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INSTAGRAM COMMUNICATION STRATEGIES OF CENTRAL AND EASTERN EUROPEAN CAPITALS: ACTIVITY, ENGAGEMENT, AND CONTENT CHARACTERISTICS*

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Abstract. This paper examines how Instagram is utilised as a tool for online tourism communication through a comparative analysis of the official English-language profiles of six Central and Eastern European capitals: Bratislava, Bucharest, Budapest, Prague, Vienna, and Warsaw. The study covers a one-year period from November 2023 to October 2024. Adopting a mixed-methods approach, it combines quantitative analysis of posting activity (2,021 posts), user engagement, and caption length with qualitative keyword analysis of textual content. The results reveal substantial differences in posting behaviour, digital presentation, and communication styles across the analysed cities, reflecting distinct destination marketing strategies and underscoring the importance of content quality over posting frequency. A key empirical contribution is the identification of a positive correlation between caption length and user engagement, suggesting that more detailed and context-rich captions enhance audience interaction. At the same time, the findings indicate that strong visual identity and destination positioning may compensate for shorter captions. Furthermore, the analysis uncovers city-specific narrative patterns aligned with local tourism assets and target segments, offering deeper insight into how destinations construct their digital identities. By integrating performance indicators with content characteristics in a comparative Central and Eastern European context, the study addresses an underexplored area in existing research and advances understanding of Instagram-based city branding. The paper also offers practical implications for social media marketing and outlines directions for future research, including longitudinal, cross-platform, and behaviour-oriented analyses.

Keywords: Instagram; destination marketing; tourism communication; user engagement; content analysis; city branding; social media analytics; Central and Eastern Europe

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1. Introduction

Digital media represent a rapid and effective means of sharing information about current events and trends (Yujie et al., 2022; Mialkovska et al., 2023) and play a crucial role in shaping public opinion and community attitudes (Chang & Chang, 2023). In tourism, these channels are pivotal for promoting destinations and shaping their reputation and perception among potential visitors (Baber & Baber, 2022; Moscardi & Nakatani, 2022; Solanki & Thomas, 2023; Santarsiero et al., 2024). Social networks, particularly Instagram (hereinafter IG), have become central to forming the image of destinations (An et al., 2022) and strengthening their marketing

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potential (Solanki & Thomas, 2023), influencing not only the number of visitors but also tourist behaviour and emotional responses (Chen, 2023).

IG stands out as a popular platform for sharing content and social interaction (Silva & Floriano, 2024). Users can post images, captions, and hashtags that reflect personal travel experiences (Paül i Agustí, 2024), inspiring others and sparking interest in specific locations (Eman & Refaie, 2023). Destination organisations, in turn, utilise official profiles to promote events, historical and cultural attractions, and other points of interest (Mele et al., 2021; Kumar et al., 2024). Engagement metrics from these posts provide valuable feedback on audience preferences (Kajikawa et al., 2023), and systematic analysis helps reveal how digital media contribute to shaping city images and the broader landscape of tourism (Stankov & Gretzel, 2021).

2. Theoretical background

The impact of digital media on tourism has been explored from multiple perspectives, including digital literacy, technology adoption, education, and professional development (Adeyinka et al., 2020; Marx et al., 2021; Sinanan & Riter, 2024). In recent years, however, research attention has shifted towards the role of social media in tourism marketing (Armutcu et al., 2023; Kilipiri et al., 2023), city branding (Fan & Zhang, 2023; Wan & Li, 2024), and the promotion of tourist destinations or even national parks (Camilleri & Kozak, 2022; Chen, 2023; Korená & Pártlová, 2023). Social media is also frequently debated within the context of the tourism industry as a whole (Rehman et al., 2023; İlhan & Günay, 2024), with growing attention drawn to specific attributes of how destinations are perceived through official and user-generated content shared online (Ilieva & Boteva, 2023; Chen, 2024; Lazarević et al., 2024). A substantial body of research examines user engagement, satisfaction, and the influence of social media on travel intentions and decision-making processes (Damayanti & Indrawati, 2023; Ibrahim, 2023; Liu & Chong, 2023; Vieira et al., 2023; Grosso et al., 2024; Guerreiro et al., 2024; Kim & Lei, 2025; Rahayu et al., 2024; Shah et al., 2024; Viñán-Luden & de Campos, 2024).

Within IG-based research, a common distinction is made between visual and textual content. Studies dealing with visual elements analyse how images influence destination attractiveness and awareness, demonstrating that although many city-related photos on IG are not directly relevant to tourists, those with a clear tourism focus tend to generate higher engagement (Arzbaecher et al., 2022; Paradise-Vit et al., 2024). In parallel, research on the textual content of IG posts explores how captions shape user responses, applying analytical models or survey-based approaches to illustrate the effect of such content on travel decisions. These studies suggest that shorter and simpler captions about lively destinations are inclined to capture interest, encourage interaction or even build connections, whereas longer and more complex texts for less dynamic or culturally themed sites are associated with lower engagement in certain contexts (Aramendia-Muneta & Olarte-Pascual, 2022; Sharma & Arora, 2023; Tugores-Ques & Bonilla-Quijada, 2023; Yu et al., 2024). At the same time, there is increasing interest in the interaction between textual and visual elements in digital travel storytelling, with evidence that the combined use of images, hashtags, emojis, and keywords creates complex communication narratives that form user perception and engagement (Marwick, 2015; Highfield & Leaver, 2016; Qian, 2023).

Despite these significant advances, several research gaps remain. First, existing studies often examine user engagement without sufficiently linking it to concrete posting behaviour, such as activity levels or content structure. Second, while prior research highlights the importance of textual content, there is limited empirical evidence on how specific textual characteristics, particularly caption length, relate to this type of engagement in a comparative, real-world context. Third, although digital storytelling and thematic communication are widely discussed, there is a lack of systematic comparative analyses of content themes and keyword usage across multiple destinations. In addition, the existing empirical research concentrates on well-established Western destinations, while Central and Eastern European cities remain underrepresented. Moreover, quantitative indicators of posting activity and user engagement are rarely integrated with qualitative content dimensions within a single framework.

This study addresses the above gaps by providing a comparative, mixed-methods analysis of official Instagram profiles of selected Central and Eastern European capitals. The combination of quantitative metrics (posting frequency, engagement, caption length) with qualitative keyword and thematic analysis offers a more

comprehensive perspective on how digital communication strategies contribute to destination image and audience engagement.

3. Research objective and methodology

Building on the above theoretical background, this study investigates six Central and Eastern European capitals (Bratislava, Bucharest, Budapest, Prague, Vienna, and Warsaw), characterised by a rich historical heritage, distinctive architecture, and diverse cultural offerings. Each city operates official English-language Instagram profiles that target mainly international audiences. The primary objective of the study is to analyse how these destinations communicate their tourism value over the course of one year through posting activity and textual content, with a particular focus on identifying differences in communication strategies, engagement patterns, and thematic orientation.

To achieve this objective, the study is guided by three research questions (RQ1, RQ2, RQ3):

RQ1: What differences in posting frequency and intensity can be observed among the Instagram profiles of the selected capitals?

RQ2: What is the relationship between caption length and user engagement, measured by the average number of likes?

RQ3: Which keywords appear most frequently in the posts, and which tourism-related themes and trends do they represent?

In line with these questions, the study seeks to evaluate the effectiveness of Instagram-based communication in tourism and to provide practical implications for optimising social media strategies in destination marketing.

Methodologically, the research adopts a mixed-methods approach combining quantitative and qualitative analysis of secondary Instagram data. Descriptive statistical analysis is used to assess posting activity and intensity (RQ1). Correlation analysis is applied to examine the relationship between caption length and user engagement (RQ2). Finally, qualitative content analysis, supported by keyword frequency analysis, is employed to identify dominant themes and communication patterns in the published posts (RQ3). This integrated approach enables a comprehensive assessment of both performance indicators and content characteristics.

3.1 Sampling and data collection

The research sample consists of six Central and Eastern European capitals: Bratislava, Bucharest, Budapest, Prague, Vienna, and Warsaw. Their selection was based on two criteria: 1) the existence of an official English-language Instagram profile and 2) regular posting activity, defined as at least one post per week over a one-year period. Although originally considered for the sample, Sofia (the capital of Bulgaria) was excluded as its profile did not fully meet the criteria. Table 1 lists the included profiles along with account names, creation dates, and follower counts as of October 30, 2024.

Table 1. Overview of IG profiles studied (as of October 30, 2024, in alphabetical order)

City	Profile name	Profile creation	Followers
Bratislava	visitbratislava	October 2015	36,865
Bucharest	visitbucharest_official	November 2019	11,742
Budapest	visitbudapest_official	January 2015	95,649
Prague	cityofprague	February 2015	114,931
Vienna	vienna	September 2012	496,897
Warsaw	go2warsaw	April 2014	100,953

Source: authors' own processing

Data were collected from November 1, 2023, to October 30, 2024, to capture a full year. All posts were gathered manually from public Instagram accounts. For each post, the following details were recorded: publication date, the complete caption text and its length in characters, as well as engagement metrics such as the number of likes

and comments. Posts identified as advertisements or those lacking captions were excluded to ensure consistency and comparability of the data.

3.2 Methods

Descriptive analysis

The analysis commenced with the calculation of both the total and average monthly number of posts for each IG profile over the study period. These descriptive statistics provided a basis for answering RQ1 and are presented in the Results section.

Correlation analysis

To address RQ2, the average number of likes, comments, and the mean length of textual content (in characters) per post were computed for each profile. The Pearson correlation coefficient was subsequently applied to assess the relationship between average caption length and the number of likes per post as an indicator of user engagement according to the following formula:

$$r = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2} \sqrt{\sum_{i=1}^n (y_i - \bar{y})^2}}$$

Where:

x_i – individual values of caption length (number of characters)

$\bar{x}$ – average caption length

y_i – individual values of the number of likes

$\bar{y}$ – average number of likes

The resulting correlation values and inter-city comparisons are reported in the Results section.

Qualitative analysis

For RQ3, a qualitative content analysis was conducted using Atlas.ti software Version 25.0.0 to examine the textual components of posts. This approach enabled the identification and visualisation of frequently occurring keywords through word clouds for each city, as displayed in the Results section. The analysis focused on extracting the frequency and significance of keywords relevant to tourism promotion, particularly those reflecting cultural and social attributes. To enhance semantic clarity, common stop words (e.g. “the,” “a,” “an”), emojis, and other non-informative symbols were excluded. Instead, emphasis was placed on adjectives, adverbial nouns, and verbs, which provide deeper insights into the characteristics, attitudes, and actions expressed within the posts. The relative frequency of the most prevalent keywords for each city is indicated in parentheses in the Results section.

4. Results

Activity on IG profiles

To evaluate posting activity among the cities’ IG profiles, both the total and average monthly number of posts were calculated for the monitored period. The analysis revealed significant variation in activity levels across the sample. An overview of these results, including follower counts for context, is provided in Table 2.

Table 2. Posting frequency and follower counts for IG profiles (as of October 30, 2024, by total number of posts)

City	Total posts	Average Posts/Month	Followers
Bratislava	587	48.9	36,865
Budapest	430	35.8	95,649
Vienna	379	31.6	496,897
Warsaw	302	25.2	100,953
Prague	166	13.8	114,931
Bucharest	157	13.1	11,742
Total	2,021	28.1 (total average)	857,037

Source: authors' own processing

Bratislava exhibited the highest posting activity, with a total of 587 posts and an average of 48.9 posts per month, despite having a comparatively smaller follower base. Budapest ranked second, generating 430 posts and averaging 35.8 posts per month. Vienna followed with 379 posts (31.6 per month) and the highest follower count among all profiles. Warsaw produced 302 posts, averaging 25.2 per month. Prague, despite being the second-most-followed account, was less active, with 166 posts (13.8 per month). Bucharest was the least active profile, publishing 157 posts at an average of 13.1 per month.

Relationship between the length of textual content and the number of likes

A quantitative analysis was conducted to explore how the length of captions relates to user engagement on the IG profiles concerned. For each city, the total and average number of likes, comments, and average caption length (in characters including spaces) were calculated, as shown in Table 3.

Despite frequent posting, Bratislava achieved high engagement with an average of 566.7 likes and 13.5 comments per post. Vienna, however, recorded the highest overall engagement, reaching an average of 5,505.2 likes and 74.2 comments per post, even though its captions were relatively short. Prague reached a high average of 1,935.8 likes per post with less frequent posting, while Warsaw had a similar average of 1,780.6 likes and the second-highest number of comments. Budapest, despite a higher post volume and longer captions, recorded lower averages for likes and comments. Bucharest had the lowest engagement across all metrics.

Table 3. Summary statistics of likes, comments, and caption length for IG posts (by total number of posts)

City	Total number of posts	Total number of likes	Total number of comments	Total number of characters (including spaces)	Average number of likes	Average number of comments	Average number of characters (including spaces)
Bratislava	587	332,626	7,920	180,662	566.7	13.5	307.8
Budapest	430	188,998	2,261	175,249	439.5	5.3	407.6
Vienna	379	2,086,487	28,106	94,385	5,505.2	74.2	249.1
Warsaw	302	537,745	6,603	86,929	1,780.6	21.9	287.8
Prague	166	321,341	1,904	61,058	1,935.8	11.5	367.8
Bucharest	156	26,811	215	24,579	171.9	1.4	157.6

Source: authors' own processing

The analysis of caption length evidenced clear differences among the profiles, with Budapest having the longest average captions at 407.6 characters per post, followed by Prague with 367.8, and Bratislava with 307.8. Warsaw averaged 287.8 characters, whereas Vienna, despite the highest engagement, had an average of 249.1. Bucharest's captions were the shortest at 157.6 characters per post.

The findings showed no clear direct link between caption length and engagement. Vienna, with shorter average captions, led in both likes and comments, while Budapest, with longer captions, had lower engagement. This suggests that while caption length may influence engagement to some extent, other factors such as content quality, visual appeal, and the size of the established audience are likely more significant.

To further examine how caption length relates to user engagement, Pearson correlation coefficients were calculated for each profile, as presented in Table 4.

Table 4. Correlation coefficients between caption length and average number of likes (from highest to lowest)

City	Average number of likes	Average number of characters	Correlation coefficient values
Bratislava	566.7	307.8	0.62
Budapest	439.5	407.6	0.58
Prague	1,935.8	367.8	0.54
Warsaw	1,780.6	287.8	0.49
Vienna	5,505.2	249.1	0.45
Bucharest	171.9	157.6	0.33

Source: authors' own processing

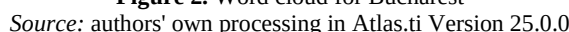
The following section presents the results of the content analysis for each city, arranged alphabetically.

Bratislava (see Figure 1) stands out among the examined profiles for its strong economic context, as indicated by the most prominent words *support* (254 occurrences; 2.01%) and *financial* (253; 2.00%), surpassing the frequency of conventional tourism-related vocabulary. Other common terms include *city* (215; 1.70%) and *history* (78; 0.62%), along with positively connoted adjectives, e.g. *beautiful*, *charming*, *stunning*, *unique*, and *iconic*. This linguistic pattern highlights Bratislava's visual appeal, historical significance, and its depiction as a dynamic metropolis offering a diverse range of activities. The word cloud also features expressions such as *views*, *castle*, *streets*, *day*, *time*, *charm*, and *coronation*, further evoking the city's historical atmosphere and attractiveness. Frequently used verbs (*explore*, *experience*, *visit*, *enjoy*, *take*, and *discover*) encourage tourism and underscore the city's attractions and cultural heritage.

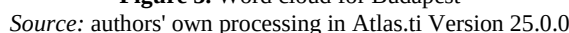


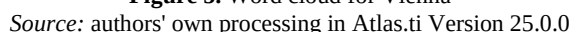
Source: authors' own processing in Atlas.ti Version 25.0.0

Bucharest (see Figure 2) emerges as a city with a vibrant and diverse art scene. The most frequent words are *art* and *festival* (each appearing 14 times; 0.93%), followed by *edition* (13; 0.86%), *weekend*, and *year* (each 11; 0.73%), pointing to a strong emphasis on recurring cultural events. Other commonly observed terms relate to architecture (*building, designers*), music (*band, rock*), and the urban environment (*streets, lake, park*). The presence of words such as *city, world, Romanian, old, history, and tradition* demonstrates a connection between Bucharest's international and local identity, as well as a bridge between past and present.

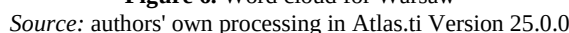


Budapest (see Figure 3) is portrayed as a city promoting tourism through a wide array of benefits and special offers, as reflected in these terms: *city* (185 occurrences; 1.48%), *card* (161; 1.28%), *free* (146; 1.16%), *enjoy* (124; 0.99%), and *discount* (86; 0.69%). The notable presence of the term *bio* (90; 0.72%) suggests a strategic use of digital marketing terminology. Words like *Hungarian*, *world*, *Budapest*, and *capital* emphasise the city's national identity and local distinctiveness within a global framework. Further, the posts highlight Budapest's accessible cultural and leisure facilities, with references to *thermal*, *baths*, *history*, *culture*, and *transport*, showcasing the city's renowned spa tradition. Social engagement and inclusivity are also evident, with frequent terms such as *let*, *action*, *together*, *join*, *public*, *programmes*, and *everyone* aiming to foster community involvement and social responsibility. As in other cities, positively loaded adjectives (*unique*, *perfect*, *stunning*, *best*, *iconic*) and persuasive verbs (*experience*, *get*, *visit*, *explore*, *don't miss*) are used to attract potential visitors.





Warsaw's IG posts (see Figure 6) place a strong emphasis on visual content, as evidenced by the frequent occurrence of *photos* (72; 1.24%) and *photo* (69; 1.19%). Other common expressions include *city* (58; 1.00%), *new* (33; 0.57%), and *love* (29; 0.50%), all of which contribute to a modern and positive perception of the city. The strong focus on photography is further underlined by frequent calls to interact with images, with words such as *take*, *shots*, *share*, *find*, *tag*, *featured*, *profile*, and *comments*. Commemoration of both historical and contemporary events is represented through *know*, *today*, *history*, *years*, *celebrate*, *weekend*, and *events*. Urban culture, art, and green spaces are evident in terms like *exhibition*, *museum*, *landmarks*, *art*, *parks*, and *green*. The use of verbs related to exploration and interaction (*see*, *visit*, *explore*, *walk*, *check*, *recommend*) is high, while positive adjectives (*beautiful*, *immersive*) are less frequent compared to other profiles.



The keyword analysis shows that each city uses a distinct strategy to engage audiences and shape an attractive destination image.

Positive emotional mood and invitations to discover

All analysed capitals aim to inspire positivity and anticipation in visitors, often using action verbs like *enjoy*, *experience*, *explore*, and *see*. The welcoming tone is adapted to the local context. For example, Bratislava combines historical and economic narratives, whereas Warsaw focuses more on visual attractions.

Tourism benefits and services

Approaches to promoting tourism benefits differ significantly. Budapest highlights discounts and tourist cards, attracting value-oriented travellers. Prague emphasises walking routes and public transport, which appeals to those seeking easy and accessible experiences. Vienna draws attention to hidden gems and gastronomy, resonating with visitors interested in authenticity and tradition. These strategies reflect varying audience preferences.

Linking the past and the present

All cities reference cultural and historical heritage, though integration varies. Bratislava connects historical motifs with economic themes. Bucharest emphasises contemporary artistic identity. Prague and Vienna combine classic architectural references with modern events and suggestions for unique attractions.

Visual and digital marketing

Visual presentation is central to all cities' digital strategies. Warsaw stands out for keywords like *photos*, *share*, and *tag*, reflecting a strong focus on visual and social engagement. Prague and Budapest make strategic use of profile features and links. Vienna and Bucharest focus more on promoting festivals and cultural events through digital content.

Target groups and positioning

Keyword choices align with diverse marketing goals and audience profiles. Bratislava targets business travellers, Budapest appeals to budget visitors, and Bucharest attracts a younger, creative demographic. Prague blends tradition with modern digital communication, widening its appeal. Vienna targets fans of classic art and food, while Warsaw appeals to visually oriented users interested in local recommendations.

In summary, each city develops a tailored communication strategy reflecting its identity and position in the market. Despite some shared features such as a positive tone and promotion of attractions, specific attributes like thermal baths, investment support, festivals, and café culture help distinguish these destinations. Thus, the keyword analysis offers valuable insight into how cities build their image and leverage social media for effective tourism communication.

5. Description of Results and Discussion

This section presents and discusses key findings derived from the analysis of the capitals' IG profiles in relation to: (1) differences in posting activity, (2) the relationship between caption length and user engagement, and (3) dominant keywords and thematic patterns. Together, these findings provide a nuanced view of how destinations construct their digital image and influence audience perception within the broader context of tourism marketing.

RQ1: What differences in posting frequency and intensity can be observed among the Instagram profiles of the selected capitals?

The comparative analysis reveals notable disparities in posting frequency and digital strategy across the studied capital cities. Bratislava emerges as the most active profile, with nearly 50 posts per month, indicating a strong emphasis on maintaining continuous interaction with IG audiences. This finding supports previous research highlighting the importance of sustained social media presence for destination branding (Stankov & Gretzel, 2021). In contrast, Prague and Bucharest exhibit significantly lower activity levels, averaging around 13 posts per month, which may reflect differing strategic priorities or resource limitations.

Overall, the difference between the most and least active profiles exceeds a factor of three, pointing to considerable heterogeneity in the adoption and implementation of social media strategies. This pattern contrasts with the more consistent posting behaviour observed in Western European capitals (Tugores-Ques & Bonilla-Quijada, 2023), suggesting that Central and Eastern European capitals are at varying stages of integrating IG into their destination marketing frameworks.

Importantly, higher posting frequency does not automatically translate into stronger user engagement. The contrast between Bratislava and Vienna demonstrates that content quality may outweigh posting volume, as Vienna achieves higher engagement despite lower activity levels. This observation aligns with the conclusions of Armutcu et al. (2023), emphasising the importance of well-curated and visually appealing content. From a practical perspective, this suggests that destination management organisations should prioritise the creation of high-quality, engaging posts rather than focusing primarily on increasing posting frequency.

RQ2: What is the relationship between caption length and user engagement, measured by the average number of likes?

Engagement on the IG profiles of the analysed capitals does not increase proportionally with posting frequency, as illustrated by Bratislava, which shows the highest posting activity, yet relatively low average likes per post, compared to Vienna, which achieves the highest engagement despite lower posting intensity. This implies that content quantity alone is not a sufficient driver of user interaction and supports the concept of “content fatigue,” whereby excessive posting may reduce audience responsiveness (Fan & Zhang, 2023).

Further differences across the cities reinforce this interpretation. Budapest combines high posting activity with only moderate engagement, while Prague’s less frequent yet more targeted posts result in comparatively higher average likes. Vienna’s strong performance likely reflects a combination of high-quality visual content, consistent branding, and a well-established follower base, confirming that content quality and strategic communication are more important than sheer volume, as pointed out by Kumar et al. (2024). In contrast, Bucharest records the lowest engagement levels, which may be linked to less effective content presentation or lower destination visibility (An et al., 2022). These disparities highlight the importance of an integrated marketing approach that, according to Pártlová et al. (2022), combines high-quality visuals, informative and engaging captions, appropriate posting timing, and active audience management.

Regarding caption length, the results indicate a generally positive correlation between longer captions and higher user engagement, particularly in Bratislava and Budapest, where audiences appear to value more detailed and context-rich information. Prague demonstrates a similar pattern, further supporting the role of comprehensive communication in enhancing engagement. However, this relationship is not universal. Vienna achieves strong engagement even with shorter captions, suggesting that visual appeal, brand strength, and audience loyalty can compensate for less extensive textual content. This finding is consistent with previous research stating that engagement is influenced not only by caption length but also by readability, complexity, and content type (Yu et al., 2024). Overall, while longer captions can enhance engagement, their effectiveness depends on contextual factors, and the optimal caption length should be adapted to the specific communication strategy and audience expectations, as suggested by Sharma & Arora (2023).

RQ3: Which keywords appear most frequently in the posts, and which tourism-related themes and trends do they represent?

The analysis of frequently used keywords and themes across the IG profiles of the capitals concerned indicates that each city employs a distinct linguistic strategy to construct its digital identity and target specific visitor segments. Action-oriented verbs such as *visit*, *explore*, and *enjoy* are consistently present across all profiles, reflecting a strong emphasis on experiential tourism and direct audience engagement. In addition, positive adjectives such as *unique*, *beautiful*, and *stunning*, particularly in posts from Bratislava, Budapest, and Vienna, contribute to an emotionally appealing and persuasive tone that enhances destination attractiveness, which is in line with Angaramo Corvalán & Pérez-Torres (2021).

At the same time, notable thematic differences emerge in the keyword usage of individual cities. Bratislava combines references to cultural heritage with economic and business-related themes, while Budapest emphasises accessibility and value-oriented offers through terms such as *free*, *card*, and *discount*. Bucharest places a stronger focus on arts and festivals, underlining the importance of cultural programming in shaping tourism demand (Lazarević et al., 2024). Prague integrates historical and architectural references with elements of modern urban infrastructure, whereas Warsaw frequently highlights visual content and sharing practices, reflecting a more community-oriented and visually driven communication style, as shown by Qian (2023) and Highfield & Leaver (2016). Vienna, in turn, promotes art, hidden locations, and gastronomy, aligning with broader trends toward authenticity, local experience, and cultural depth in tourism (Kilipiri et al., 2023).

Overall, keyword selection and communication style are vital in shaping a destination's online image and influencing audience perception. Destinations that effectively combine cultural, historical, and contemporary elements within their digital storytelling are more likely to appeal to diverse visitor groups and foster long-term engagement. This finding is consistent with previous research emphasising the importance of well-crafted narratives and emotional tone in strengthening destination reputation and audience connection (Marwick, 2015; Fan & Zhang, 2023; Lazarević et al., 2024; Kilipiri et al., 2023; Qian, 2023). In this context, language can be understood as a strategic tool for positioning destinations within the competitive digital tourism environment.

Limitations and recommendations for future research

This study has several limitations that should be taken into account when interpreting the findings. First, the analysis focuses exclusively on textual content, while visual elements, which are central to IG communication, were not examined. Future research should therefore incorporate a systematic analysis of images and videos in order to better capture their quality, aesthetic characteristics, and narrative function within destination marketing (Aramendia-Muneta & Olarte-Pascual, 2022). Second, the use of correlation analysis limits the ability to draw causal inferences, as only associations between variables were identified. User engagement may be influenced by additional factors such as posting time, seasonality, or major events. Furthermore, the application of more advanced statistical techniques, including regression models or structural equation modelling, could provide deeper insights into these relationships and help identify underlying causal mechanisms. Another limitation lies in the absence of analysis of user-generated interactions, particularly comments and the nature of communication between account administrators and followers. Such interactions are essential for building online communities and fostering meaningful engagement (Highfield & Leaver, 2016). Thus, future studies should examine dialogic communication patterns, including comments, replies, and interaction dynamics, as well as the use of hashtags, emojis, and posting strategies. In addition, the study is limited to capital cities in Central and Eastern Europe, which restricts the generalisability of the findings. Expanding the scope to include other types of destinations, such as coastal, rural, or mountain areas, as well as different geographical regions, would enable more comprehensive comparative analyses and contribute to a broader understanding of IG communication strategies in tourism.

Despite these limitations, the study offers relevant implications for destination marketing practice. In particular, it highlights the importance of balancing posting frequency with content quality, optimising caption length, and adapting communication strategies to specific audience characteristics. More broadly, the findings provide a foundation for future research on digital tourism communication, including emerging perspectives such as neurocommunication and the behavioural dimensions of tourist engagement.

6. Conclusions

This study examined how six Central and Eastern European capitals – Bratislava, Bucharest, Budapest, Prague, Vienna, and Warsaw – use Instagram (IG) to promote their tourist destinations, focusing on posting frequency, caption length, and the thematic structure of published content. The findings show that, despite geographical and cultural proximity, these cities adopt markedly different digital communication strategies, with each building its online identity in line with its historical context, target audience, international visibility, and specific marketing priorities.

Importantly, this study offers a novel contribution to the field of digital destination marketing by providing a systematic comparative analysis of IG communication strategies across Central and Eastern European capitals, a region that has received limited attention in previous research. In addition, it integrates quantitative indicators of posting activity and engagement with qualitative analysis of content themes, thereby offering a more comprehensive understanding of how different communication elements jointly shape audience interaction and destination branding.

The results challenge the assumption that higher posting frequency leads to greater user engagement. The contrast between Bratislava and Vienna clearly illustrates that content quality plays a more decisive role than posting volume. While longer and more detailed captions are associated with higher engagement in some cases, particularly in Bratislava and Budapest, Vienna demonstrates that strong visual content, consistent branding, and an established reputation can generate high levels of interaction even with shorter captions.

From a theoretical perspective, the study contributes to the literature on digital destination marketing by identifying five recurring patterns in city branding strategies: emotional storytelling, thematic segmentation, the integration of cultural and modern elements, the emphasis on geographic identity, and the promotion of community-oriented communication. These patterns highlight the importance of adaptive digital narratives tailored to different audience segments (McCabe, 2024). The findings further illustrate how individual cities prioritise distinct thematic dimensions. For example, Bratislava emphasises economic aspects, Budapest highlights accessibility and visitor benefits, Bucharest focuses on arts and festivals, while Prague and Vienna effectively combine historical authenticity with contemporary appeal.

Moreover, the results suggest that destination management organisations should tailor their digital strategies to the expectations of their target audiences and prioritise the creation of clear, engaging, and thematically coherent content. In this context, content quality consistently proves more important than quantity. Established destinations may benefit from focusing on visually refined and strategically curated posts, as exemplified by Vienna, whereas destinations targeting more diverse audiences may adopt a more hybrid and flexible communication approach, similar to Prague.

However, several limitations should be acknowledged. These include the absence of visual content analysis, the exclusive focus on English-language profiles, and the relatively static nature of the dataset, which may not fully capture seasonal variations or temporal dynamics. Future research should therefore integrate both textual and visual dimensions of social media content, examine engagement patterns over longer time periods, and extend the analysis to different types of destinations and geographical contexts. In addition, the application of advanced analytical methods could help establish stronger links between digital communication strategies and actual tourist behaviour, including behavioural and neurocommunication perspectives.

Overall, the study provides a robust foundation for additional research into digital tourism communication and offers practical insights for enhancing the effectiveness of Instagram-based destination marketing.

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