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A Study on the Change of Tourism Marketing Trends through Big Data

Se-won Jeon* and Gi-Hwan Ryu**

* Ph. D Student, Department of Immersive Content Convergence, Graduate School, Kwangwoon University, Korea
** Professor, Department of Tourism and Food Industry, Graduate School of Smart Convergence, Kwangwoon University, Seoul, Korea
E-mail { sw2947, allryu}@kw.ac.kr

Abstract

Recently, there has been an increasing trend in the role of social media in tourism marketing. We analyze changes in tourism marketing trends using tourism marketing keywords through social media networks. The aim is to understand marketing trends based on the analyzed data and effectively create, maintain, and manage customers, as well as efficiently supply tourism products. Data was collected using web data from platforms such as Naver, Google, and Daum through TexTom. The data collection period was set for one year, from December 1, 2022, to December 1, 2023. The collected data, after undergoing refinement, was analyzed as keyword networks based on frequency analysis results. Network visualization and CONCOR analysis were conducted using the Ucinet program. The top words in frequency were 'tourists,' 'promotion,' 'travel,' and 'research.' Clusters were categorized into four: tourism field, tourism products, marketing, and motivation for visits. Through this, it was confirmed that tourism marketing is being conducted in various tourism sectors such as MICE, medical tourism, and conventions. Utilizing digital marketing via online platforms, tourism products are promoted to tourists, and unique tourism products are developed to increase city branding and tourism demand through integrated tourism content. We identify trends in tourism marketing, providing tourists with a positive image and contributing to the activation of local tourism.

Keywords: Big Data, Marketing, Tourism, Tourism Marketing

1. Introduction

Tourists prefer to visit various specific attractions throughout a city rather than just one particular tourist spot, so there is a need to perceive the entire city as one product [1]. Tourism marketing is increasingly relying on the role of social media, especially in the era of COVID-19 [2]. Currently, regional tourism has become highly competitive, with each region creating its own tourism characteristics and conducting differentiated marketing [3]. It is necessary to analyze tourism marketing in detail to understand its current status. This paper aims to analyze the use of the keyword 'tourism marketing' on social media to identify the main marketing strategies

used and to analyze the marketing trends in tourism. Through the analyzed data, we aim to identify new marketing approaches and effectively market each tourist destination based on the identified keywords. Additionally, we aim to utilize tourism marketing in various ways to provide tourists with more effective information about tourist destinations.

2. Related Work

2.1 Tourism Marketing

Tourism marketing is the activity of developing and promoting tangible and intangible assets of a city for the purpose of attracting residents, tourists, investors, and businesses. It goes beyond advertising and promoting the city to encompass the creation, delivery, and exchange of social value with customers who utilize the city, such as visitors, investors, and residents. It is the overall process of creating value, communicating, and exchanging value with various stakeholders. This marketing activity undertaken by local governments aims to manage customer relationships efficiently by understanding customer needs and desires through environmental analysis, managing consumer value, cost, convenience, and communication processes, and benefiting local governments and stakeholders [1].

2.2 Big Data

Big data analysis utilizes vast amounts of data to predict future data or quickly extract hidden relationships between data that are not easily discernible. Furthermore, predictions of future data can yield significant benefits across various fields, leading to its widespread utilization [4, 5]. Semantic Network Analysis, originating from social network theory, involves extracting keywords contained in text and analyzing the relationships between these keywords to understand and interpret the meaning within the network of keywords [6].

3. Research Methods

This paper conducted big data analysis to investigate marketing used in the tourism field. Data was collected from internet portal sites for big data analysis [7]. For data collection in this paper, the TexTom 4.0 big data collection program was used. The keyword selected for data collection was 'tourism+marketing'. Clustering was performed based on the correlation between the extracted key keywords to understand the marketing used in the tourism field. The data collection period was set to one year, from December 1, 2022, to December 1, 2023. Nouns were extracted to collect unstructured data. Through the cleansing process, modifications and errors were minimized. Duplicate data found in blogs and cafes on social media was removed by checking the original data [8]. Based on the refined data, word frequency analysis, TF-IDF(Term Frequency - Inverse Document Frequency) analysis, and CONCOR analysis were conducted. Ucinet network analysis program was utilized for centrality analysis and visualization [9, 10]. Through this, clustering was performed by analyzing the frequency of linkages and structural equivalence between key keywords.

4. Analysis Results

The text mining data collection resulted in a total of 5,096 keywords related to tourism marketing being extracted. After refining the keywords, Table 1 shows the top 30 words with the highest frequencies. Among these 30 words, the most frequent ones were 'tourists' (781), 'promotion' (590), 'travel' (582), 'research' (537), and 'active' (521). Table 1 represents the frequency analysis of tourism marketing.

Table 1. Analysis of the frequency of tourism marketing

Keword	Frequency	Keword	Frequency	Keword	Frequency
Tourist	781	Content	350	Visit	225
Promotion	590	Propulsion	343	Service	223
Travel	582	Progress	340	Overseas	219
Research	537	A tourist attraction	334	Planning	213
Activation	521	Korea Tourism Organization	267	Industry	213
Variety	501	Hosting	260	Program	213
Attract	457	Operation	249	Domestic	209
Area	427	Contest	247	Global	209
Application	365	Field	232	Provision	208
Education	361	Foreigner	229	Digital	200

Centrality analysis visualized in Figure 1 shows the results of the connectivity centrality analysis. Keywords located in the center of the network are the most significant words in terms of importance. The words appearing at the center include 'tourism,' 'marketing,' 'promotion,' 'attraction,' 'diversity,' 'active,' and 'operation.' Surrounding words include 'night tourism,' 'medical tourism,' 'MICE,' 'trends,' 'convention,' 'improvement,' 'experience,' and 'analysis.' It can be observed that 'tourism,' 'marketing,' 'tourists,' 'promotion,' 'attraction,' and 'active' have larger node sizes, indicating higher search frequencies.
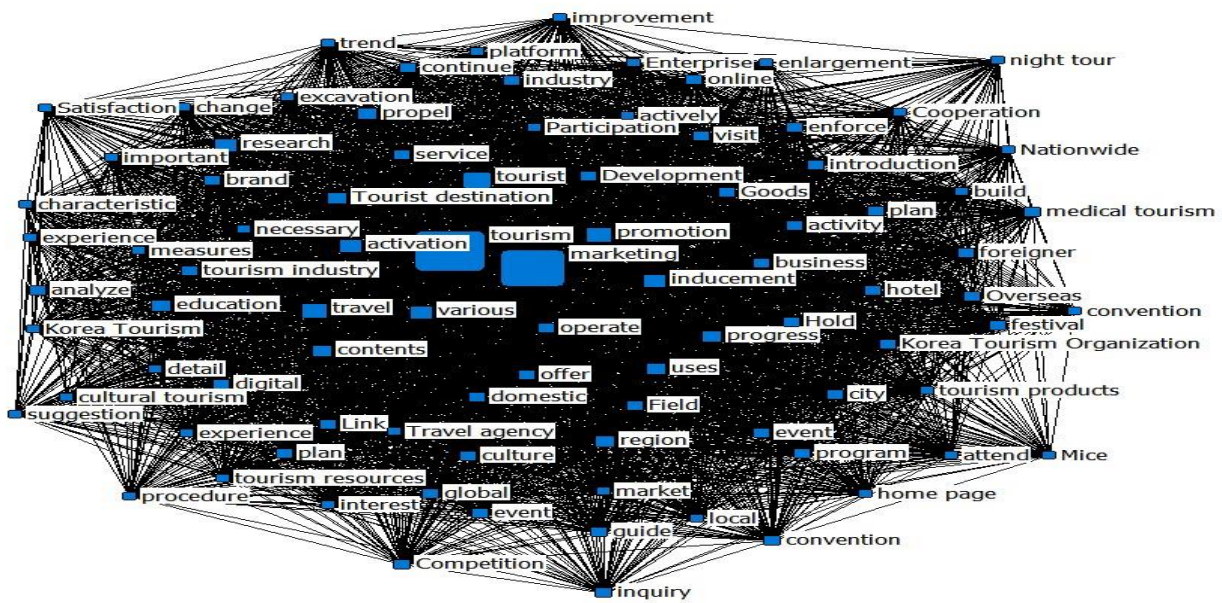

Figure 1. Network visualization

CONCOR analysis interprets relationships between keyword clusters by conducting correlation analysis to identify clusters of similar keywords. Using the Ucinet program, the forms and compositions of each cluster were identified. Figure 2 shows a visualization of the clustering of tourism marketing keywords.
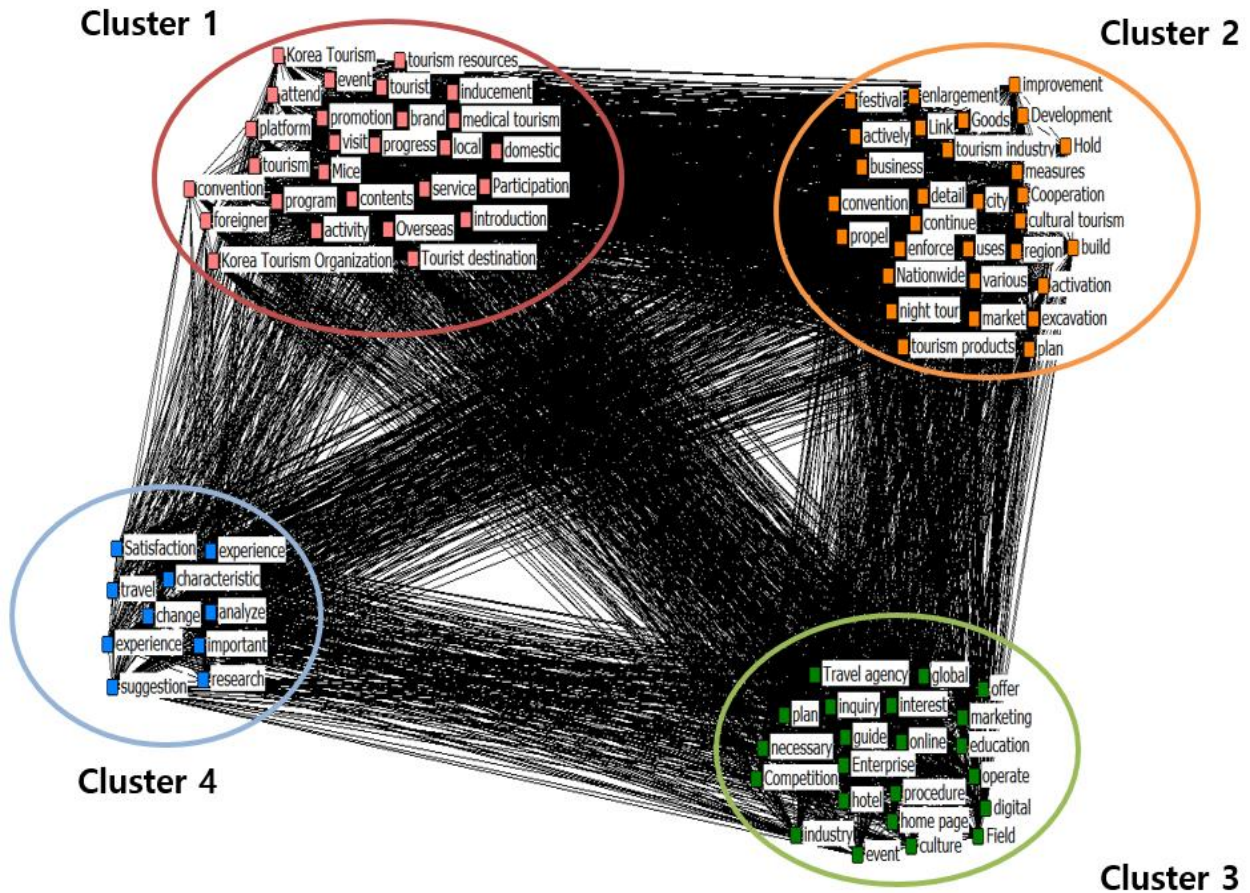

Figure 2. CONCOR analysis

Cluster 1 encompasses various medical tourism marketing activities, ranging from convenient one-stop packages for medical treatments to promoting immediate refund-type duty-free services in collaboration with Olive Young, as identified through original data. The Korea Tourism Organization (KTO) has been actively promoting various medical tourism marketing efforts, and with the increasing recognition of K-beauty, it contributes to promoting domestic consumption among foreign tourists and activating domestic consumption. This cluster is labeled as 'Tourism Field' as marketing is actively utilized across various tourism sectors such as conventions, medical tourism, travel agencies, and MICE.

Cluster 2 focuses on the core contents of the tourism industry. The Horizon Festival has become a festival where the world can see and enjoy the most Korean traditional agricultural culture, centered around the Byeokgolje stage, utilizing agricultural cultural contents for festival tourism marketing. Active promotion and marketing efforts are also made to develop and expand nighttime tourism contents. Additionally, Gangneung's Coffee Festival is continuously operated to activate local tourism marketing. Suggestions related to excavation, such as AR and hologram technologies applied to tourist attractions like Mireuksa Temple and royal palaces,

aim to create nighttime cultural contents integrated with state-of-the-art industries. Through the confirmation of original data, innovative tourism products are being developed to increase city branding and tourism demand, hence labeled as 'Tourism Products'.

Cluster 3 utilizes digital marketing, providing convenient services for domestic and international tourists like Odii, allowing them to easily obtain various information including the history of tourist destinations. It continuously expands to provide tourists with interesting and informative content. Based on global marketing themes, it aims to coexist traditional and modern elements, indicating the use of marketing related to digital platforms. Through websites, festivals, and local information are uploaded, and online marketing is utilized by developing local agricultural and specialty products. This cluster is labeled as 'Marketing'.

Cluster 4 indicates a significant interest among foreigners in visiting Korea, particularly in attracting tourists from Southeast Asia through campaigns and marketing to activate tourism. It aims to promote cultural exchange, view digital tourism residents as a means of population influx in an era of declining population, and aims to revitalize the tourism economy through various marketing strategies, encouraging repeat visits. Tourist sites are utilized as symbolic representations of cultural experiences, with iconic MZ desserts becoming tourism marketing tools that attract visitors worldwide. The promotion of K-drama filming locations as immersive and experiential tourism marketing is actively pursued. Additionally, there is an increasing demand, seen through online marketing with overseas influencers, to directly experience what was seen in videos. Both domestic and international tourists visit tourist destinations through various marketing efforts, hence labeled as 'Motivation for Visits'.

5. Conclusion

This paper aimed to analyze recent trends in tourism marketing by collecting and analyzing tourism marketing keywords as central data through text mining. It sought to understand how marketing has evolved and to grasp current trends. The changing trends of interest in marketing were analyzed to confirm the marketing trends over one year. Semantic network analysis based on keyword frequency and clustering through CONCOR analysis were conducted and visualized. In this paper, tourism marketing was observed to heavily involve keywords related to online, website, digital, global, and platform marketing, indicating their significant use in marketing strategies. Based on this, it was confirmed that marketing in the tourism sector utilizes online platforms for promoting tourism destination images, new tourism information, and tourism products. Additionally, it was found that tourism products are evolving, incorporating advanced industries such as AR and holograms into nighttime cultural contents or online tourism. We provide basic data on tourism marketing trends. By creating various marketing approaches, such as traditional cultural experience program marketing, beyond the existing ones, it can provide tourists with a positive image and contribute to the activation of local tourism. Since this study collected data from social media and analyzed it from the perspective of tourism marketing, it has limitations in examining marketing comprehensively. Therefore, there is a need to conduct research to grasp and analyze the overall trends in marketing beyond the tourism marketing field. By reflecting on marketing contents unused in the tourism sector and analyzing them from various aspects, more in-depth research can be expected.

References

[1] Kim Kwanyong, "A Study on the Effect of Tourism Marketing Channel Characteristics, Tourism Brand Equity, and Tourist Attraction on Behavioral Intentions : Focusing on Jeollanam-do," Graduate School

Kyonggi University, Ph. D. Dissertation, 2021.

[2] Park Young-kwang and Lee Seung-kon, "The Effect of Short-form Advertising on SNS Tourism Marketing Using the AISAS Model," Vol. 45, No. 9, pp. 747-760, 2023.
DOI: https://doi.org/10.33645 /cnc.2023.09.45.09.747

[3] Lee Jong Hyun, "A Study on the Effects of Social Media Tourism Marketing Activity on Jeju Special Self-Governing Province Local Image and Visit Intention," Graduate School of Tourism & Hospitality Kyonggi University, MA.Thesis, 2020.

[4] Park Byeong-Hyeon, Kim Yeong-Gug and Nam Jang-Hyeon, "A Study on Zero-calorie drinks Perception with Big Data Analysis," Journal of Tourism Enhancement, pp.115-164, 2024.
DOI: https://doi.org/10.35498/kotes.2024.se6.115

[5] Jiang Shan, "A Study on the Perception of K-culture of Chinese Using Big Data Analysis and Q Methodology," Dong-Eui university, a doctoral dissertation, 2024.

[6] Yang Soung-hoon, "Hallyu Tourism Discourses' Change and Future Direction: Semantic Analysis on Media and SNS Text," Journal of Tourism Enhancement, Vol. 11, No. 3, pp.1-16, 2023.

[7] Lee Yong kyu, "A study on Changes in Travel Marketing Targets Before and After COVID-19 Pandemic Using SNS Big Data," Journal of Marketing Studies, Vol. 30, No. 2, pp. 30-49, 2022.
DOI: http://dx.doi.org/10.22736/jms.30.2.02

[8] Se -won Jeon, Youn Ju Ahn and Gi -Hwan Ryu, "A Study on Gamification Consumer Perception Analysis Using Big Data," International Journal of Advanced Culture Technology, Vol.11, No .3, pp. 332 -337, 2023.

[9] MinHwan Ko and Park Yun Mi, "A study on future tourism in the post-COVID-19 era using text mining based on big data: Focused on LAN cable tours," International Journal of Tourism and Hospitality Research, Vol. 36, No. 5, pp. 79-92, 2022.
DOI: https://doi.org/10.21298/IJTHR.2022.5.36.5.79

[10] Se-won Jeon, Sung-Woo Park, Youn Ju Ahn and Gi-Hwan Ryu, "A Study on User Perception of Tourism Platform Using Big Data," The International Journal of Advanced Smart Convergence, Vol. 13, No. 1, pp. 108-113, 2024.
DOI: http://dx.doi.org/10.7236/IJASC.2024 .13.1.108