limitations, tap into broader markets, and build personalized relationships with customers at scale. As digital transformation deepens in Africa, and consumer behaviour continues shifting toward mobile and online platforms, SMEs that leverage AI-integrated tools are likely to gain a sustained competitive advantage. However, challenges such as digital skills gaps, tool accessibility, and infrastructure disparities still limit widespread adoption and must be addressed through coordinated support from the private sector, government, and development partners.

5.2 Implications ——— For SME owners, the findings emphasize the importance of cultivating a positive and proactive mindset toward digital innovation. Business leaders should explore and experiment with affordable AI tools embedded within platforms like Facebook Business Suite, WhatsApp Business, and Instagram to automate

routine marketing tasks, improve responsiveness, and track campaign performance. Investing in basic digital literacy and social media strategy training will also empower entrepreneurs to maximize the return on AI-enabled platforms. For technology providers and social media companies, the study underscores the need to design localized and intuitive AI tools tailored to small business contexts in emerging economies. Simplified user interfaces, AI tutorials in local languages, and feature sets aligned with common SME needs (e.g., inventory alerts, customer chat templates) can improve uptake and user satisfaction. For government agencies and policymakers, there is a clear call to support digital inclusion initiatives targeting SMEs. This includes offering training subsidies, integrating AI use cases into the national entrepreneurship curriculum, and promoting AI-readiness frameworks within Uganda's national SME development strategy. Additionally, investment in affordable internet access, particularly in peri-urban and rural regions, will be essential to ensure equitable participation in the digital economy. Collectively, these recommendations can accelerate the diffusion of AI-driven social media marketing across Uganda's SME landscape, enabling firms to not only survive but thrive in a rapidly digitizing marketplace.

5.3 Limitations and future research ——— While this study provides valuable insights into the impact of AI-powered social media platforms on customer engagement and sales growth among SMEs in Uganda, several limitations must be acknowledged. First, the study relied primarily on self-reported data from SME owners and managers, which may be subject to social desirability bias or overestimation of actual tool usage and sales performance. Although care was taken to ensure the reliability of responses, objective performance data (e.g., profit margins, conversion rates) would strengthen the empirical foundation of future studies. Secondly, the sample was drawn predominantly from urban areas such as Kampala, Gulu, Mbale and Mbarara, where digital infrastructure is relatively more developed. As such, the findings may not fully represent SMEs operating in rural and underserved regions, where internet access, digital literacy, and exposure to AI tools are significantly lower. Future studies should expand coverage to include rural SMEs and informal enterprises to better understand the digital divide in AI adoption and its implications for inclusive economic development. Thirdly, this study focused on four AI-driven factors perceived usefulness, ease of use, attitude, and customer engagement without incorporating other moderating variables that may influence sales outcomes, such as firm size, industry sector, or owner's digital competency. Future research could adopt structural equation modelling (SEM) to test more complex, multi-path relationships and identify which contextual factors amplify or weaken the effect of AI tools on business performance. Lastly, given the rapid evolution of AI technologies, particularly generative AI (e.g., AI content creation, voice assistants), future research should explore how these advanced tools are being adopted and perceived in emerging markets. Longitudinal studies could also be employed to examine the sustainability of AI impacts on SME growth over time and whether early adopters achieve long-term competitive advantages compared to late adopters.

Poznámky | *Notes* ——— This paper is an output of the research project VEGA 1/0109/23 Framework for systematisation of digital transformation in organisations with the focus on marketing and business processes.

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Kľúčové slová | Key Words ——— artificial intelligence (AI), social media marketing, small and medium-sized enterprises (SMEs), customer engagement, sales performance, digital marketing adoption, emerging markets, digital transformation | *umelá inteligencia (AI), marketing na sociálnych médiách, malé a stredné podniky (MSP), zapojenie zákazníkov, výkonnosť predaja, zavádzanie digitálneho marketingu, rozvíjajúce sa trhy, digitálna transformácia*

JEL klasifikácia | *JEL Classification* ——— L26, M15, M31, O33

Résumé ——— ***Využitie sociálnych médií poháňaných umelou inteligenciou na zvýšenie angažovanosti zákazníkov a podporu rastu predaja v ugandských MSP***

V digitálnej ére umelá inteligencia (AI) premenila platformy sociálnych médií na výkonné marketingové nástroje, najmä pre malé a stredné podniky (MSP), ktoré sa snažia zlepšiť interakciu so zákazníkmi a zvýšiť predaj. Táto štúdia skúma aká je úloha funkcií poháňaných umelou inteligenciou, ako sú chatboty, algoritmy odporúčania obsahu, cielená reklama a prediktívna analýza na platformách ako Facebook, WhatsApp, TikTok a Instagram, pri zvyšovaní viditeľnosti značky a ovplyvňovaní predajných výkonov na príklade MSP v Ugande. V rozšírenom modeli prijatia technológie (TAM) štúdia použila kombinovaný prístup, pričom zhromaždila údaje z prieskumu od 155 prevádzkovateľov MSP v Kampale, Gulu, Mbale a Mbarare. Na základe viacnásobnej regresnej analýzy zistenia ukazujú, že postoj k nástrojom AI a angažovanosť zákazníkov sú najsilnejšími prediktormi rastu predaja, nasledované vnímanou užitočnosťou a jednoduchosťou používania. Štúdia zdôrazňuje rastúci význam umelej inteligencie v ugandskom ekosystéme malých a stredných podnikov a podčiarkuje potrebu rozvoja digitálnych zručností, lokalizovaných nástrojov umelej inteligencie a inkluzívnej politickej podpory s cieľom maximalizovať vplyv umelej inteligencie na rast podnikania. Štúdia končí praktickými odporúčaniami a navrhuje smery budúceho výskumu s cieľom prekonať digitálne rozdiely a rozšíriť pochopenie transformatívneho potenciálu umelej inteligencie na rozvíjajúcich sa trhoch..

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ACHIEVING COMPARATIVE ADVANTAGE THROUGH DISTRIBUTION MODELS: DIGITAL DELIVERY, DIRECT CONNECTIONS, AND CUSTOMER BONDING

In an era characterized by rapid technological advancement and shifting consumer expectations, firms increasingly recognize distribution not merely as a logistical necessity but as a strategic lever of competitive and comparative advantage. Traditionally, comparative advantage has been associated with the efficient production of goods based on factor endowments, such as natural resources or labor. However, in the digital economy, the source of comparative advantage often lies in how products and services reach customers and the value-added interactions created along that journey. Distribution models - especially those that leverage digital channels and direct customer relationships - have become central to how organizations differentiate themselves, reduce costs, and build customer loyalty.

A company's comparative advantage refers to its ability to produce and deliver goods or services at a lower opportunity cost than its competitors, allowing it to operate more efficiently or create greater value in specific areas. Unlike absolute advantage, which focuses on overall productivity, comparative advantage emphasizes relative efficiency - how well a company allocates its resources compared to others. This advantage may stem from superior technology, specialized expertise, unique distribution systems, brand reputation, or closer customer relationships. When effectively leveraged, comparative advantage enables a firm to focus on its strengths, differentiate itself in the marketplace, and achieve lasting profitability.

Comparative advantage in distribution might be achieved through modern distribution models, focusing on three interrelated strategies: digital distribution of goods and services, direct-to-customer channels, and the development of customer relationships. In combination, these approaches allow firms to enhance efficiency, capture data-driven insights, personalize offerings, and foster trust.

Direct-to-consumer (D2C or DTC) is a business model in which a company sells its products directly to end customers, bypassing traditional intermediaries such as wholesalers and retailers. Brands typically use D2C channels, often e-commerce platforms, to build closer relationships with customers, gain full control over the customer experience, and collect direct feedback and data. While the D2C model offers advantages such as higher profit margins and greater control, it also requires companies to manage all aspects of marketing, sales, and delivery. Traditional distribution models, by contrast, rely on intermediaries like wholesalers, retailers, or agents to connect producers with consumers. The D2C approach can also be viewed as a departure from another recent buzzword in distribution literature: the agency model. Although the agency model allows brands to retain substantial control over the cus-

tomer experience, it involves sharing operational responsibilities and commissions with an external intermediary.

From an economic perspective, comparative advantage through distribution emerges when a firm's chosen model enables it to deliver value at lower opportunity cost than competitors. This may occur through operational efficiencies, faster time to market, superior customer access, or enhanced service quality. For example, Amazon's distribution model is built on a combination of automated warehouses, predictive logistics, and data analytics. It has allowed the company to achieve cost and speed advantages. Similarly, Apple's control over both physical and digital distribution channels strengthens its ability to maintain brand identity and optimize the customer experience.

In essence, the way a company organizes its distribution system determines not only how efficiently it operates, but also how effectively it differentiates itself in the marketplace. This strategic alignment between production and distribution creates a unique comparative edge that is difficult for competitors to imitate. Possibly, such an approach requires not only learning from others but thinking about innovative and novel ways of how to bring products to customers.

For many businesses, particularly those in services, software, entertainment, and education, products are no longer delivered physically but through digital platforms. Digital distribution eliminates many of the traditional constraints associated with geography, inventory, and intermediary costs, providing immediate access to global markets. For instance, streaming services such as Netflix or Spotify distribute content directly to millions of users via cloud-based platforms. The marginal cost of serving an additional customer is zero to none, allowing these firms to exploit economies of scale and scope. Similarly, software companies that once relied on boxed products now use subscription-based models delivered digitally, which provide continuous revenue streams and closer customer engagement.

Digital distribution also supports comparative advantage through the accumulation and use of data. Each digital transaction or interaction generates information about customer preferences, behavior, and satisfaction. Firms that effectively analyze this data can personalize recommendations, improve products, and anticipate market trends. This data-driven adaptability may bring the necessary market responsiveness and provide stimuli for further innovation.

Moreover, digital distribution reduces entry barriers for small and medium-sized firms and start-up entrepreneurs. By leveraging online marketplaces, social media, and e-commerce platforms, even resource-constrained enterprises can reach international audiences without substantial upfront investments in physical infrastructure. As a result, digital distribution democratizes access to markets while still allowing well-positioned firms to build scale-based comparative advantages through superior platform design, analytics, and/or customer service.

Tesla provides a prime example for direct distribution in the traditional product-based market: by bypassing dealerships, the company retains control over the entire sales process and customer interaction. This model enhances transparency, allows for consistent pricing, and ensures that every touchpoint reflects the brand's ethos. Similarly, fashion brands such as Nike have increasingly shifted to direct digital channels, integrating online stores, mobile apps, and loyalty programs that personalize the shopping experience.

Thus, direct distribution has the potential not only to increase operational efficiency but also to foster differentiation through authenticity, responsiveness, and control. This might be essential in a competitive environment, where customers value experience as much as or even more than product quality. In modern markets, products are easily replicated, but relationships are not. The process of distribution plays a vital role in shaping customer perceptions and emotional connections.

Customer bonding arises from consistent positive interactions, trust, and a sense of shared values. Companies that distribute directly, whether digitally or physically, are uniquely positioned to cultivate this bond. For example, personalized recommendations, responsive support, and community-building initiatives (such as user forums or brand ambassador programs) create a sense of belonging. These emotional connections translate into brand loyalty, reduced price sensitivity, and positive word-of-mouth - all of which reinforce the firm's comparative advantage. Ultimately, bonding with customers converts functional distribution into relational capital. Firms that achieve this transformation build a self-reinforcing advantage: satisfied customers generate repeat business, valuable feedback, and social validation that attract new customers at lower acquisition cost. Moreover, in the digital environment, the "last mile" of distribution - the interface between company and customer - has become a key competitive battleground. Timely delivery, seamless user experiences, transparent return policies, and ethical practices all contribute to trust and satisfaction.

Achieving comparative advantage through distribution requires integration of the three dimensions discussed: digital access, direct interaction, and customer bonding. Successful firms orchestrate these dimensions to create a virtuous cycle. Digital platforms enable direct communication, which in turn deepens customer relationships, generating feedback that refines the digital experience. For example, Apple's ecosystem exemplifies this integration: digital distribution through the App Store, direct retail stores for personal engagement, and a strong emotional brand connection all reinforce one another. The result is a unique comparative advantage that transcends mere production efficiency - it resides in the firm's ability to deliver, interact, and connect.

It is fair to say, that digital distribution also exposes firms to a range of strategic and technical vulnerabilities. Going direct can create channel conflict with existing partners, especially if pricing or product access differs across channels. Dependence on digital platforms and technologies increases risks related to cybersecurity, system failures, and data privacy compliance (which may be different for various international markets). Additionally, the online environment often limits human interaction, making it difficult to foster loyalty or convey brand values effectively. In highly competitive digital markets, maintaining visibility and differentiation becomes a continuous challenge, meaning that while direct and digital channels offer freedom and flexibility, they demand ongoing investment, maintenance, and cutting-edge technical expertise.

In today's interconnected world, comparative advantage extends far beyond production costs and natural endowments. Digital distribution reduces barriers and enhances efficiency; direct distribution empowers firms with data, control, and authenticity; and customer bonding transforms transactions into enduring relationships. Organizations that successfully integrate these elements redefine what it

means to be competitive. Their advantage lies not only in what they produce but in how they reach and relate to those they serve. In this sense, the future of comparative advantage will be written not in factories or supply chains alone, but in the intelligent, direct, and emotionally sound ways firms distribute and deliver value to customers.

Résumé ——— ***Komparativní výhoda skrze přímou distribuci: Digitální doručení, přímá komunikace a budování vztahů se zákazníky***

Komparativní výhoda prostřednictvím přímé distribuce spočívá v schopnosti firem doručovat hodnotu zákazníkům efektivněji, osobněji a autentičtěji. Digitální doručení, přímá komunikace a dlouhodobé budování vztahů se zákazníky se stávají klíčovými faktory konkurenceschopnosti. Pojem komparativní výhody sahá za hranice výrobních nákladů a přírodních zdrojů. Modely přímé a digitální distribuce snižují bariéry vstupu na trhu a potenciálně zvyšují efektivitu. Přímá distribuce poskytuje firmám data, možnost kontroly nad zákaznickou cestou a autentičnost při budování vztahů se zákazníky a konzistentní brand image.

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SÚŤAŽ FLEMA MEDIA AWARDS 2025

Tento rok sa odohral dvadsiaty ročník súťaže FLEMA. Ide o súťaž organizovanú v Českej a Slovenskej republike, ktorá sa zameriava na mediálne kampane a využitie jednotlivých mediatypov. Vďaka tomu umožňuje porovnanie úrovne mediálneho plánovania a inovatívnych komunikačných stratégií v oboch krajinách. Vedecký časopis Marketing Science & Inspirations prináša informácie, ktoré zverejnili organizátori súťaže o jej priebehu a výsledkoch.

Kampane prihlásené do súťaže boli posudzované v troch kategóriách podľa sledovaného cieľa: best awareness campaign, best consideration campaign, best conversion campaign. Súčasne boli vyhodnotené aj kampane podľa realizácie: best spot campaign a best non spot campaign. Ďalej boli ocenené kampane v kategóriách: grand prix, bravery award, innovation award, best author a best advertiser. Do súťaže bolo celkovo prihlásených 46 kampaní, ktoré boli zaradené práce, ktoré boli zrealizované na českom alebo slovenskom trhu v období od 1. januára 2024 do 30. júna 2025. Výsledky boli vyhlásené 30. 9. 2025. Víťazmi v jednotlivých kategóriách sa stali:

best awareness campaign ——— (#prosteja/dm drogerie markt/Wavemaker, WPP Media, Ogilvy PR (CZ)),
best consideration campaign ——— (Duster pro radost/Dacia/OMD Czech, Seznam Brand Studio (CZ)),
best conversion campaign ——— (Jak KFC zachutnalo české rapové komunitě/ AmRest, s. r. o./PHD, FUSE (CZ)),
best spot campaign ——— (Jama Levova/Slovenská Sporiteľňa/Wavemaker Slovakia (SK)),
best non spot campaign ——— (Duster pro radost/Dacia/OMD Czech, Seznam Brand Studio (CZ)),
grand prix ——— (Jama Levova/Slovenská Sporiteľňa/Wavemaker Slovakia (SK)),
bravery award ——— (Nahí/Slovak Telekom/Wavemaker Slovakia, MUW Saatchi & Saatchi (SK)),
innovation award ——— (Vertikálny futbal – Serie A, ktorá prepísala gravitáciu a divákov pritiahla k AMC/AMC Networks Inc./ Mindshare Slovakia, s. r. o. (SK)),
best author ——— (Wavemaker Slovakia (CZ)),
best advertiser ——— (Dacia Česká Republika (CZ)).

Všetky kampane prihlásené do súťaže si je možné pozrieť na webovej stránke súťaže www.flemedia.cz.

DICTIONARY OF USEFUL MARKETING TERMS o

optimal | *optimálny* ——— The team analyzed customer behavior to determine the optimal pricing strategy. | *Tím analyzoval správanie zákazníkov, aby určil optimálnu cenovú stratégiu.*

optimistic | *optimistický* ——— Marketers are optimistic about growth in emerging markets. | *Marketéri sú optimistickí, pokiaľ ide o rast na rozvíjajúcich sa trhoch.*

option | *možnosť* ——— Offering a „buy now, pay later" option increased conversion rates significantly. | *Ponuka možnosti „kúpiť teraz, zaplatiť neskôr" výrazne zvýšila mieru konverzie.*

optional | *voliteľný, dobrovoľný* ——— Participation in the loyalty program is optional but highly encouraged. | *Účasť vo vernostnom programe je dobrovoľná, ale veľmi odporúčaná.*

optionally | *voliteľne, dobrovoľné, prípadne* ——— Customers can optionally subscribe to receive exclusive deals. | *Zákazníci sa môžu dobrovoľne prihlásiť na odber exkluzívnych ponúk.*

or | *alebo* ——— You can choose a physical gift or a digital voucher as your reward. | *Ako odmenu si môžete vybrať fyzický darček alebo digitálny poukaz.*

oral | *ústny* ——— Oral communication skills are essential in sales and brand presentations. | *Ústne komunikačné zručnosti sú kľúčové pri predaji a prezentácii značky.*

orange | *oranžový, pomaranč* ——— The new packaging features a bold orange color to stand out on the shelves. | *Nové balenie má výraznú oranžovú farbu, aby vyniklo na regáloch.*

orangeade | *oranžáda* ——— The company launched a limited-edition orangeade for the summer season. | *Spoločnosť uviedla na trh limitovanú edíciu oranžády na letnú sezónu.*

orbit | *obežná dráha, obehať* ——— Influencer marketing is now in the orbit of every modern brand strategy. | *Influencer marketing je dnes v obežnej dráhe každej modernej stratégie značky.*

order | *objednávka, objednať* ——— The company received a large online order during the holiday season. | *Spoločnosť dostala veľkú online objednávku počas sviatočného obdobia.*

organization | *organizácia* ——— A strong organization is essential for building a global brand. | *Silná organizácia je nevyhnutnosťou pre budovanie globálnej značky.*

organizational | *organizačný* ——— Good organizational structure helps improve communication in marketing teams. | *Dobrá organizačná štruktúra pomáha zlepšiť komunikáciu v marketingových tímoch.*

organizational chart | *organizačná schéma* ——— The marketing department updated its organizational chart to reflect new roles. | *Marketingové oddelenie aktualizovalo svoju organizačnú schému, aby odrážala nové role.*

organize | *organizovať* ——— They plan to organize a promotional event in the city center. | *Plánujú organizovať propagačné podujatie v centre mesta.*

organized | *organizovaný* ——— The campaign was well organized and reached millions of consumers. | *Kampaň bola dobre organizovaná a zasiahla milióny spotrebiteľov.*

orientation | *orientácia* ——— The brand's market orientation focuses on customer needs. | *Trhová orientácia značky sa zameriava na potreby zákazníkov.*

oriented | *orientovaný* ——— The company is customer-oriented and invests heavily in service quality. | *Spoločnosť je zákaznícky orientovaná a výrazne investuje do kvality služieb.*

origin | *pôvod* ——— The origin of the product is often highlighted in international marketing. | *Pôvod produktu je často zdôrazňovaný v medzinárodnom marketingu.*

original | *originálny* ——— The agency created an original slogan that stood out from competitors. | *Agentúra vytvorila originálny slogan, ktorý prekonal konkurenciu.*

originally | *pôvodne* ——— The campaign was originally designed for the local market but later expanded. | *Kampaň bola pôvodne navrhnutá pre lokálny trh, no neskôr sa rozšírila.*

out | *von, mimo* ——— The new collection is out now and available in all stores. | *Nová kolekcia je už vonku a dostupná vo všetkých predajniach.*

outbid | *prebiť ponuku* ——— In online auctions, brands often outbid each other to secure advertising space. | *V online aukciách značky často prebijú ponuku jedna druhej, aby získali reklamný priestor.*

outdoor | *vonkajší* ——— Outdoor campaigns are effective for reaching mass audiences. | *Vonkajšie kampane sú účinné na oslovenie masového publika.*

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