

“Leveraging Instagram for Rural Tourism Growth: A Data-Driven Analysis”

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Abstract:

Rural tourism, characterized by travel to non-urban areas to experience local culture and natural landscapes, has seen a marked increase in popularity, driven by the growing demand for authentic, immersive, and sustainable experiences. However, rural tourism faces numerous challenges, particularly in regions such as Lebanon, where economic instability, wars and political unrest, and global crises have severely impacted the sector. Moreover, the number of visitors has declined due to recent crises, including economic downturns, the COVID-19 pandemic, and socio-political turbulence. Nonetheless, the rural town of Ehden has defied this trend, with a reported 3% growth in 2024 in tourism-related economic activity, according to the Syndicate of Food & Beverage in Lebanon. One of the driving factors behind this phenomenon is the increasing role of social media platforms, particularly Instagram, with its visual and interactive nature. It has emerged as a powerful marketing tool for increasing the visibility and engagement of rural destinations, ultimately attracting much more the Lebanese diaspora and tourists, and contributing to local economic growth. This paper aims to explore the influence of Instagram on tourism in Ehden using a data-driven approach. Data will be collected from different Instagram accounts, to assess the impact of social media on visitor numbers and overall growth in sectors. Additionally, this study will examine Instagram's role in amplifying Ehden's tourism appeal through a quantitative and qualitative assessment of engagement metrics, content strategies, and audience reach. By evaluating the effectiveness of platform-specific tools, it identifies best practices for optimizing digital engagement and fostering tourist interest. By combining algorithmic analysis with field data, this research will offer insights into the evolving role of social media in rural tourism development. The findings will contribute to the broader discourse on digital marketing's potential to support sustainable tourism in underdeveloped and crisis-affected regions.

Keywords: Touristic Growth; Digital Marketing; Visitor's Engagement; Algorithm Analysis; Rural Development, Ehden village, Lebanon

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1. Introduction

As travelers increasingly seek authentic and sustainable experiences, rural tourism is gaining prominence for its unique appeal and untapped potential. It plays a vital role in economic development by attracting visitors to lesser developed destinations, hence supporting local communities. However, rural destinations often face challenges such as limited visibility, and accessibility issues, making it difficult to compete with urban tourism hubs and major archaeological sites.

The rise of social media, particularly Instagram, has transformed tourism marketing in the world, by offering cost-effective ways to promote destinations. Instagram's visual and interactive features enable rural areas to showcase their landscapes, traditions, and experiences, connecting with a global audience and inspiring travelers to explore hidden gems. This study focuses on Ehden, located 110 km from Beirut (Lebanon), a picturesque rural destination in Mount Lebanon.

Traditional marketing methods often fail to effectively highlight Ehden's natural beauty, rich history, and cultural significance. Instagram presents an opportunity to bridge this gap through digital storytelling, blogs, and community-driven engagement. This study aims to assess how Instagram can enhance Ehden's visibility by analyzing engagement metrics, content strategies, and audience reach. It seeks to identify effective ways to leverage Instagram's features (hashtags, stories, and user-generated content) to boost tourism engagement and interest.

The findings will provide actionable insights for local businesses, tourism managers, and policymakers on optimizing Instagram as part of a broader marketing strategy. By focusing on Ehden, the study also offers broader recommendations for other Lebanese rural destinations facing similar challenges, particularly those aiming to develop sustainable tourism models that benefit local communities. Ultimately, the research highlights Instagram's potential as a strategic tool for rural tourism growth, enabling destinations to overcome visibility barriers and attract a global audience.

Research Questions

To achieve the study's objective, the following research questions will guide the analysis:

To what extent does Instagram marketing influence engagement metrics in rural tourism destinations?

This question addresses the effectiveness of Instagram as a marketing tool for rural tourism. It aims to measure how Instagram marketing strategies contribute to key metrics such as reach, engagement, follower growth, and ultimately, tourist visits to Ehden. This will involve a data-driven analysis of Instagram interactions and their correlation to tourism-related outcomes.

How can Instagram strategies be optimized for Ehden's tourism growth?

This question seeks to explore the specific Instagram features and strategies that could most effectively promote Ehden as a rural tourism destination. This includes an analysis of content types, hashtag usage, and other tools available on the platform that can enhance engagement with potential visitors.

These research questions will provide a foundation for understanding the impact of Instagram on rural tourism development and offer practical recommendations for maximizing its potential in rural tourism promotion.

2. Literature Review

2.1. Rural Tourism and Digital Marketing

Rural tourism refers to travel in non-urban areas, often characterized by natural landscapes, cultural heritage, and local traditions. It plays a crucial role in economic development by attracting visitors, creating jobs, and preserving local identity. However, rural destinations face challenges such as limited visibility, geographical isolation, and competition from more established historic or urban tourism hubs. Digital marketing has emerged as a transformative tool to address these challenges, enabling rural destinations to reach a global audience, engage with potential tourists, and promote their unique offerings in a cost-effective manner (Kastenholz, Carneiro, & Marques, 2012).

Rural areas often struggle to attract tourists, but digital platforms help bridge this gap by exposing these destinations to a wider audience. Social media, particularly Instagram, has proven to be an effective tool in this regard, offering a visual and interactive platform to showcase scenic landscapes, cultural heritage, gastronomic richness, religious sites and local traditions (Tung & Ritchie, 2011).

Another key advantage of digital marketing is its ability to promote the authenticity and unique experiences of rural tourism. By leveraging storytelling, images, and videos, rural destinations can highlight their cultural and natural assets in an engaging way. Additionally, digital platforms facilitate community involvement in tourism promotion, empowering local populations to actively participate in showcasing their heritage and attractions, thus fostering sustainability and ownership (Rodrigues et al., 2023).

Furthermore, digital marketing supports sustainable tourism practices by promoting eco-friendly initiatives, responsible travel behavior, promotion of local products, etc. It aligns with the increasing demand for sustainability in tourism, offering a platform to advocate for environmental and cultural preservation (Gretzel et al., 2015; Leung et al., 2013).

However, many rural areas in underdeveloped countries lack the necessary digital infrastructure (reliable internet access and digital literacy, etc.) limiting their ability to fully leverage online platforms. Small rural businesses often struggle to invest in digital marketing due to financial constraints, making it difficult to compete with major sites and urban destinations that have more resources for promotion (Cheung, Pires, & Rosenberger, 2020).

Finally, the effectiveness of digital marketing in rural tourism depends on strategic implementation. Without a well-planned approach, rural destinations may struggle to engage audiences effectively. Overcoming these barriers requires targeted, tailored digital marketing strategies that maximize engagement, attract visitors, and support sustainable economic development in rural areas.

2.2. Instagram role and features

Instagram has become a crucial platform in the world for promoting rural tourism due to its visual nature and extensive reach. Through various features, rural destinations can increase their visibility and engage potential tourists in creative ways (Cf. Table 1).

Table 1. Instagram features' role

Feature	Definition	Marketing Potential
Instagram Stories	Temporary posts (photos or videos) that disappear after 24 hours	Stories appear at the top of the feed, making them highly visible. Use interactive tools like polls, quizzes, questions, and sliders to engage your audience. Highlights allow to save Stories for long-term visibility, and businesses can run Story ads to reach a wider audience (Instagram for Business, 2024).
Instagram Reels	Short form, engaging videos (up to 90 seconds) with music, effects, and editing tools	Reels are prioritized on the Explore page, increasing discoverability. Leverage trending audio and challenges to boost visibility and use this format to showcase the brand's creativity and authenticity (Zimmerman, 2023).
Hashtags	Keywords or phrases preceded by the “#” symbol to categorize content	Hashtags help users find the content through search and the Explore page. Create branded hashtags to promote campaigns or events and encourage followers to use them for user-generated content (UGC) (Macready, 2024).
Instagram Feed Posts	Permanent posts (photos, videos, or carousels) that appear on your profile grid	A visually cohesive grid reflects the brand identity. Call-to-actions (CTAs) encourage likes, comments, shares, or website visits. For business accounts, shopping tags in posts enable direct purchases (Instagram Insights, 2024).

Instagram Ads	Paid promotions that appear in feeds, Stories, Reels, and Explore	Instagram’s advanced targeting options enable reaching specific audiences. Ads are available in multiple formats, and performance tracking is available through Instagram Insights (Sprout Social, 2024).
Instagram Insights	Analytics tool for business accounts to track performance	Analysis of metrics like engagement, reach, and follower demographics supports data-driven decisions. Identification of top-performing posts enables content optimization and strategy refinement (Sprout Social, 2024).
Collaborations and Influencer Marketing	Partnering with influencers or other brands to promote products/services	Leveraging influencers’ trust and audience results in relatable content for rural tourism. Collaborations provide access to new audiences (Nadalipour et al., 2023).
Instagram Live	Real-time video streaming to interact with the audience	Real-time engagement builds trust with followers. Live sessions with influencers or partners, along with behind-the-scenes footage, Q&A sessions, or product launches, enhance audience connection (Zimmerman, 2023).

Source: Adapted from Instagram features official website, <https://about.instagram.com/features>

The table consolidates all the features of Instagram that can be leveraged to promote rural tourism. Each feature is defined, and its marketing potential is outlined to provide a clear understanding of how it can be used effectively. The explanations offer additional context, highlighting how rural tourism businesses can utilize these features to increase visibility, engage with audiences, and drive tourism. By combining these strategies, rural destinations can create a comprehensive and impactful Instagram marketing plan.

2.3. Case Studies and Examples

Several case studies from rural regions worldwide demonstrate Instagram's effectiveness in promoting tourism. These studies show how rural destinations have successfully used Instagram's visual platform to highlight their natural beauty, cultural heritage, craftsman, gastronomy, and local experiences, drawing tourists and increasing engagement. Mobile apps like Airbnb Experiences and local tourism apps offer specialized activities and accommodations, enhancing the appeal of rural destinations. Additionally, emerging technologies such as Virtual Reality (VR) and Augmented Reality (AR) are being employed to provide virtual tours, attracting tech-savvy travelers.

In Indonesia, the Sumber Urip Tourism Village utilized Instagram to promote its natural beauty and cultural heritage. However, challenges like inconsistent posting and limited interaction with followers hindered their full potential (Ikhlusal et al., 2024). Similarly, the Stockholm Archipelago in Sweden explored how Instagram shapes perceptions of rural landscapes. Visual content played a significant role in creating collective representations of the destination, shaping tourists' expectations (Widholm, 2023). The Bani Tehsil in India leveraged Instagram to promote its natural and cultural landmarks, showcasing the importance of local digital content in fostering rural tourism development (Zenodo, 2024).

These case studies illustrate how Instagram has been used effectively to attract visitors, build community engagement, and support long-term tourism growth in rural areas. Each example highlights the importance of strategic planning, consistent online presence, and the creative use of Instagram’s features, such as hashtags, user-generated content, and visual storytelling, to create an authentic and appealing narrative for rural destinations.

3. Case Study: Ehden village (Lebanon)

Ehden, a picturesque village in northern Lebanon, is located 1500 meters above sea level, 110 kilometers from Beirut, and twinned with the city of Zgharta. Known as the “Bride of the North,” it is celebrated for its rich built and religious heritage, stunning natural surroundings, and renowned gastronomy. Historically significant, Ehden has been inhabited since antiquity and was once called the “Circular Paradise” by the Persians (Yammine, 1990). Its resilient community is deeply rooted in Maronite Christian traditions, with Maronite Patriarch Estephan Al Douaihy (1630-1704) likening it to the Garden of Eden. The village’s name, derived from “Adon,” signifies strength and serenity (Freiha, 1997).

Ehden is a cultural and culinary hub, featuring lively cafes, an old souk, and restaurants near water sources, famous for dishes like Kebbeh. The annual Ehdeniyat International Festival, held in the village center (except during 2020-2022 because of COVID 19 pandemic), attracts each year, global artists, and visitors. The village is also home to historical figures like scholar Gabriel Sionite and nationalist leader Youssef Bey Karam, whose statue stands prominently at the entrance of the village. Nearby, the Horsh Ehden Nature Reserve, just 3km away, offers hiking trails and is a biodiversity hotspot with over 1,058 plant species and wildlife such as wildcats and imperial eagles.

Religious heritage is another cornerstone of Ehden's identity, with numerous churches, monasteries, and pilgrimages adding to its cultural richness. While Ehden has a presence on Instagram through tourism accounts, local businesses, and user-generated content, its digital strategy remains fragmented. Content often highlights natural beauty, cultural events, and local experiences, but there is untapped potential in using features like Reels and influencer collaborations.

To attract a broader audience, Ehden must leverage Instagram and digital marketing to showcase its unique offerings. A coordinated digital strategy would enhance visibility, engage tourists, and position Ehden as a must-visit destination for younger, tech-savvy travelers, ensuring its sustainable growth as a rural tourism hotspot.

4. Methodology

This study employs a data-driven approach to analyze the effectiveness of Instagram as a tool for promoting rural tourism, using Ehden, Lebanon, as a case study. The methodology is structured into three key components: data collection, analytical tools, and criteria for evaluation.

Data was collected from Instagram to assess the platform's impact on promoting Ehden as a rural tourism destination. The following methods were used:

- Number of Followers: The number of followers for accounts promoting Ehden was tracked to measure the impact of Instagram campaigns.
- Hashtag Analysis: Popular hashtags associated with Ehden (e.g. #Ehden, #EhdenLebanon, #RuralTourism, etc.) were analyzed to determine their reach and frequency of use. This helped identify trends and user-generated content related to the destination.
- Type of account or business: Accounts either promoting Ehden, or are related to the tourism field (Hotels, restaurants, service providers, etc.) were tracked to compare account popularity to their respective field of work.
- Date of last activity: The date of the last activity was registered to be able to track it.

Data was collected using Instagram's native analytics tool, Instagram Insights, and the Explore page, as well as third-party tools like Influencers Club for broader trend analysis. The data collection period spanned from September 2024 to February 2025. During this time, a war took place in Lebanon, impacting the followers of touristic pages.

To analyze the data collected, the following tools and techniques were employed:

- Instagram Insights and Explore page: Used to track engagement metrics, follower demographics, and post-performance for accounts promoting Ehden.
- Influencers Club: Used to search for "Ehden" as keyword, not only in the account's username or name, but as well as its bio.
- Excel: Statistical software used to organize and analyze quantitative data, such as engagement rates and follower growth trends.

To analyze Instagram account performance scientifically, the best approach has been to use Data Envelopment Analysis (DEA) or Multi-Criteria Decision Making (MCDM) methods like TOPSIS (Technique for Order Preference by Similarity to Ideal Solution). DEA is ideal for measuring relative efficiency when multiple input and output parameters are involved (Charnes, A., Cooper, W. W., & Rhodes, E., 1978). In this case:

Inputs: **Business type, account verification status, and activity level.**

Outputs: Number of followers and engagement potential.

TOPSIS ranks alternatives based on their closeness to an ideal solution. It would rank Instagram accounts by considering the best performance in each criterion (e.g., highest followers, most recent activity) (Hwang, C. L., & Yoon, K., 1981).

And finally, to find patterns, we analyzed correlations between business types, follower counts, and activity levels. A multiple regression model could predict follower growth based on these variables (Cohen, J., Cohen, P., West, S. G., & Aiken, L. S., 2003).

These metrics were chosen to provide a comprehensive understanding of how Instagram contributes to tourism growth in rural areas.

5. Results and Findings

5.1. The #hashtag game

Table 2 provides a snapshot of Instagram hashtags containing the keyword “Ehden,” along with its usage frequency.

Table 2. Hashtag usage "Ehden" Keyword

Hashtags	Number	Hashtags	Number
ehden	154K	ehdennightlife	100+
liveloveehden	31.2K	ehden_adventures	100+
ehdenspirit	10.9k	ehdenmountainsactivities	100+
ehdeniyat	5000+	ehdenrestaurants	100+
ehdenadventures	1000+	ehdennightlife*	100+
ehden2020	1000+	ehden*	100+
ehdenforever	1000+	ehdenbeerfestival	100+
ehdenmountainactivities	1000+	ehdenvibes	100+
ehdenreserve	1000+	ehdensnowymountains	100+
ehdenlebanon	1000+	ehdening	100+
ehdencountryclub	1000+	ehdenlovers	100+
ehdenseasons	500+	ehdensky	100+
ehdenoffroad	500+	ehdensunset	100+
ehdenhotels	500+	midanehden	100+
ehdenmyscape	500+	ehden_lebanon	100+

Source: Hashtag data analysis done by the researchers, 2025

This data offers valuable insights into how Ehden is being represented and promoted, as well as the level of engagement and interest surrounding the destination.

We can notice that #ehden has (154,000) uses until February 2025, this is the most popular hashtag, indicating that “Ehden” is a widely recognized keyword on Instagram. It serves as a general identifier for the destination, capturing a broad range of content related to the village. Followed by #liveloveehden at (31,200) uses until February 2025, this hashtag suggests a strong emotional connection to Ehden, likely used by both tourists and locals to express their love for the destination. And finally, #ehdenspirit with (10,900) uses until February 2025, this hashtag reflects a focus on one of the oldest Instagram accounts (Ehden Spirit) used to promote Ehden, its natural beauty, cultural heritage, or community spirit.

These top three hashtags dominate the conversation around Ehden, accounting for most mentions and indicating a strong digital presence for the destination.

The table also includes several niche hashtags that highlight specific aspects of Ehden:

- i. **Nature and Adventure:** Hashtags like #ehdenadventures, #ehdenmountainsactivities, and #ehdensnowymountains emphasize Ehden's appeal as a destination for outdoor activities and nature enthusiasts. Also, Ehden Adventures and Ehden Mountain Activities are 2 separate accounts used both to promote extreme outdoor sports businesses in Ehden.
- ii. **Cultural and Local Events:** Hashtags such as #ehdenbeerfestival and #ehdenvibes suggest that Ehden hosts events and festivals that attract both locals and tourists, contributing to its cultural appeal.
- iii. **Hospitality and Services:** Hashtags like #ehdenhotels, #ehdenrestaurants, and #ehdencountryclub highlight the availability of accommodations, dining, and recreational facilities, which are essential for attracting and retaining tourists.

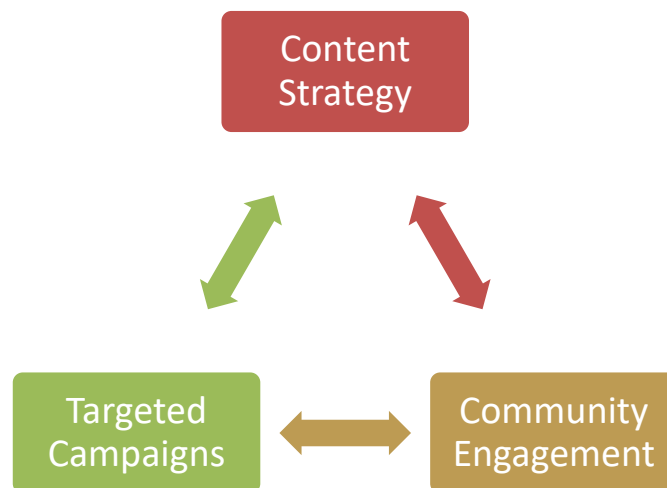
These niche hashtags demonstrate that Ehden is being promoted not only as a scenic destination but also as a hub for diverse experiences, from adventure tourism to cultural events.

Several hashtags in the table have relatively low usage (100+ or 500+), indicating potential areas for growth, such as #ehdenoffroad, #ehdening, and #ehdenlovers. These hashtags, while less popular, could be leveraged to target specific audiences, such as adventure seekers or loyal visitors. We also notice the use of location-specific hashtags, such as #ehden_lebanon and #ehdenlebanon, that could be used to strengthen Ehden's identity as a Lebanese destination, appealing to both domestic and international tourists. And finally, we find the usage of visually oriented hashtags highlight the aesthetic appeal of Ehden, which could be further promoted to attract photographers and nature lovers, such as #ehdensunset and #ehdensky. By increasing the use of these underutilized hashtags, Ehden can expand its digital footprint and reach new audience segments.

Strategic Implications

The hashtag data reveals several opportunities for Ehden's tourism promotion (Cf. Figure 1).

Figure 1. Hashtag vs. Promotion opportunities



Source: Data Analysis, 2025

If we focus on content strategy, by leveraging the popularity of hashtags like #ehden and #liveloveehden, we are suggesting that emotionally resonant content performs well. However, niche hashtags like #ehdenadventures and #ehdenbeerfestival indicate that specific themes (e.g., adventure, culture) also attract engagement.

The presence of hashtags like #ehdenspirit and #ehdenvibes reflects a strong sense of community and local pride. Encouraging user-generated content with these hashtags can further amplify Ehden's appeal. This is what we mean by community engagement.

And finally, targeted campaigns, we utilize hashtags like #ehdenoffroad and #ehden_lebanon present opportunities for targeted campaigns to promote specific aspects of Ehden, such as its adventure tourism offerings or its identity as a Lebanese destination.

Despite all the above, limitations include a lack of engagement metrics (e.g., likes, comments), potential regional bias favoring Lebanese/Middle Eastern users, and no temporal analysis to track trends. Despite this, the insights can help refine Ehden’s digital strategy to attract a broader audience and strengthen its rural tourism appeal. Addressing these gaps would improve future marketing efforts.

5.2. The Explore page

Table 3. Instagram accounts with Ehden keyword

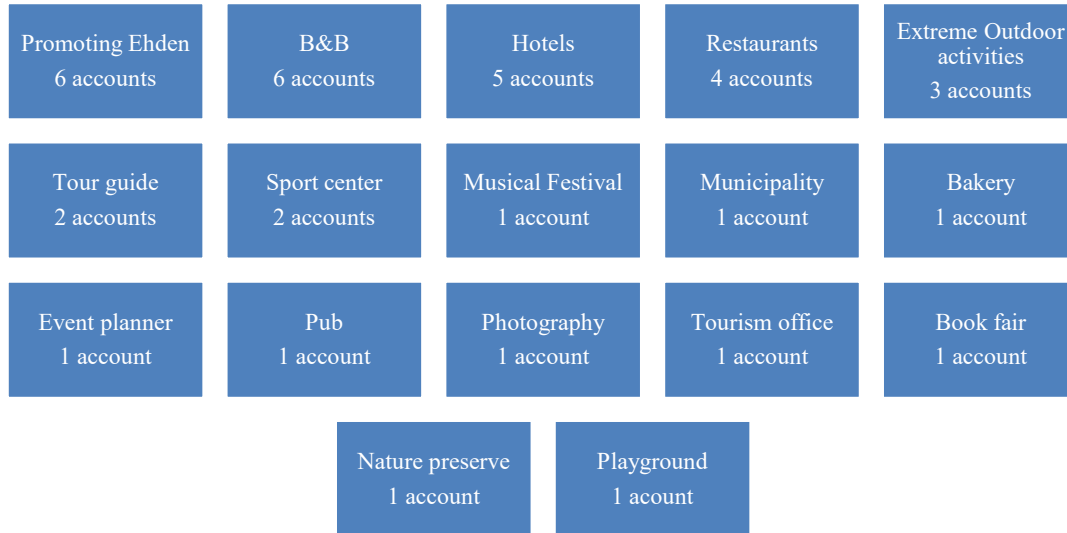
Username	Account Name	Number of followers	Private/Public	Type of business	Active
experienceehden	Ehden	33.7K	Public	Promoting Ehden	No
mist_hotelehden	MIST Hotel & Spa - Ehden	31.9K	Public	Hotel	Yes
ehdeniyat	Ehdeniyat International Festival	24.8K	Public	Musical festival	Yes
dar.ehden.hotel	Dar Ehden	21.2K	Public	Hotel	Yes
ehdenpadel	Ehden Padel	19K	Public	Sport center	Yes
karaz.ehden	Kàràz Guest House	19.8K	Public	B&B	Yes
ehdenspirit	Ehden Spirit	17.1K	Public	Promoting Ehden	Yes
ehdencountryclub	Ehden Country Club	12.7K	Public	Hotel	Yes
ehdenmountainactivities	Mark Finianos	11.1k	Public	Extreme Outdoor activities	Yes
cruisingehden	Cruising Ehden	10.8K	Public	Tour guide	Yes
ehden_wood_bungalow	Ehden Wood Bungalow	10.7K	Public	B&B	Yes
ehdenadventures	Ehden Adventures	10.7K	Public	Extreme Outdoor activities	Yes
municipality_of_zgharta_ehden	Municipality of Zgharta-Ehden	7,665	Public	Municipality	Yes
horshehdennaturereserve	Horsh Ehden Nature Reserve	7,376	Public	Nature Preserve	Yes
reef_ehden	Reef Ehden	6,008	Public	Restaurant	Yes
lavenderhouseehden	Lavender House Ehden	5,173	Public	B&B	Yes
iskan.dar.ehden	iskan دار guesthouse	4,703	Public	B&B	Yes
hotelehden	Hotel Ehden	3,839	Public	Hotel	Yes
dropin_ehden	Ehden, Drop in	3,602	Public	Restaurant	Yes
explore.ehden	explore.ehdeh.lb	3,550	Public	Promoting Ehden	Yes
hotelbelmontehden	Hotel Belmont Ehden	3,225	Private	Hotel	Yes
bview.ehden	B View Guesthouse	3,106	Public	B&B	Yes
sama.ehden.park	Sama Ehden Park	2,825	Public	Playground	Yes
ehdensol	Sol Ehden	2,696	Public	B&B	Yes

tajehden	Taj Ehden	2,298	Public	Restaurant	Yes
ehdenforever	Ehden Forever	1,699	Private		N/A
platanus.ehden	Platanus Restaurant	1,670	Public	Restaurant	Yes
meetehden	Meet Ehden	1,368	Public	Promoting Ehden	Yes
ehdenha	إهدنها - EhdenHa	1,120	Public	Event planner	No
ehden.zgharta8	ز غرتا-إهدن	1,037	Public	Promoting Ehden	Yes
names.ehden	Names Ehden	841	Public	Pub	Yes
ehden_nature	Ehden_nature	779	Private		N/A
ehdenride	Ehden Ride - Vespa	728	Public	Tour guide	Yes
copain.ehden	Copain	653	Public	Bakery	Yes
ehden_bookfair	Ehden Book Fair معرض إهدن للكتاب	465	Public	Book Fair	No
ehdenroots	Ehden Roots	374	Private		N/A
visitehden.lb	Visit Ehden	325	Public	Tourism office	Yes
ehden5kmrace	Ehden 5Km Running Race	322	Public	Sport center	No
my_ehden	My ♥ Ehden	296	Public	Promoting Ehden	Yes
snowlineehden	Snowline Ehden	221	Public	Extreme Outdoor activities	No
ehden365	365 days of Ehden	207	Public	Photography	No
eben.ehden	Eben.ehden	164	Private		N/A
ehden_photographer	Ehden	75	Private		N/A
ehden_leb	إهدن	66	Private		N/A
love.ehden	live.love.ehden	48	Private		N/A
ehden_ehden	Ehden Ehden	30	Private		N/A

Source: Search and Explore page data analysis done by the researchers, 2025

Based on Table 3, the clusters of accounts are based on the type of business (Cf. Figure 2):

Figure 2.Accounts clusters based on business type



Source: Accounts Data Analysis done by the researchers, 2025

By analyzing the accounts, we noted that the followers are locals, Lebanese tourists living outside the region, Lebanese diaspora and other types of tourists. Also, by analyzing table 7 and the summary above, we find the following:

1. Category Distribution

- **Promoting Ehden and Bed & Breakfast accommodation** have the highest number of accounts (6 each), highlighting a strong focus on local promotion and accommodation.
- **Hotels** are also well-represented (5 accounts), emphasizing the importance of traditional lodging.
- **Restaurants and Extreme Outdoor Activities** follow, indicating a balance between gastronomy and adventure tourism.
- Niche categories like **Musical Festival, Municipality, Bakery, Event Planner, Pub, Photography, Tourism Office, Book Fair, Nature Preserve, and Playground** have minimal representation (1 account each), showcasing a more specialized or emerging presence.

2. Tourism and Hospitality Dominance

Most accounts are linked to tourism and hospitality (Promoting Ehden, B&B, Hotels, Restaurants, Tour Guide, Tourism Office), reflecting Ehden's focus on attracting visitors and supporting the local economy through tourism.

3. Cultural and Recreational Activities

While there are accounts for **Musical Festival, Book Fair, and Playground**, their limited numbers suggest potential growth opportunities in cultural and family-oriented activities.

It's important to note that Ehdeniyat Musical festival is an international music festival with more than 20 years of events.

4. Opportunities for Growth and Diversification

- **Extreme Outdoor Activities** and **Sport Centers** show interest in adventure and sports tourism but could be expanded further.
- Underrepresented sectors like **Event Planning** and **Photography** could be leveraged to diversify tourist experiences.
- **Nature Preserve**, even though it's one account Horsh Ehden Nature Reserve is a one-of-a-kind reserve in the Middle East with the highest biodiversity in the Middle East.

5. Community and Identity Integration

The current distribution suggests a need to enhance cultural tourism initiatives. Collaborations with the **Tourism Office** and accounts focused on local events (e.g., Book Fair, Musical Festival) could help integrate cultural identity and religious heritage into the tourism strategy.

In summary, the data suggests a strong emphasis on **tourism and hospitality** (Promoting Ehden, B&B, Hotel, Restaurant, Tour Guide), which aligns with Ehden being a tourist destination. Moreover, there is a mix of **cultural, recreational, and outdoor activities** (Musical Festival, Extreme Outdoor Activities, Sport Centers, Playground), indicating efforts to cater to diverse interests.

The presence of **local services** (Municipality, Bakery, Event Planner, Photography, Tourism Office) highlights the community's infrastructure and support for both residents and visitors. And finally, the single accounts in niche categories (e.g., Book Fair, Nature Preserve) suggest unique or seasonal offerings that add to the town's appeal.

We find the potential insights are the high number of accounts for **Promoting Ehden** and **B&B** suggests a strategic focus on marketing and accommodation, which are likely key drivers of the local economy.

The lower representation of **cultural and recreational activities** (e.g., Musical Festival, Book Fair) might indicate opportunities for growth in these areas to attract a broader audience.

The presence of **extreme outdoor activities** and **nature preserves** aligns with Ehden's natural beauty and could be further leveraged to attract adventure and eco-tourists.

In summary, the table reflects a strong focus on tourism and hospitality, with a diverse range of supporting services and activities that cater to various interests. There may be opportunities to expand or promote niche categories to enhance the overall appeal of Ehden.

We move on to analyze the representation of tourism services (restaurants, pubs, cafés, B&Bs, and hotels) for Ehden on Instagram:

Existing tourism services in Ehden:

- Restaurants, pubs, and cafés (123 total in Ehden) (**Error! Reference source not found.**)
- B&Bs, hotels, guesthouses, etc. (37 total in Ehden) (**Error! Reference source not found.**)

Extracted Data from the Table:

- **Restaurants, Pubs & Cafés** (6 accounts found):
 1. Reef Ehden (6,008 followers) – Restaurant
 2. Drop in Ehden (3,602 followers) – Restaurant
 3. Taj Ehden (2,298 followers) – Restaurant

4. Platanus Ehden (1,670 followers) – Restaurant
5. Names Ehden (841 followers) – Pub

Representation: 6 out of 123 = **4.88%**

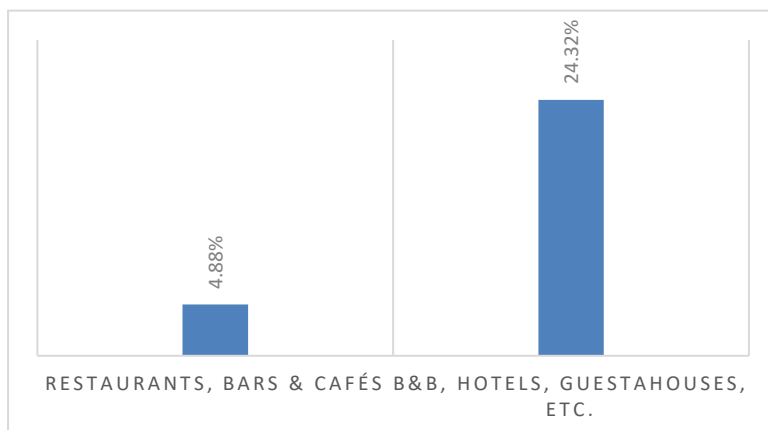
- **B&Bs, Hotels & Guesthouses** (9 accounts found):
 1. Mist Hotel & Spa - Ehden (31.9K followers) – Hotel
 2. Dar Ehden (21.2K followers) – Hotel
 3. Ehden Country Club (12.7K followers) – Hotel
 4. Ehden Wood Bungalow (10.7K followers) – B&B
 5. Karaz Guest House (19.8K followers) – B&B
 6. Lavender House Ehden (5,173 followers) – B&B
 7. Iskandar Guesthouse (4,703 followers) – B&B
 8. Hotel Ehden (3,839 followers) – Hotel
 9. B View Guesthouse (3,106 followers) – B&B

Representation: 9 out of 37 = **24.32%**

Analysis, as per the explore page search for the keyword “Ehden”:

- **Restaurants, pubs, and cafés are significantly underrepresented (4.88%),** considering their large presence in Ehden.
- **B&Bs and hotels have better representation (24.32%),** but there’s still room for improvement.
- **The most followed accounts are hotels and guesthouses, suggesting a stronger online presence in accommodations compared to dining options.**

Figure 3. Representation of the tourism services in Ehden on Instagram



Source: Tourism services data analysis done by the researchers, 2025

The chart (Cf. Figure 3) highlights the significant gap in online presence between restaurants, pubs, and cafés (4.88%) versus B&Bs and hotels (24.32%). This means that the accommodation’s presence on Instagram is 4.98 times the food and beverages. However, this result contradicts with the reality where the number of food and beverages in Ehden is 3.48 times

the number of accommodations there. The number of restaurants, pubs and cafés in Ehden is 122 (see Annex 2), and the number of B&Bs and hotels is 35 (see Annex 3). Is it because accommodation facilities are newly opened or work only during the summer season and are trying to increase their clientele using Digital marketing, in contradiction with the old well-known restaurants? Or are the F&B small businesses that can't afford boosting posts? Or are there other reasons for that?

5.3. The Algorithm

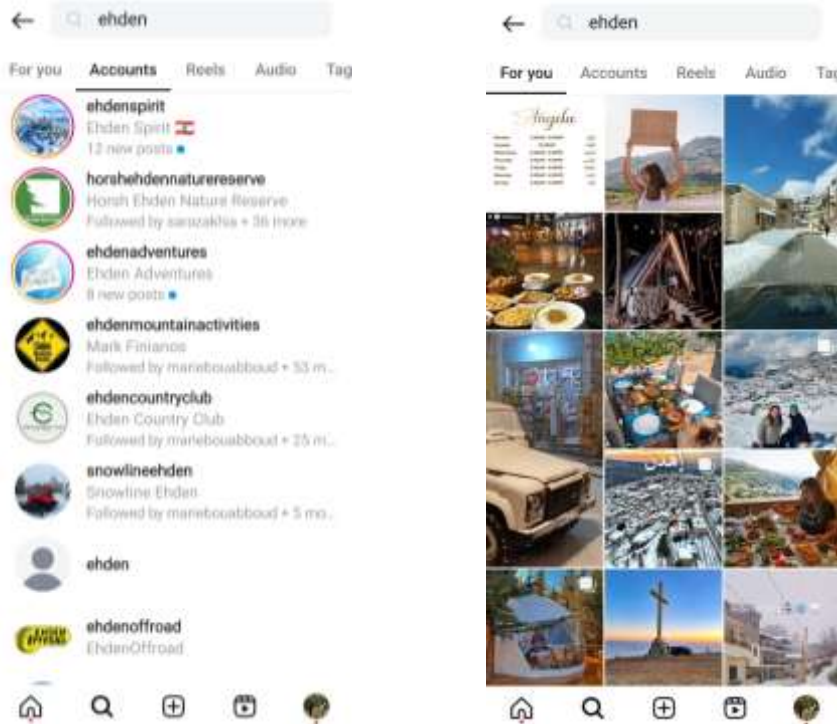


Figure 4. Instagram account of a person in the North of Lebanon, closer range to Ehden
 Source: Data search, 2025

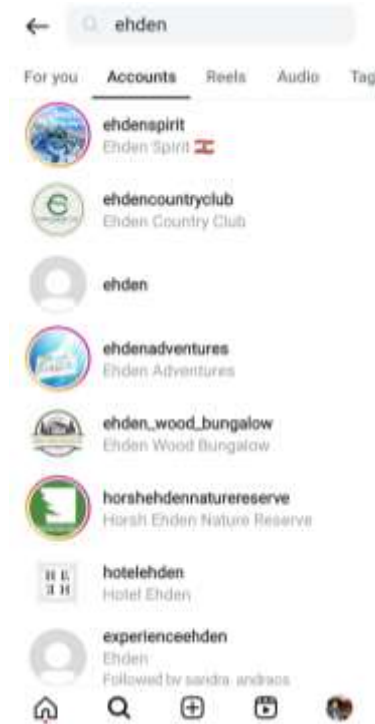


Figure 5. Instagram account of a person in the South of Lebanon, a greater range from Ehden
Source: Data search, 2025



Figure 6. Instagram account of a person in Beirut, mid-way from Ehden
Source: Data search, 2025

The above images (Cf. Figure 4, Figure 5 and Figure 6) are data collection for comparing Instagram content from different regions. We search the keyword “Ehden” from different locations in Lebanon, from different people’s phone, and we checked their “For you” page and Accounts’ page. We note that the emphasis on “closer range” vs. “greater range” hints at analyzing how geographical distance influences content reach or engagement and more importantly a focus on regional targeting for tourism promotion.

We notice that the order of the accounts differs from one place to another.

Table 4. Order of accounts based on location

Account name	Person A	Person B	Person C
Ehden Spirit	1	1	1
Horsh Ehden Nature Reserve	2	6	3
Ehden adventures	3	4	2
Ehden Mountain Activities	4		10
Ehden Country Club	5	2	6
Snow line Ehden	6		
Ehden	7	3	7
Ehden off road	8		
Ehden Wood Bungalow		5	4
Hotel Ehden		7	
Experience Ehden		8	
Karaz Ehden			5
Cruising Ehden			8
Mist Hotel Ehden			9
Ehdeniyat			11

Source: Data analysis, 2025

The dataset in Table 4 examines Instagram content visibility for the search term “Ehden” across users in different Lebanese locations, assessing how geographical distance impacts content ranking and engagement. A key finding is that while the account “Ehden Spirit” consistently ranks first for all users, the order of other accounts varies significantly. This suggests Instagram’s algorithm tailors’ results based on regional interest, engagement history, or location-based personalization, influencing how tourism-related content is promoted.

The study reveals distinct variations in content emphasis based on user location. For Person A, accounts like “Horsh Ehden Nature Reserve” and “Ehden Adventures” rank higher, indicating a preference for adventure and nature-based content. In contrast, Person B’s results prioritize accommodation-related accounts like “Ehden Country Club” and “Hotel Ehden,” while Person C’s rankings reflect a mix of accommodation and activity-focused accounts, such as “Mist Hotel Ehden” and “Ehden Mountain Activities.” These differences suggest Instagram’s algorithm adapts to inferred user preferences, search history, or engagement patterns, shaping how tourism content is displayed.

These findings underscore the importance of personalized content ranking in social media marketing and its implications for regional tourism promotion. The influence of location and user profiles on search rankings highlights the need for a diversified content strategy to effectively reach different audience segments. While general accounts like “Ehden Spirit” maintain consistent visibility, accommodation providers and activity organizers must optimize their content to improve rankings for diverse audiences. Understanding these algorithmic nuances can help tourism marketers tailor content to user behaviors, maximize engagement, and ensure strategic visibility on Instagram.

The study has limitations, including the absence of visual data, which restricts analysis of design elements like color schemes or call-to-action placements. Additionally, while proximity descriptions imply the use of geotags or location-based targeting, these variables are not explicitly confirmed, leaving room for speculation about methodological rigor.

In conclusion, the research provides a systematic framework for leveraging Instagram to promote rural tourism, particularly in Ehden. To enhance scientific validity, future studies should incorporate empirical data—such as engagement rates and follower demographics—and align strategies with Instagram’s evolving algorithm (e.g., its 2024 emphasis on Reels). Expanding the dataset to include underrepresented rural regions and validating hypotheses through A/B testing would further strengthen the study’s applicability. By addressing these gaps, this approach could serve as a replicable model for rural tourism growth in Lebanon and beyond.

6. Discussion

6.1. Future Research Directions

As digital marketing in rural tourism evolves, several areas require further exploration. Emerging technologies such as Artificial Intelligence (AI), blockchain, and the metaverse have the potential to transform how rural destinations are promoted and experienced. Additionally, assessing the effectiveness of digital marketing strategies in fostering rural tourism growth is crucial. Future research should explore community-based digital marketing, where local communities actively participate in content creation to enhance rural tourism promotion. According to Buhalis and Sinarta (2019), real-time co-creation and collaboration could significantly improve these efforts.

Looking ahead, Instagram's role in rural tourism marketing will likely shift towards more interactive and personalized content. Technologies like augmented reality (AR) and virtual reality (VR) can enhance destination visibility, enabling virtual tours and immersive experiences. AI-driven content customization can further tailor marketing strategies to individual preferences. Local community engagement will become more central to tourism marketing, with grassroots initiatives and user-generated content playing a vital role. Additionally, data-driven insights from Instagram analytics (e.g., engagement rates, follower growth, conversion rates) will help rural tourism stakeholders refine their strategies and optimize marketing campaigns.

To remain competitive, rural tourism destinations must embrace digital marketing strategies that leverage new technologies and community engagement. By doing so, they can attract a global audience and ensure sustainable tourism growth. Instagram offers a dynamic platform for promoting rural destinations, provided there is strategic planning, consistent content creation, and adaptation to emerging trends.

6.2. Strategies to Improve Representation

Given that food tourism is a major attraction, increasing the digital presence of food businesses can significantly enhance Ehden's appeal. Currently, only (4.88%) of restaurants, pubs, and cafés incorporate "Ehden" in their usernames, and many are either inactive or lack an Instagram presence. To address this, the Ehden tourism office could organize digital marketing workshops for restaurant owners. Additionally, leveraging food influencers and bloggers—both Lebanese and international—can boost visibility. A campaign using hashtags like #TasteEhden or #EhdenEats can make food-related content more discoverable (as per strategies shown in Figure 7).

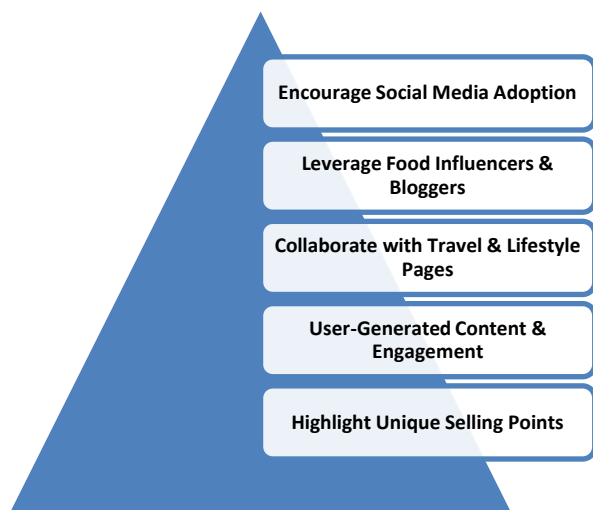


Figure 7. Strategies to improve representation

Collaboration with travel and lifestyle pages is another key strategy. Partnering with established accounts like @experiencehden and @ehdenspirit to feature restaurant content can broaden reach. Encouraging user-generated content through contests such as “Best Ehden Dish” can also drive engagement. Showcasing Ehden’s signature dish, Kebbeh, through Instagram Reels and behind-the-scenes preparation videos can further strengthen its culinary identity (as per strategies shown in Figure 8).

While accommodation businesses have a stronger digital presence (24.32%), more engagement can lead to increased bookings. A cohesive brand identity with consistent aesthetics (color schemes, fonts, high-quality photography) is essential. Collaborations with travel influencers can enhance visibility, while Instagram Reels and TikTok virtual tours can showcase guest experiences. Location-based targeted ads aimed at tourists from Beirut, Tripoli, and international markets can position Ehden as an ideal getaway. Lastly, Instagram-exclusive promotions and contests (e.g., “Win a Weekend Stay in Ehden”) can boost engagement.

A unified hashtag strategy (e.g., #VisitEhden, #StayInEhden) can create a more cohesive digital presence. Cross-promotion between restaurants and hotels—where each recommends the other—can also enhance engagement. Additionally, SEO optimization for Instagram is crucial, ensuring



Figure 8. Strategies to improve representation
 Source: Data analysis, 2025

profiles include keywords like “Best food in Ehden” and “Stay in Ehden.”

6.3. Study Limitations

Despite offering valuable insights, this study has several limitations. Data access remains a challenge due to Instagram’s API restrictions, limiting access to detailed user demographics for non-business accounts. Additionally, the study focuses on Ehden, a specific rural destination in Lebanon, which may limit the generalizability of findings to other rural areas with different cultural and economic contexts.

Time constraints also impacted the study. Data was collected over a three-month period, which may not capture long-term trends or seasonal variations—especially considering that the study began during a time of war in Lebanon. Furthermore, user-generated content bias is a factor, as Instagram’s algorithm is influenced by the preferences and behaviors of specific subsets of users, potentially skewing results.

Nevertheless, this study provides a systematic, data-driven framework for understanding how Instagram can promote rural tourism. It offers actionable insights for stakeholders in Ehden and similar destinations, emphasizing the importance of adapting to digital marketing trends while acknowledging research challenges and constraints.

7. Conclusion

The study underscores Instagram’s transformative potential as a digital marketing tool for rural tourism, focusing on Ehden, Lebanon. Despite challenges like limited visibility, economic instability, and urban competition, Instagram’s visual and interactive features—such as Stories, Reels, hashtags, and influencer collaborations—have proven effective in boosting Ehden’s engagement, visibility, and tourist interest. The research addresses two key questions: (1) the measurable impacts of Instagram marketing on rural tourism engagement, and (2) how Instagram can be optimized for Ehden’s tourism growth.

Ehden's strong digital presence is evident through hashtag usage, with #ehden used 154,000 times and #liveloveehden used 31,200 times as of February 2025, reflecting a deep emotional connection to the destination. However, niche hashtags like #ehdenadventures and #ehdenbeerfestival, highlighting adventure tourism and cultural events, remain underutilized (1,000+ uses each), signaling opportunities for targeted campaigns. Analysis of Instagram accounts reveals that while hotels and guesthouses have a relatively strong presence (24.32% representation, 9 out of 37), restaurants, pubs, and cafés are significantly underrepresented (4.88%, 6 out of 123), indicating a need for greater digital engagement in the food and beverage sector, a major tourist attraction.

Community engagement and user-generated content are critical. For instance, the Ehdeniyat International Festival attracted 45,000 tourists in 2024, boosting local economic activity. Encouraging more user-generated content and leveraging hashtags like #ehdenspirit (10,900 uses) can further amplify Ehden's appeal.

To optimize Instagram for tourism growth, the study recommends strategies tailored to specific sectors. For restaurants, organizing digital marketing workshops, collaborating with food influencers, and launching campaigns with hashtags like #TasteEhden or #EhdenEats are essential. For accommodations, cohesive branding, high-quality photography, and influencer collaborations can enhance visibility and bookings. A unified hashtag strategy (e.g., #VisitEhden) and cross-promotion between sectors can create a cohesive digital presence.

In conclusion, Instagram is a vital, cost-effective tool for rural tourism development, enabling destinations like Ehden to connect with global audiences. Success depends on strategic planning, consistent content creation, and adaptability to emerging trends. The insights from Ehden's case study, supported by data on hashtag usage and account representation, offer a roadmap for other rural destinations to leverage digital platforms for sustainable tourism growth.

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"الإستفادة من إنستغرام في نمو السياحة الريفية: تحليل قائم على البيانات"

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الملخص:

السياحة الريفية، التي تُعرف بالسفر إلى المناطق غير المَدُنِيَّة للتعرف إلى الثقافات المحلية والاستمتاع بالمناظر الطبيعية، شهدت زيادة شعبية ملحوظة، والطلب المتزايد على تجارب سياحية أصيلة وشاملة ومستدامة. ومع ذلك، تواجه السياحة الريفية تحديات عديدة، خاصة في مناطق مثل لبنان، حيث أثرت عدم الاستقرار الاقتصادي، والحروب، والاضطرابات السياسية، والأزمات العالمية بشكل كبير على القطاع. علاوة على ذلك، انخفض عدد الزوار بسبب الأزمات الأخيرة، بما في ذلك الركود الاقتصادي، وجائحة كوفيد-19، والاضطرابات الاجتماعية السياسية. ومع ذلك، تجاوزت البلدة الريفية إهدن هذا الاتجاه، حيث سجلت نمواً بنسبة 3% في النشاط الاقتصادي المرتبط بالسياحة في عام 2024، وفقاً لنقابة المطاعم والمقاهي في لبنان. ومن العوامل الرئيسية وراء هذه الظاهرة الدور المتزايد لوسائل التواصل الاجتماعي، وخاصة إنستغرام، بطابعه المرئي والتفاعلي، حيث أصبح أداة تسويقية قوية لزيادة ظهور الوجهات الريفية وجذب انتباه السياح والشتات اللبناني على نحو أكبر، مما يساهم في النمو الاقتصادي المحلي.

تهدف هذه الدراسة البحثية إلى استكشاف تأثير إنستغرام على السياحة في إهدن باستخدام منهجية قائمة على تحليل البيانات. سيتم جمع البيانات من حسابات مختلفة على إنستغرام لتقييم تأثير وسائل التواصل الاجتماعي على أعداد الزوار والنمو العام في القطاع السياحي. بالإضافة إلى ذلك، ستبحث هذه الدراسة دور إنستغرام في تعزيز جاذبية إهدن السياحية من خلال تقييم كمي ونوعي لمقاييس التفاعل، واستراتيجيات المحتوى، ومدى الوصول إلى الجمهور. ومن خلال تقييم فعالية أدوات المنصة الخاصة، ستحدد أفضل الممارسات لتحسين المشاركة الرقمية وتعزيز اهتمام السياح. ومن خلال الجمع بين التحليل الخوارزمي والبيانات الميدانية، ستقدم هذه البحث رؤى حول الدور المتطور لوسائل التواصل الاجتماعي في تنمية السياحة الريفية. وستساهم النتائج في النقاش الأوسع حول إمكانات التسويق الرقمي في دعم السياحة المستدامة في المناطق الأقل نمواً والمتأثرة بالأزمات.

الكلمات المفتاحية: النمو السياحي؛ التسويق الرقمي؛ تفاعل الزوار؛ تحليل الخوارزميات؛ التنمية الريفية؛ قرية إهدن، لبنان.