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Exploring Instagram Strategies: A Comparative Analysis of DMO in central region of Portugal

Explorando las estrategias de comunicación en Instagram: Un análisis comparativo de las OGD de la región centro de Portugal

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ABSTRACT

Instagram has become one of the principal social media platforms with substantial influence in contemporary society. This study sheds light on the divergent approaches adopted by two DMOs tasked with promoting the central region of Portugal. This approach encompasses several facets, including the types of images shared, the frequency of publication, and the implementation of hashtags. All the images shared by the two accounts in 2022 were systematically collected and subjected to exhaustive analysis based on predetermined parameters. The research revealed different strategies for using Instagram, despite both DMOs promoting the same territory. While the ERTCP account, @centro_de_portugal, focuses mainly on the Nature & Landscape and Place categories, the ARPTCP account, @centerofportugal, emphasises Humanised Spaces and Architecture categories. The frequency of publication and the use of hashtags also varied, with the ERTCP account posting more frequently and using a wider range of hashtags. In terms of engagement metrics, the @centro_de_portugal maintains its prominent position. However, the pattern of follower interaction over the course of the year was similar for both accounts, with the first and last four months witnessing higher engagement. An analysis of the frequency of posts per day of the week also revealed different patterns.

Keywords: Instagram; central region of Portugal; DMO; hashtag.

RESUMEN

Instagram se ha convertido en una de las principales plataformas de redes sociales con gran influencia significativa en la sociedad contemporánea. Esta investigación revela los enfoques

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divergentes adoptados por dos OGD encargadas de promocionar la región centro de Portugal, abarcando aspectos como la variedad de imágenes compartidas, la frecuencia de publicaciones y la implementación de hashtags. Se recopiló sistemáticamente todas las imágenes compartidas por las dos cuentas en 2022 y se sometieron a un análisis exhaustivo basado en parámetros predeterminados. La investigación reveló diferentes estrategias de uso de Instagram, a pesar de que ambas OGD promocionan el mismo territorio. Mientras que la cuenta de la ERTCP, @centro_de_portugal, se centra principalmente en las categorías Naturaleza y Paisaje y Lugar, la cuenta de la ARPTCP, @centerofportugal, hace hincapié en las categorías Espacios Humanizados y Arquitectura. La frecuencia de publicación y el uso de hashtags también variaron, con la cuenta ERTCP compartiendo con más frecuencia y utilizando una gama más amplia de hashtags. En términos de métricas de *engagement*, el @centro_de_portugal mantiene su posición destacada. Sin embargo, el patrón de interacción de los seguidores a lo largo del año fue similar para ambas cuentas, con el primer y el último trimestre con mayor participación.

Palabras clave: Instagram; región centro de Portugal; OGD; hashtag.

I. RELEVANCE

With nearly five billion users and a tendency to grow, as Statista points out, the significance of social media in contemporary society, is widely recognised, particularly among the younger population, as evidenced by the study conducted by Ihsanuddin and Anuar (2016). Instagram, in particular, is known for its persuasive and informative capabilities in encouraging users to visit destinations promoted through this platform (Afandi, 2018; Hanan & Putit, 2013; Huertas & Martínez-Rolán, 2020; Tešin et al., 2022), mainly among the younger generation (El Tayeb, 2021). In fact, this is in line with the conclusions of Avila Campoverde and Ugalde (2020) and Ibrahim and Aljarah (2023), who state that Instagram is one of the social media platforms with the greatest impact on destination promotion and an indispensable marketing tool for brands. Instagram allows, above all, to “create travel inspiration, and enhance interest in a destination” (Neuburger et al., 2024, p. 410). For this reason, Smith (2021, p. 605) suggests that “Instagram is closely aligned with the tourism industry”. This recognition can also be attributed to Instagram's reliance on visual content, which reinforces research demonstrating the persuasive power of visual stimuli in motivating viewers to action (Valentini et al., 2018). Additionally, the concept of “social media as well as tourism 4.0, which embraces big data collection in order to create personalised travel experiences, is seen as vital ways for offering products and engaging the consumer emotionally” (Bohn & Bernardi, 2019, p. 55). About a decade ago, it was suggested that the “social media wave [was] only gaining in momentum and drowning in it [was] a real danger for many DMO” (Shao et al., 2012, p. 96). However, even then, it was clear “that online communities, Web 2.0, and social media [were] already having an effect on destination marketing, but the revolution has really only just started” (O’Connor et al., 2011, p. 241). More recently, Fletcher et al. (2018, p. 607) have argued that the majority of “DMOs are not currently utilising social media to their full effectiveness when it comes to the ability to interact and engage with consumers”. This is particularly worrying given the ability of social media to cultivate the destination among both loyal and potential tourists (Avila Campoverde & Ugalde, 2020).

It is undeniable that social media and smartphones have changed the paradigm of how tourists experience destinations and how companies and DMOs communicate. As the importance of social media has grown over the past decade, it has become clear that “improving a destination’s marketing effectiveness and efficiency involve adopting the appropriate approaches and using the adequate tools and techniques by DMOs” (Hanan & Putit, 2013, p. 473). This transition from a one-way communication model to a three-way communication model (Minazzi, 2022) has influenced the promotion and decision-making processes (Buhalis & Law, 2008; De Marco, 2022), providing a perfect tool for disseminating information (Kirant Yozcu & Cetin, 2019). Social media has become so vital that it has led social media marketing (SMM) to emerge as one of the fastest growing sectors in direct marketing (Kotler et al., 2022), characterised by its low cost, personalisation, immediacy, and interactive capacity (George, 2021; Uşaklı et al., 2019). Munar (2016) goes even further, arguing that social media generates new tourist cultures and practices. This is exemplified by the research carried out by Uşaklı et al. (2019), which highlights the significant role of social media for DMOs.

The importance of social media has been further emphasised by the COVID-19 pandemic, witnessing an increase in the importance of these tools (McClain et al., 2021; Quan-Haase & Sloan, 2022; Sharon & Shahrabani, 2021).

Despite some persistent reluctance to use social media as a source of information for scientific research, Quan-Haase and Sloan (2022) argue that the current reality surrounding social media often stems from the reality that exists outside of these platforms, generated within a specific historical, social, political, and economic context. Difficulties persist in defining the concept. However, the following definition of social media seems appropriate:

Social media are web-based and mobile services that allow individuals, communities, and organizations to collaborate, connect, interact, and build community by enabling them to create, co-create, modify, share, and engage with content (user- or bot-generated). (Nau et al., 2022, p. 23)

However, Volo and Irimiás (2021) recommend the use and relevance of social media in scientific tourism research, even though Instagram - the honeypot of pictures - has been used timidly by tourism researchers.

Instagram, a social media platform founded in 2010 by Kevin Systrom and Mike Krieger, and currently owned by Meta Platforms, has approximately 2 billion active users (Laestadius & Witt, 2022). Instagram is essentially visual, designed to share images, whether photographs or videos. This aligns perfectly with Hand’s (2022, p. 185) assertion that these platforms have become “essentially visual in terms of content and user experience”. The majority of users access Instagram via smartphones or tablets (McDonald, 2022).

Over the last 15 years, the continental part of Portugal has been divided into five promotional areas, according to level II of the Nomenclature of Territorial Units for Statistics (NUTS II). Due to successive updates to the legislation, Portugal currently has five Regional Tourism Entities (ERTs): Turismo do Porto e Norte de Portugal, Turismo do Centro de Portugal, Turismo da Região de Lisboa, Turismo do Alentejo e Ribatejo, and Região de Turismo do Algarve. Additionally, in the autonomous regions of Madeira and the Azores, there are Regional Secretariats. As Sá (2022) demonstrated, this organisational framework represents

the culmination of several decades of changes in the regional administration of tourism in Portugal, with ERTs being recognised for their role in "promoting in the extended domestic market, encompassing national and cross-border territories with Spain" (Law no. 33/2013, 2013, p. 2912).

Simultaneously, there are seven Regional Tourism Promotion Agencies (ARPTs), the Associação de Turismo do Porto e Norte de Portugal (ATP&N), the Agência Regional de Promoção Turística do Centro de Portugal (ARPTCP), the Associação Turismo de Lisboa (ATL), the Agência Regional de Promoção Turística do Alentejo (ARPTA), the Associação Turismo do Algarve (ATA), the Associação de Promoção da Região Autónoma da Madeira (APM), and the Associação de Turismo dos Açores (ATA). These entities operate on a public-private basis and are non-profit organisations responsible for external promotion. In 2003, the current competences of these entities were established by Council of Ministers Resolution no. 97/2003, of August 1st. The aim of these organisations is to develop and formulate external promotion strategies. They are constituted by a significant number of members working in the tourism sector, which makes them private, non-profit associations with a regional character (Neves, 2007; Vieira, 2020). In this sense, ARPTs concentrate "all their resources and strategies on promoting destinations and their tourist products in the main international markets, counting on partnerships between regional and national public entities linked to tourism and industry entrepreneurs" (Vieira, 2020, p. 46).

For all the reasons outlined above, we consider it crucial to investigate the communication practices of DMOs on Instagram. Thus, this research aims to shed light on the different communication approaches via Instagram employed by two DMOs from the same region. Through the use of selected activity and impact indicators, we also intend to evaluate the promotional policies of both organisations.

II. LITERATURE REVIEW

Pioneering research into social media in the context of tourism began in the second half of the 2000s, primarily focusing on blogging (Mack et al., 2008; Thevenot, 2007), the role of social media in travel information search (Schmallegger & Carson, 2008; Xiang & Gretzel, 2010), its impact on tourism (Buhalis et al., 2010; Haiyan, 2010), user-generated content (Miguéns et al., 2008), destination promotion (Coll Ramis et al., 2021; Ranjha, 2010; Stankov et al., 2010; Treer, 2010), among other approaches (Buhalis & Law, 2008; Chalkiti & Sigala, 2008; Claster et al., 2010; Dippelreiter et al., 2009; Jensen, 2008; Nguyen, 2010).

This is therefore a recent approach to scientific research in tourism. Since then, more than a decade has passed, and the online world, particularly social media, has witnessed remarkable progress, which is also reflected in the annual growth of research. Despite persistent doubts about the use of social media as a research source, these platforms have become an important tool for study in numerous academic areas (McEwan & Fox, 2022).

The widespread adoption of social media for tourism research is evident, with Instagram emerging as a commonly used tool, as evidenced in several studies, inter alia, Fatanti and Suyadnya (2015), Paül i Agustí (2018), Krisna et al. (2019), Avila Campoverde and Ugalde (2020), Noordin (2021), Khosihan et al. (2021), Mecca (2021), Cohen et al. (2022), Paül i Agustí and Campodónico (2022), or Kilipiri et al. (2023).

In recent scientific literature, the articles with the highest level of impact in the study of the relationship between Instagram and the tourism sector are Uşaklı et al. (2017), Paül i Agustí (2018), Teles da Mota and Pickerning (2020), Arefieva et al. (2021), and Filieri et al. (2021), all with very different approaches. This fact demonstrates how diverse research approaches can be in the study of the relationship between social media and tourism.

The pioneering work by Albers and James (1988) recognised the dominance and ubiquitous position of photography in the modern world, playing a crucial role in destination promotion (Garrod, 2008). Pertinently, MacKay and Fesenmaier (1997) also note that destination promotion is conducted primarily through the use of photographs, especially in a hyper-visual society like the one we live in today (Bassalo & Weller, 2011). The connection between tourism and photography is so closely linked, that taking photographs is seen as an archetype of tourist activity, with both industries evolving hand in hand (Garrod, 2009; Human, 1999). According to Rodrigues (2018), it is not surprising that visual data analysis has gained prominence among qualitative methods in recent years.

Albers and James (1988, p. 136) argued that photography is the "greatest force of imagination manipulation" in destination promotion, regardless of whether digital or physical (Hunter, 2010). Although it offers a limited but powerful record of a place, its ability to shape perception makes it a crucial tool (Loizos, 2002).

While a growing body of research, including Rodrigues et al. (2017), Sá (2021a, 2021b) or Sá and Pereira (2023), has examined the representation of Portugal in promotional images in the media, relatively few studies have specifically explored the nation's image on social media platforms. The limited body of literature on the portrayal of Portugal as a tourist destination on social media platforms includes Kuhzady and Ghasemi (2019), Inglesias-Sánchez et al. (2020) or Nogueira (2019). However, one study specifically examines the online image of the central region of Portugal. Bondarets (2022) investigates precisely the image of regions on Instagram.

From other latitudes, there have been studies such as Fayzullaev et al. (2021), which focus on the representation created by the DMO of Uzbekistan; Noordin et al. (2021) with an analysis of Instagram content from the Indonesian DMO; or Bernkopf and Nixon (2019) with the case of Mexico City.

There are also studies comparing user-generated content with that generated by DMOs (Adamiş & Pınarbaşı, 2022; Neuburger et al., 2024; Stepchenkova & Zhan, 2013), a study comparing the use of social media by different DMOs (Uşaklı et al., 2017, 2019), and, about a decade ago, a study on the adoption of social media by DMOs (Hamill et al., 2012). Although without the use of social media, the study that is most similar to this research was conducted by Singh and Formica (2007). The authors explored the level of discourse congruence between two DMO's. More recently, studies have been published on the DMO's response to the pandemic through social media, identifying changes in publication patterns (Mele et al., 2023; Noordin et al., 2021).

III. METHODOLOGY

In this study, we chose to collect images shared on the Instagram accounts of the two organisations, Entidade Regional de Turismo do Centro de Portugal (ERTCP) and Agência Regional de Promoção do Centro de Portugal (ARPTCP). These organisations are responsible

for promoting tourism in the central region of Portugal. Using the respective accounts, @centro_de_portugal, created in March 2017, and @centerofportugal, created in January 2015, all images shared during the year 2022 were downloaded. Methodologically, these images are considered "found visuals," which are pre-existing materials generated without intervention from the researcher (Pauwels, 2011, 2015).

In order to avoid the selection difficulties recognised by Hand (2022), we followed a set of well-defined criteria. We began by excluding videos, focusing our analysis exclusively on photographs. The collection of images from ARPTCP Instagram (@centerofportugal) took place between June 30 and July 5, 2023, while the collection data from ERTCP (@centro_de_portugal) took place between July 6 and 12. The number of likes and hashtags was recorded simultaneously with the collection of images. In addition, the number of followers for each account was recorded on July 12.

Applying content analysis, the most commonly used technique for examining images on social media (Hand, 2022), the images were categorised (Table 1) according to the methodology and categories previously defined by Gorji et al. (2021), similar to those used by Mele et al. (2023) and Kuhzady and Ghasemi (2019). This approach seeks to apply clear, unambiguous, and consistent criteria to obtain relevant results, as advocated by Bell (2001) and Bock et al. (2011).

Table 1 Categories assigned to the images

Categories	Examples of Descriptions
Nature and landscape (N&L)	N&L photographs are related to beaches, forests, steppes, meadows, mountains, deserts, rivers and lakes, trees, caves, jungles, geographical phenomena, etc.
People (PP)	PP includes local inhabitants, tourists, one-person images, unrelated people, many people, etc.
Religious Building/Object (RO)	RO refers to religious ceremonies, holy shrines, mosques, churches, mourning places, Zoroastrian places, spiritual places, supplication, prayers, etc.
Way of Life (WOL)	WOL refers to natural living and depicts inhabitants in everyday situations in public and private spaces: at home, local markets, fixing a car, selling or buying goods, cooking, doing farm work, playing with children, etc.
Architecture and Heritage site (A&H)	A&H includes temples, royal palaces, historic and prehistoric monuments, castles, watchtowers, traditional houses, buildings, architecture, imperial palaces, the architectural structure of a building, etc.
Leisure Activities (LA)	LA refers to outdoor and adventure activities such as skiing, boating, snowboarding, swimming, kayaking, climbing, etc.
Traditional Object (TO)	TO includes arts and crafts made by locals, traditional clothes, ornaments and designs, folk art, etc.
Rituals & Festivals (RF)	RF refers to regional or national ceremonies, which are celebrated by people, etc.
Transport & Infrastructure (TI)	TI includes airports, roads, bus stops, railway tracks, highway networks, taxis, bridges, seaports, etc.
Place (P)	P refers to photographs of urban and rural areas such as city skylines, urbanized/developed environments, parks, rural areas, gardens, villages, fences in fields, etc.
Space (S)	S includes tourist spaces, residential and private spaces. hotels, resorts and spas, ecolodges, museums, restaurants, apartments, alleys, etc.
Season (SE)	SE refers to weather and climate conditions, snow and/or region full of snow and ice, or photographs indicating spring, summer or autumn, bloom, yellow leaves, etc.
Wildlife (WL)	WL includes mammals and birds, horses, butterflies, ecological havens, flora, fauna, etc.
Food (F)	F includes food, desserts, fruit, appetizers, local food, traditional yoghurt, etc.

Source: Gorji et al. (2021)

When downloading the images via the DevTools of the respective account, in addition to the categories already mentioned, each image was assigned a unique identification code, and the date of publication, location represented, the number of likes, and hashtags used were collected. In some cases, when a post comprised multiple photographs, all of them were gathered. However, the likes and hashtags were only documented once, given their association with the entire post. Throughout the process, images promoting private initiatives were identified and labelled. In total, 297 images from @centerofportugal and 489 images from @centro_de_portugal, were collected. Due to the considerable number of images, the Awesome Duplicate Photo Finder software version 1.2 was used to identify duplicate images.

For the research analysis, the categories defined by Gorji et al. (2021) were used, and the methodology proposed by Rose (2016) was followed, involving the following steps: i) locating the images, i.e., the found visuals; ii) categorising them for coding; iii) conducting the coding process; and iv) analysing the results.

The Instagram data was analysed using multiple data analysis websites (inflact.com, toolzu.com, business.notjustanalytics.com, and analisa.io). The data was extracted on July 29, covering levels of interaction with the accounts, including engagement, average user activity, comment rate, and like rate.

Subsequently, two-word clouds were generated based on the hashtags used in the 2022 posts. The website wordsift.org was employed to produce the word clouds, including the 50 most common hashtags in the posts of both Instagram accounts. The inclusion of only 50 hashtags allowed for the creation of more concise and focused word clouds, highlighting the most frequent ones.

IV. FINDINGS

4.1 Posting and interaction dynamics

The collection of images extracted from 2022 posts on the two Instagram accounts revealed a total of 786 photographs distributed over 614 posts (Table 2). Despite representing the same region of the country, the posting behaviours of the two accounts show significant differences.

Table 2 Number of images collected and number of posts in the year 2022

	Number of images /daily mean	Number of posts/ daily mean	Mean number of likes	Mode number of likes	Median number of likes	Followers (07/2023)	Number of hashtags (Mean per post)
@centerofportugal	297/0.81	279/0.76	84,5	48	58	11 000	2425 (8,6)
@centro_de_portugal	489/1.34	335/0.92	2516	893	988,5	54 581	1768 (5,3)
Total	786	614	--	--	--	--	--

The ERTCP account (@centro_de_portugal) has almost five times as many followers as the ARPTCP account (@centerofportugal). This discrepancy contributes to the significantly higher average number of likes per post on the ERTCP account (Table 2). Regarding the number of posts and images, the differences are less marked. Once again, the ERTCP account has higher values, exceeding one image per day, despite having fewer posts on average. In contrast, the ARPTCP account exhibits a smaller disparity between the average number of posts and images. This fact demonstrates that ERTCP not only publishes more regularly but also frequently shares posts with multiple images.

The differences in dynamics of publication and interaction with followers become even more evident when, following Pando et al. (2023), certain metrics are analysed. In relation to engagement, which includes likes, comments, posts, and followers in its calculation, $\left(\frac{\text{likes} + \text{commets}}{\text{posts}} \times \frac{\text{posts}}{\text{Total followers}} \times 100 \right)$ these metrics reveal the level of interaction and involvement of followers with a particular account. For this reason, a higher value indicates more active and interested followers. In all parameters, the ERTCP account shows higher values. However,

engagement is low, as it falls below the 1% threshold (Table 3). Specifically, this metric suggests that both accounts have a limited impact when considering the number of interactions on their respective posts.

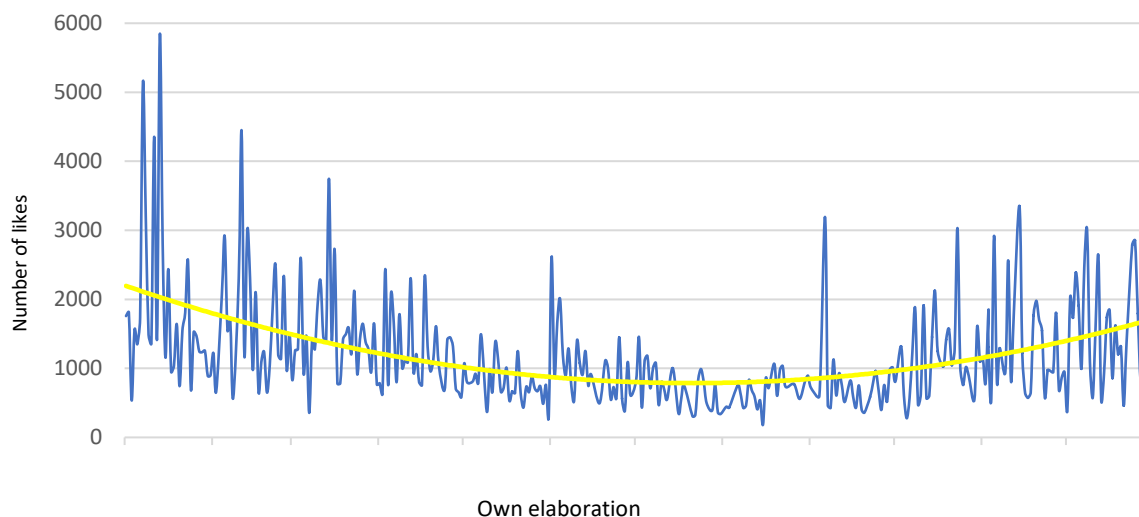
Table 3 Account interaction metrics

	Engagement	Like rate	Comment rate	Median users' activity
@centerofportugal	0.00%	0.52%	0.01%	0.07%
@centro_de_portugal	0.01%	1.53%	0.03%	0.65%

According to the like rate, a key feedback metric (Yang et al., 2023) that represents the proportion of individuals who have liked a post in relation to the total number of viewers, $\left(\frac{\text{Number of likes}}{\text{Total followers}} \times 100\right)$ a reduced level of follower engagement is visible. Although the value for @centro_de_portugal is considered moderate. Regarding the comment rate $\left(\frac{\text{Number of comments}}{\text{Total followers}} \times 100\right)$, both accounts demonstrated low values. In terms of average user activity $\left(\frac{\text{Average post engagement médio}}{\text{Total followers}} \times 100\right)$, the @centro_de_portugal account has a notably higher value, indicating a superior ratio between the number of interactions and followers.

Analysing Graph 1 and 2, we can see that, despite the different degrees of impact resulting from the activity of each account, it is possible to observe a pattern that reveals certain similarities throughout the year. Two distinct periods of greater involvement are evident, particularly in terms of likes, with both accounts recording the highest figures in the first quarter of the year and the last two months. This oscillation is noticeable through visual inspection of the graphs and is corroborated by the polynomial trend line of degree 2. This observation is further supported in Table 4. Specifically, when looking exclusively at the five posts with the highest number of likes on both accounts, there is a significant prevalence of representations from the interior of the central region, a subject that will be explored in more detail in section 5.5 of this article.

Graph 1 Number of likes per post evolution during the year 2022 on the ERTCP Instagram account



Graph 2 Number of likes per post evolution during the year 2022 on the ARPTCP Instagram account

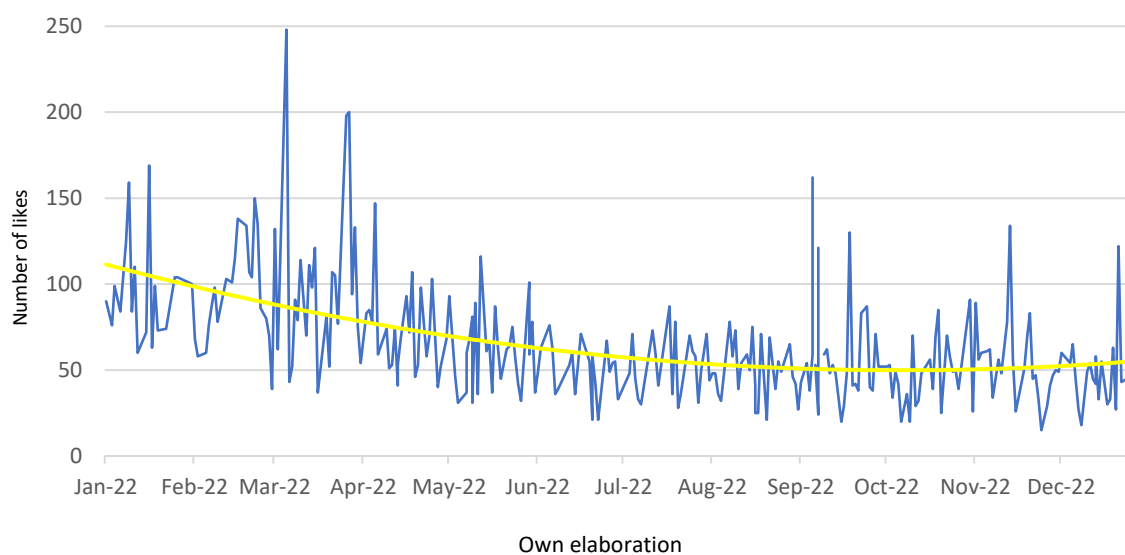
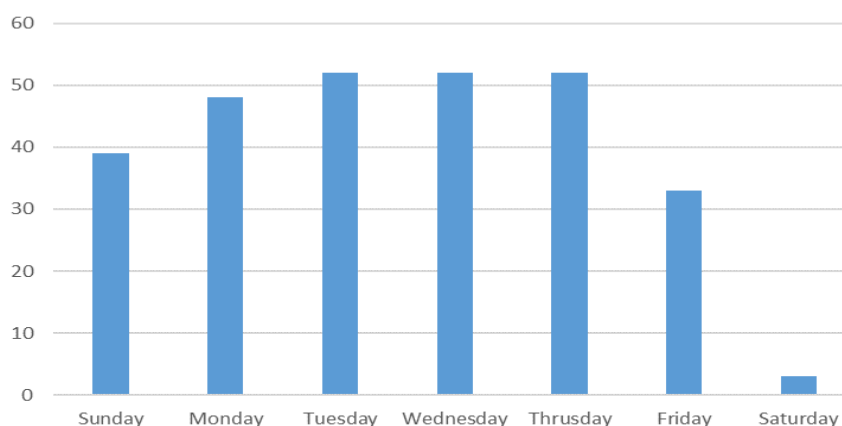


Table 4 Posts with the most likes by date, day of the week and place

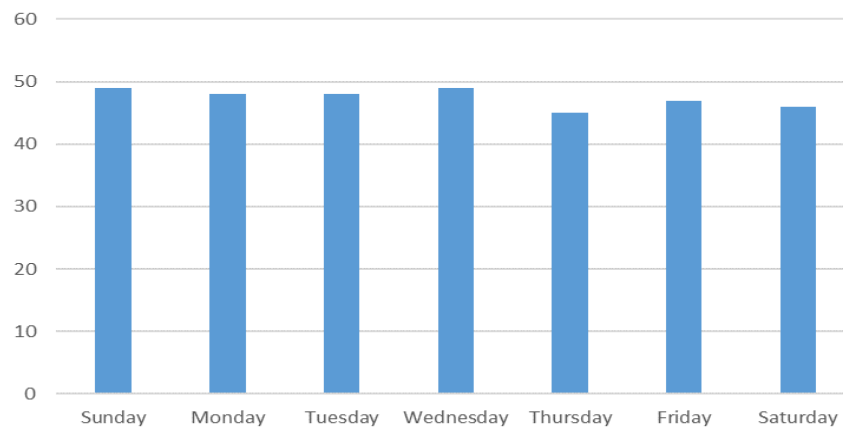
Code	Date	Day of the week	Municipality	Number of likes	Observations
@centro_de_portugal – Regional Tourism Entity of the Centre of Portugal (ERTCP)					
ERT323	14/01/2022	Friday	Lousã	5833	Representation of Aldeia do Candal, a Schist Village in Serra da Lousã.
ERT329	08/01/2022	Saturday	Lousã	5143	Representation of Aldeia do Talasnal, a Schist Village in Serra da Lousã.
ERT296	12/02/2022	Saturday	Unknown	4438	Representation of the sunset at Óbidos Lagoon.
ERT325	12/01/2022	Wednesday	Arganil	4355	Representation of aerial crossing in Foz d'Égua in Aldeia de Piodão, a Schist Village in Serra do Açor.
ERT265	15/03/2022	Tuesday	Idanha-a-Nova	3747	Representation of Monsanto Village, belonging to the network of Historical Villages of Portugal.
@centerofportugal – Regional Tourism Promotion Agency of the Centre of Portugal (ARPTCP)					
TC239	06/03/2022	Sunday	Almeida	248	Aerial image of the Almeida fortress.
TC222	28/03/2022	Monday	Nazaré	200	Image of a small fishing boat on the beach in Nazaré.
TC223	27/03/2022	Sunday	Guarda	198	Panoramic view over the centre of Guarda with the cathedral in the background.
TC269	17/01/2022	Monday	Viseu	169	Panoramic view over the upper part of Viseu with the Misericórdia Church in the background.
TC96	06/09/2022	Tuesday	Tomar	162	Multiple representations of Tomar's heritage (Convent of Christ and Tomar Castle).

When analysing the publication dates of the most popular posts, a prevalence of dates within the first quarter of 2022 is evident, with only one photo in the top 5 outside of this period (graphs 1, 2, and Table 4). Similarly, a significant proportion of the posts with the highest impact were published on days ranging from Fridays to Mondays. Although these posts are the most successful, they are not considered the best days to maximise the impact of Instagram posts (Keutelian, 2023b). Several authors suggest that the most suitable days to achieve a higher level of engagement are Tuesdays and Wednesdays, with Sundays being the least favourable (Keutelian, 2023a; Purba et al., 2021).

Graph 3 Frequency of posting per day of the week on the ARPTCP account



Graph 4 Frequency of posting per day of the week on ERTCP account



By analysing graphs 3 and 4, it is possible to see the publication patterns throughout the week. While the ARPTCP account exhibits a higher incidence of posts between Tuesday and Thursday, the ERTCP account does not have a clearly defined posting pattern, with Thursday clearly being the day with the lowest frequency of posts, although the discrepancy is not that significant. However, the ERTCP account shows a more consistent and prolific posting behaviour between Sunday and Wednesday. In line with the findings mentioned above, Wednesdays are the days with the highest volume of posts on both accounts. However, the expected behaviour on Sundays, as advocated by Keutelian (2023a) and Purba et al. (2021), is not observed, as they remain among the days with the highest publication activity on both accounts.

4.2 Represented categories

After exhaustively reviewing all images from the 2022 publications on the @centerofportugal and @centro_de_portugal Instagram accounts, the distinctions became markedly clearer. The most represented categories on the ERTCP's Instagram account, @centro_de_portugal, were Nature & Landscape and Place, with 156 and 155 images, respectively, cumulatively representing 63.6% of the total number of images. These figures demonstrate the ERTCP's emphasis on promoting the regions natural values as well as humanized spaces, whether urban or rural. The Nature & Landscape category contributed significantly to the promotion of coastal areas, with Nazaré and Peniche receiving considerable attention, but also inland areas such as Idanha-a-Nova, Seia, or Sabugal. These findings corroborate those reported by Kuhzady & Ghasemi (2019). As for the Place category, Idanha-a-Nova stands out for its images of Monsanto, but also Arganil, Lousã, Belmonte, and Figueiró dos Vinhos for their Historical Villages and Schist Villages. The Food category was the only one noticeably absent in the 2022 photos; however, the People, Traditions, and Transport categories appeared with very low frequencies.

On ARPTCP's Instagram account, @centerofportugal, the most prominent categories were Spaces, with 83 photos, and Architecture, with 64. Together, these two categories account for 49.49% of the total number of images. Analysing the Space category reveals a dispersed representation across the territory, with a particular focus on Óbidos. In this category, the representations are mostly centred on the promotion of private spaces, namely

accommodation. This emphasis can be attributed to the public-private partnership that makes up the ARPTCP. As for the Architecture category, Tomar stands out with representations of the Convent of Christ and its historic centre. In this category, the photos focused mainly on historical heritage. The People, Transport, and Wildlife categories are absent from the visual representation.

4.3 Repeated photos

The initial analysis using Awesome Duplicate Photo Finder identified 13 duplicate images within the ERT photos, all with a single repetition (no image repeated more than twice). In particular, 10 of these duplicates appeared for the first time in the same publication. On the other hand, no duplicate photos were found in the ARPTCP collection, nor were any images published simultaneously by ERT and ARPTCP identified.

4.4 Hashtags

The use of hashtags on the web emerged with the popularisation of social media and can be understood as one of the tagging methods. Tagging is defined as a "label which links in some way to further information (metadata)" (Ali & Frew, 2013, p. 132). Preceded by the "#" symbol, hashtags make it easier for users to navigate by helping them discover content that uses the same hashtag. This not only improves the searchability of content but also expands its reach beyond the followers of a specific account (Fatanti & Suyadnya, 2015; Gorji et al., 2021; Uşaklı et al., 2019; Ye et al., 2018). Hashtags have become a frequent element in the linguistic structure of social media posts themselves (Zappavigna, 2015).

The research conducted by Uşaklı et al. (2019, p. 11) concluded that "the content analysis of posts indicates that DMOs generally use hashtags that are familiar in their traditional advertising campaigns". This conclusion is further substantiated by the present study. Similarly, Gorji et al. (2021) conclusions are confirmed, as the evidence suggests DMOs strategically use hashtags that evoke feelings of well-being and pleasure, with the aim of attracting and persuading potential tourists.

To analyse the communication strategies employed by the two DMOs, word clouds were generated, showing the 50 most frequently used hashtags. These word clouds effectively illustrate the distinct communication approaches adopted by ARPTCP and ERTCP, even though they both promote the central region of Portugal. Their promotional objectives are different.

Figure 1 Word Cloud of the ARPTCP hashtags



Figure 1 Word Cloud of the ERTCP hashtags



Despite sharing the same territory, the centre of Portugal, they have different promotional missions. In ARPTCP's (Figure 1) word cloud, the emphasis on attracting non-Portuguese followers is evident, with a predominance of English hashtags such as #centerofportugal (used in 175 posts) and #visitcenterofportugal (which appears in 53 posts). There are also additional, less frequent hashtags in languages other than Portuguese, including #weihnachtsdörfer (7 occurrences), #ruraltourism (21 occurrences), and #historicalvillage (12 occurrences). This strategic selection is probably the result of ARPTCP's responsibility for promoting the central region of Portugal on an international scale.

On the other hand, the ERTCP (Figure 2) reveals a focus on Portuguese-language hashtags. The most frequently used hashtags include #AquiEntreNós; appearing 282 times, #umdestinoetanto; repeated 115 times, and a set of other hashtags that appear approximately 100 times, such as #centrodeportugal, #visitportugal, #portugal, or #turismocentrodeportugal. ERTCP's use of hashtags exemplifies a finding by Uşaklı et al. (2019), which relates specific hashtags to destination promotional campaigns. Analysing

ERTCP's Instagram hashtags and their corresponding word clouds reveals a strategic use of campaigns to engage audiences. The hashtag #AquiEntreNós is prominent, linked to the 2021 campaign "Aqui entre nós" (ERTCP, 2021), which aimed to familiarise Portuguese citizens with the region's core qualities and establish it as their top holiday choice. Although the content is from 2022, the continued presence of this hashtag indicates its lasting impact or a potential overlap in the campaign calendar. In 2022, the hashtag #umdestinoetanto appeared, associated with the campaign "Um destino e tanto" (Tnews, 2022) launched in July. This campaign was aimed at families seeking new experiences and serenity, favouring natural environments over urban ones in order to escape the hustle and bustle of big cities. The persistence of hashtags such as #AVidaÉAgora and #APrimeiradeMuitasVezeas from previous campaigns suggests thematic continuity in the ERTCP's promotional efforts, emphasising post-pandemic resilience and renewal and positioning the centre of Portugal as an ideal location for post-lockdown rejuvenation.

In addition, the ERTCP's selection of hashtags reinforces Gorji et al. (2021) observation, regarding the use of hashtags that evoke feelings of well-being, pleasantness, and even empowerment, such as #TuPodes (You Can) and #AVidaÉAgora (Life is Now), although these are only present in the ERTCP's posts.

4.5 Geographical distribution

An analysis of the spatial distribution of ARPTCP and ERTCP posts on Instagram, as shown in figures 3 and 4, reveals a nuanced promotional strategy for the central region (NUTS II). While there is a certain similarity in spatial distribution, the frequency of posts in the various municipalities varies significantly.

Figure 3 Geographical distribution of ARPTCP posts.

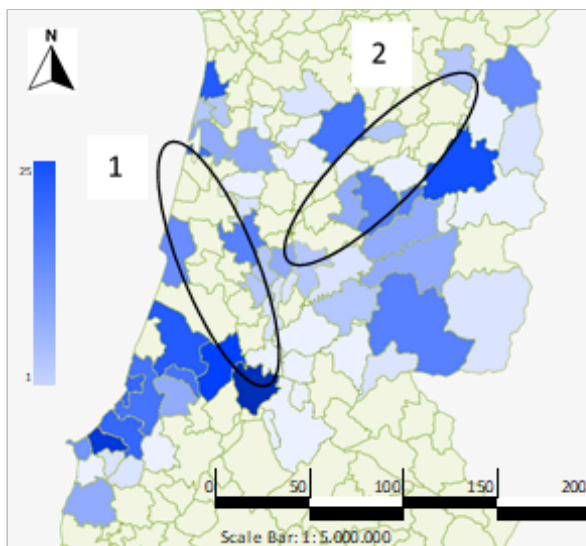
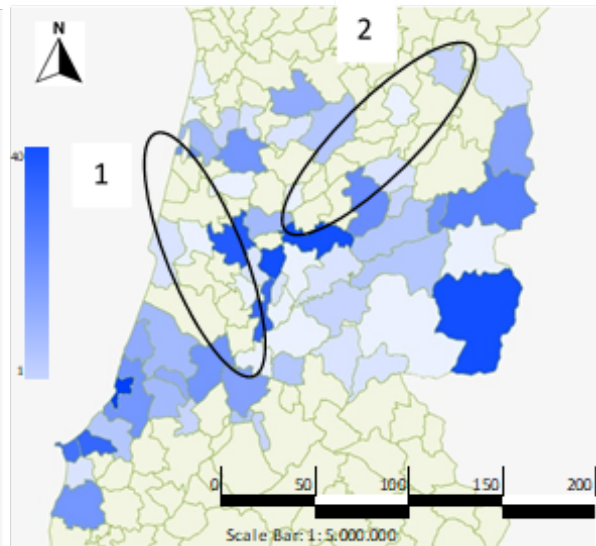


Figure 4 Geographical distribution of ERTCP posts.



ARPTCP's presence on Instagram is marked by a concentration of images from the northern segment of the Western Region, with a particular focus on Óbidos, Nazaré, and Alcobaça, extending to the neighbouring municipalities of Ourém and Tomar. To the north, the municipalities of Guarda and Ovar also stand out for their substantial photographic representation. On the other hand, the ERTCP's Instagram strategy revolves around the Serra da Lousã and the district of Coimbra, spotlighting municipalities such as Arganil, Lousã, Figueiró dos Vinhos, Castanheira de Pêra, and the city of Coimbra itself. This strategic

commitment is in line with the vigorous promotion of the Schist Villages. On the other hand, the municipality of Idanha-a-Nova is receiving considerable attention, particularly for its historical Villages.

Despite these distinct approaches, both ARPTCP and ERTCP share a common point in their promotional strategies: the existence of two areas in the central region of Portugal where promotional efforts are markedly scarce. As indicated in the referenced figures, Areas 1 and 2 receive minimal visibility on the DMOs' Instagram platforms throughout 2022. Area 1 includes municipalities such as Fornos de Algodres, Celorico da Beira, Trancoso, Aguiar da Beira, Satão, Penalva do Castelo, Nelas, Tábua, and Santa Comba Dão. Area 2 comprises the municipalities of Vagos, Mira, Cantanhede, Montemor-o-Velho, Condeixa-a-Nova, Soure, Pombal, and Ansião.

V. ENDNOTES

The comparative analysis of the two Destination Management Organisations (DMOs), ERTCP and ARPTCP, reveals distinct strategic methods for promoting the central region of Portugal on Instagram.

Although ERTCP is focused only on the Iberian market, the number of followers and interactions on this account is significantly higher than ARPTCP, probably due to its dynamic use of Instagram and effective engagement strategies, such as targeted hashtags and promotional campaigns that resonate with the Portuguese audience. The organisation's presence at events, tourism fairs, and advertising campaigns further amplifies its visibility and connection with the target audience.

On the other hand, ARPTCP's content strategy includes significant promotion of its members private initiatives. ERTCP's greater proximity to the Portuguese public, through tourism events and fairs or advertising campaigns, could also create greater awareness of the work carried out by this DMO, despite the ARPTCP's wider geographical scope and English-language approach. As a result, despite working in the same region, the images shared on their respective accounts are quite different. ERTCP uses images that represent the picturesque aspects, featuring inland villages and natural landscapes, as well as coastal areas and activities on the coast. There is significantly less emphasis on images of urban areas. Martínez-Rolán et al. (2019) have already recognised a correlation between a greater commitment to promoting these villages and an increase in demand. On the other hand, as mentioned above, the ARPTCP often promotes private initiatives, such as accommodations and restaurants, while placing great emphasis on the region's historical heritage.

The parameter in which both DMOs share similarities is the regional distribution of their images. In this respect, the municipalities represented are very similar, as are those that are ignored, reflecting the geographical distribution of the most attractive places in the central region, but also the areas that are marginalised in tourism promotion policies. The successful images endorse the emphasis on heritage and picturesque aspects for the promotion of the central region of Portugal, as they are the most popular.

These conclusions corroborate the findings of Bondarets (2022, p. i), with the author stating that "despite observing a consistent sharing of photographs over the years analysed, there is an inequality not only in terms of the disclosed location but also in the type of attractions present in the images".

Regarding the use of hashtags, once again, the ERTCP account demonstrates a more dynamic and appropriate approach, aligning them with promotional initiatives.

However, the posting patterns of both accounts are not in line with recommended practices for maximising engagement, and followers' interactions are not correlated with the tourism high season, which peaks in the first and last quarters of the year.

In short, and despite the importance of congruence in destination communication (Egger et al., 2022), ERTCP and ARPTCP apply different communication strategies to engage with their respective audiences. Despite operating in the same region, their levels of engagement and follower counts are disproportionate to their target markets. The ERTCP account stands out as more successful, probably due to its strategic alignment of content and audience engagement practices. This analysis underlines the importance of tailored social media strategies in destination marketing and the potential benefits of aligning content with audience preferences and behaviours

VI. IMPLICATIONS

We believe that the results presented in this research will contribute to the enrichment of knowledge in the field of tourism management. These results can contribute to improving academic knowledge about the use of social media by DMOs and their strategies for reaching and attracting their target audiences.

Regarding the practical contributions of this research, the findings of this study can lead to more efficient practices in the use of resources applied to social media promotion. It also serves to make DMOs aware of the differences and similarities that exist in regional promotion, as well as the areas that can be ostracised. Thus, this research highlights for the DMOs in the central region of Portugal the need for better and more equitable promotion of the territory through social media, particularly Instagram, avoiding the lack of diversity in promotion as previously stated by Bondarets (2022).

VII. LIMITATIONS

The study's conclusions reflect some limitations, which are important to consider when interpreting the results. The most significant are the time frame, the geographical focus, and the lack of cross-references.

The analysis is confined to a one-year period, which may not capture the full spectrum of the Instagram account dynamics over time. We also believe that the exclusive focus on DMOs in the central region of Portugal limits the scope of the study and prevents benchmarking with other regions. A comparative analysis with broader geographical data could offer a more holistic view of regional promotion strategies. We believe that the lack of cross-references with DMOs' communication strategies means that the study does not take into account the wider context in which these Instagram activities take place. Understanding the overall communication plan could provide information on the strategic objectives behind using social media and sharing content.

These limitations suggest opportunities for future research, such as extending the study over several years, including a wider range of DMOs, and integrating additional data sources to enrich the analysis. Recognising these limitations is crucial for a balanced

understanding of the implications of the study and even for guiding research into the role of social media in destination marketing.

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