




# “Understanding Thailand’s tourism industry from the perspective of tweets: A qualitative content analysis using NVivo 12.0”

<b>AUTHORS</b>	Haiying Fu  Meizhi Ma Xiaoe Zhu 
<b>ARTICLE INFO</b>	Haiying Fu, Meizhi Ma and Xiaoe Zhu (2023). Understanding Thailand’s tourism industry from the perspective of tweets: A qualitative content analysis using NVivo 12.0. <i>Problems and Perspectives in Management</i> , 21(4), 430-442. doi: <a href="https://doi.org/10.21511/ppm.21(4).2023.33">10.21511/ppm.21(4).2023.33</a>
<b>DOI</b>	<a href="http://dx.doi.org/10.21511/ppm.21(4).2023.33">http://dx.doi.org/10.21511/ppm.21(4).2023.33</a>
<b>RELEASED ON</b>	Tuesday, 21 November 2023
<b>RECEIVED ON</b>	Wednesday, 23 August 2023
<b>ACCEPTED ON</b>	Thursday, 02 November 2023
<b>LICENSE</b>	 This work is licensed under a <a href="https://creativecommons.org/licenses/by/4.0/">Creative Commons Attribution 4.0 International License</a>
<b>JOURNAL</b>	"Problems and Perspectives in Management"
<b>ISSN PRINT</b>	1727-7051
<b>ISSN ONLINE</b>	1810-5467
<b>PUBLISHER</b>	LLC “Consulting Publishing Company “Business Perspectives”
<b>FOUNDER</b>	LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

**40**



NUMBER OF FIGURES

**1**



NUMBER OF TABLES

**11**

© The author(s) 2023. This publication is an open access article.



## BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"  
Hryhorii Skovoroda lane, 10,  
Sumy, 40022, Ukraine  
[www.businessperspectives.org](http://www.businessperspectives.org)

**Received on:** 23<sup>rd</sup> of August, 2023

**Accepted on:** 2<sup>nd</sup> of November, 2023

**Published on:** 21<sup>st</sup> of November, 2023

© Haiying Fu, Meizhi Ma, Xiaoe Zhu,  
2023

Haiying Fu, Ph.D. Student,  
Chakrabongse Bhuvanarth  
International Institute for  
Interdisciplinary Studies, Rajamangala  
University of Technology Tawan-ok,  
Thailand. (Corresponding author)

Meizhi Ma, Master, Assistant Professor,  
School of Management, Jiujiang  
University, China.

Xiaoe Zhu, Ph.D., Assistant Professor,  
School of Architectural Engineering  
and Planning, Jiujiang University,  
China.



This is an Open Access article,  
distributed under the terms of the  
[Creative Commons Attribution 4.0  
International license](https://creativecommons.org/licenses/by/4.0/), which permits  
unrestricted re-use, distribution, and  
reproduction in any medium, provided  
the original work is properly cited.

### **Conflict of interest statement:**

Author(s) reported no conflict of interest

Haiying Fu (Thailand), Meizhi Ma (China), Xiaoe Zhu (China)

# UNDERSTANDING THAILAND'S TOURISM INDUSTRY FROM THE PERSPECTIVE OF TWEETS: A QUALITATIVE CONTENT ANALYSIS USING NVIVO 12.0

## Abstract

Social media provide a variety of possibilities for tourist destination selection and bring new opportunities and challenges to the development of Thailand's tourism industry. This study aims to examine Thailand's tourism development through the lens of social media users via content analysis and find ways to improve Thailand's tourism marketing strategies within social media. A dataset consisting of 10,008 tweets was utilized. Grounded theory is conducted to finish the open coding, axis coding, and selective coding process within NVivo 12.0, resulting in nine dimensions: the development of cities, elephant tourism development, Thailand perspective, the development of the tourism industry, tourism story, the development of tourist, tourism for Asian development, travel development perspective and cannabis. Subsequently, word frequency, sentiment, and cluster analyses were performed on those topics. The findings highlighted the critical elements of Thailand's tourism development in social media, including cities, tourists, industries, stories, animals, and cannabis. In addition, the study identified popular tourist attractions and destinations within Thailand's tourism development, as well as the positive impact of tourism on the economy, market, and urban development. Concurrently, Twitter users expressed concerns regarding sex tourism, cannabis, medical tourism, ecology, agriculture, and unrest in Thailand.

## Keywords

Thailand tourism, Nvivo 12.0, social media, Twitter,  
digital tourism, tourism issues

## JEL Classification

O14, D83, Z30, P47

## INTRODUCTION

As a world-class tourism destination, Thailand has also experienced the test of the COVID-19 pandemic (Ryu et al., 2023). Thailand has excellent natural scenery and a rich cultural intangible heritage, attracting many tourists worldwide (Luekveerawattana, 2012). Tourism has become a significant industry in Thailand (Ryu et al., 2023).

In 2022, the number of foreign tourists in Thailand exceeded 9 million, and the tourism revenue reached 1.27 trillion Baht (Sudsawasdt et al., 2022). The Thai government has set the tourism revenue target for 2023 as 1.73 billion Baht, or 46.2 billion US dollars, 80% of the level before the epidemic outbreak in 2019 (Sudsawasdt et al., 2022). Among them, foreign tourists contributed 970 billion Baht of tourism revenue, while domestic tourists contributed 760 billion Baht. It is estimated that by the end of 2022, Thailand will receive 10 million international tourists (Fakfare & Wattanacharoensil, 2023).

The Thai government has been cooperating with relevant public and private sectors and tourism operators to jointly determine and implement tourism promotion measures and focus on increasing high-quality

ity tourists in Thailand (Chaisawat, 2006). To attract tourists, Thailand has relaxed its tourist visa policy and opened many film tourism destinations to attract tourists (Gelbman & Timothy, 2010). Therefore, Thailand's tourism development is still a severe topic after the COVID-19 pandemic (Ryu et al., 2023). While obtaining more benefits, Thailand should shoulder the responsibility of tourism and promote the sustainable development of Thailand's tourism (Intason et al., 2021).

Using Twitter as a research tool, significant breakthroughs have been made in exploring cutting-edge topics such as AI tourism, sustainable tourism development, and digital tourism (Hays et al., 2013). As one of the primary social media, Twitter is a natural travel topic bank. Although it is not a new method to explore the secrets of tourism development through social media, the vast amount of information in social media undoubtedly gives some clues to Thailand's tourism development research (Martin-Domingo et al., 2019). It is also a window to study and understand Thailand's tourism development.

## 1. LITERATURE REVIEW

Tourism development in Thailand is a macro concept, and many scholars try to explore the secrets of tourism development in Thailand. In recent years, Thailand has made outstanding achievements in tourism development (Intason et al., 2021). Regarding carbon dioxide emissions in Thailand's tourism development, while cruise tourism and ports in Thailand have made extraordinary contributions to Thailand's tourism development, the pollution costs of exhaust gas and waste oil on the sea are also severe (Fethi & Senyuçel, 2021).

In addition, a breakthrough has been made in solving the problem of village poverty through tourism. Therefore, Thailand's promotion of sustainable tourism, including urban tourism development and sustainable tourism practices, has won much applause (Muangasame & McKercher, 2015). Thailand has rich tourism resources and diversified tourism models, which can create many tourist attractions worldwide (Ryu et al., 2023). In addition to urban and island tourism, the research on ecotourism, medical tourism, and military tourism has become increasingly prominent, and the models for different tourism models have matured (Hunt & Stronza, 2014).

In order to explore the potential of Thailand's tourism development in the digital era, Thailand tried to investigate the competitiveness of global tourism destinations to determine the positive impact of service marketing strategies on tourism and hotel enterprises (Sobaih et al., 2021), especially the operators of non-tourism destinations and small towns visited by only a few tourists (Lai et al., 2017). Thai tourism and hotel service operators must attach importance

to sustainable development, starting from upstream processes such as research and development, using local wisdom, reflecting cultural characteristics, and paying attention to downstream activities, including modern media (Buathong & Lai, 2017).

COVID-19 has a strong negative impact on Thai tourism, and it is imperative to segment the market and attract new tourists in the post-COVID-19 stage (Li et al., 2023). Thailand actively seeks sustainable tourism development methods to forecast the future development of tourism (Chansuk et al., 2022). The academia analyzed the current economic situation of world tourism and explored the predictive factors of Thailand's tourism development participation to help stakeholders manage tourism development more effectively during COVID-19 (Yan et al., 2021).

Thailand's tourism development pays special attention to attracting tourists and achieving sustainable tourism development (Gong et al., 2019). Tourism recovery after COVID-19 is also the focus of research (Yan et al., 2021). Progress has indeed been made in discussing Thailand's tourism development from the consumers' perspective, the tourism market, and tourism policies (Ditta-Apichai et al., 2020). Social media is a new opportunity for tourism development (Park & Oh, 2012). However, more research must be conducted on Thailand's tourism development among Twitter users. Therefore, the attempt of this study is of epochal significance and can also guide Thailand's tourism development in a new direction and provide a new perspective and explanation.

Social media is not only a way of communication but also has the potential to foster the development of the tourism industry. Therefore, social media for

tourism development are significant achievements and direction in the digital economy and social media era (Picco-Schwendener et al., 2022).

In the context of social media for developing Thailand tourism, Xu et al. (2017) proposed developing game applications to promote cultural tourism in Thailand. Charoensukmongkol and Sasatanun (2017) explored the remarkable contribution of social media marketing capabilities to the business performance of Thai enterprises. Agyeiwaah et al. (2019) reviewed the research on food tourism in Thailand and believed that the consumption behavior and destination marketing of food tourism in Thailand in the future are the main directions. Pholphirul et al. (2022) determined the positive impact of social media service marketing strategy on Thai tourism and hotel enterprises. Although Thailand's tourism development has made some achievements with social media support, many dimensions still have not been explored. In order to promote the development of social media for Thai tourism, Thai tourism research can learn from the application and development of other nations' tourism in social media (Nusair et al., 2019).

As one of the world's foremost social media, Twitter has many customers and an open comment environment (Feizollah et al., 2021). For a long time, it has been an essential tool and platform for social media content analysis, bringing forth new ideas for tourism research and development. Social media is the most preferred platform for sentiment analysis (Martin-Domingo et al., 2019). Twitter data are about how people feel about popular travel websites. Although the tourism market in Thailand has grown by leaps and bounds, only some achievements have been found in the sentiment analysis of social media applications of Twitter travelers on Thai travel (Leelawat et al., 2022). At present, only a few studies are about the complex process involved in the loyalty of Twitter users to Thailand as a tourist destination. However, there are many research cases about Twitter data serving other tourism countries, which may be the weakness of Thailand's tourism research (Claster et al., 2013).

The value of tweets as a sentiment analysis has been verified in the tourism situations of Malaysia, China, the United States, Europe, and Australia (Mishra et al., 2021). The sentiment analysis of Twitter data

is mainly used to research national image, tourism city image, and tourism destination. Therefore, social media, especially Twitter, is an innovative and meaningful undertaking to study Thailand's tourism development.

Following the literature review, this paper aims to reveal the purpose and conceptual framework of Thailand's tourism development in social media utilizing qualitative coding by analyzing tweets related to Thailand's tourism development and putting forward more clues and suggestions for future research on Thailand's tourism development.

## 2. METHODS

The analysis retrieved the topics on Twitter and used Ncapture to obtain the interface. Table 1 introduces the topics and the number of tweets: Tourism development in Thailand (3), the Tourism industry in Thailand (53), Thailand tourism industry (287), Thailand tourism development (5), Tourism in Thailand (664), Thailand tourism (5485), Tourists visit Thailand (3), Travel to Thailand (840), and Thailand travel (2706). Then, the study deleted a few keywords with a small number of tweets and finally left 6 search words, including 10008 tweets, forming a total of 6 files. Table 1 summarizes these six topics and quantities.

Nvivo 12.0 is a software specially used for processing qualitative and quantitative content data (Ram & Titarenko, 2022). It has been widely used in tourism and social media research, helping this paper complete the theme analysis of 10,008 tweets.

**Table 1.** The topics captured and the number of tweets

Topics	No. of Tweets
Tourism industry in Thailand	53
Thailand tourism industry	287
Tourism in Thailand	664
Thailand tourism	5458
Travel to Thailand	840
Thailand travel	2706
Total	10008

The study uses grounded theory to encode 10008 tweets in three levels. The third-level themes are

some concepts abstracted from a large number of tweets. The second-level themes continue to be abstracted from the third-level themes. Some third-level themes fall into the second-level themes. Therefore, there are no third-level themes in some abstract perspectives. The end of the abstract process is saturation, which means that the primary theme is the most abstract part, which is conducive to the direct understanding of the conceptual theme of Thailand's tourism development.

After three levels of topic coding, 11 first-level themes were obtained. However, there are many reference nodes for two themes. "Social Backlash" has 286 reference tweets; the content of these tweets is the same. They are all "Now a growing social backlash is creating the industry." Therefore, the study excludes this topic, and the same method excludes "Horrible brutality," which has 230 tweet references. The references to "Horrible brutality" are all "Horrible brutality and it occurs because of TOURISTS!" Hence, the study finally obtained nine first-level themes that can be used to explain Thailand's tourism development from the social media perspective. Table 2 to Table 10 systematically describe the process of theme coding, the code name, the number of coding references, and relevant documents.

### 3. RESULTS

Theme coding is one of the main methods of abstracting concepts from text and a common guide to grounded theory (Chun Tie et al., 2019). In general, the three-level theme coding method is more reasonable when addressing tweet analysis (Adewole et al., 2020). Through three-level theme coding, the study determined that the development of the tourism industry includes several elements: tourism attraction, revolutionary risks, tourism industry, medical tourism, tourism destinations, tourism organization, and tourism opportunities. Specifically, tourism industry development can be defined as organizations focusing on opportunities and challenges in the tourism industry and exploring various tourism development opportunities in terms of tourism attraction and destination.

There are many tourist attractions in Thailand. Sex, cannabis, agriculture, medical care, mountain areas, and cross-country tourism have become the main attractions. In particular, 130 reference points for type tourism occupy the leading position in tourism attraction. Social media tourists pay special attention to the content of sex tourism in Thailand. Medical tourism is another major attraction in Thailand. With the legalization of cannabis in Thailand, weed tourism has gradually emerged in social media. Although its appeal is not as attractive as sex and medical care, Twitter users have begun to accept cannabis tourism in Thailand, which is both an opportunity and a challenge for tourism development.

The tweet analysis of tourism development in Thailand claims that tourism headwinds and brutality are the main risks of tourism development. Furthermore, in coping with risks, the rapid recovery of the tourism industry has also become one of the issues. Domestic and foreign tourists together constitute the content of Thailand's tourism development, but foreigners still come to Thailand for tourism. In Table 2, foreign tourism has 20 reference points.

In terms of Thai tourism organizations, in order to promote tourism in Thailand, the evidence of tweets has revealed that promoters, administration, visa policies, tourism cooperation, and tourism ambassadors may all be involved in the work of Thai tourism organizations. To promote Thailand's tourism development, these may be the main contents that the official should try.

Table 2 also introduces the opportunities faced by Thailand's tourism development. APEC, World Tourism Expo, transnational tourism, tourism videos, tourism spaces, tourism accounts, advertising, tourism campaigns, tourism incentives, and sustainable tourism are all opportunities for Thailand's tourism development. Therefore, the Thailand sector should seize the opportunity of international and economic cooperation and strive to build a space for tourism development at all levels to create sustainable tourism development.

**Table 2.** Theme coding process of the development of the tourism industry

Theme coding level	Theme	No. of files	No. of references
Level 1	Development of the tourism industry	5	90
Level 2	Tourism attraction	1	2
	Sex tourism	4	130
Level 3	Weed tourism	2	6
	Agrotourism	2	2
	Kashmir tourism	3	3
	Queer-friendly tourism	1	4
Level 3	Playfulness drives tourism	4	4
	Medical tourism	3	29
Level 2	Tourism revival risks	3	43
	Thai tourism headwinds	1	1
Level 3	Brutal tourism institutions	1	2
Level 3	Fast-recovering tourism industry	4	15
Level 2	Tourism destinations	1	3
Level 3	Domestic tourism	2	6
Level 3	Foreign tourism	2	20
Level 2	Tourism organization	2	9
	Tourism promoter	1	1
	Lazy tourism institutions	2	4
	Tourism authority	1	2
	Tourism visa	1	1
	Tourism officials	2	5
Level 3	Tourism cooperation	3	8
	Tourism communities	2	2
	Tourism ambassadors	2	3
Level 2	Tourism sector	2	16
	Tourism opportunities	0	0
	Tourism APEC	2	16
	Tourism rebound potential	2	2
Level 3	Tourism income sources	1	1
	Tourism expo	4	4
	Affordable tourism	1	1
	Japan-Thailand tourism seminar	1	1
	Tourism returns	2	2
	Tourism development	2	2
	Tourism videos	1	2
	Tourism accounts	2	2
	Tourism zones	2	8
	Tourism forces	1	6
	Tourism advertisement	1	1
	Bringing tourism	2	10
	Tourism initiative	2	2
	Tourism campaigns	1	1
	Tourism encouragement	1	1
	Sustainable tourism	1	2

In order to understand the connotation of tourist development in Thailand, the study used three-level theme coding to obtain 188 reference points in tweets. The source of tourists is key to the develop-

ment of tourists. Table 3 introduces Thai tourists in tweets mainly from Singapore, France, South Korea, India, China, and Russia. Among them, Indian and Russian tourists are the most prominent. Since October, Thailand has long been one of the main tourist destinations for Russian tourists. Due to the influence of the COVID-19 pandemic, Chinese tourists have yet to return to Thailand for the time being. Therefore, Chinese tourists need to be more evident on social media. The results also warn that Thai tourism should actively catch Russian and Indian tourists when China has not officially promoted international tourism. By the way, tourists from other countries in Southeast Asia still deserve attention. In addition to tourist types, the study found that tourist development also includes pre-COVID-19 tourists, tourist markets, and Haul tourists.

Obviously, from the secondary themes in Table 3, the study summarized that the development of Thai tourists should pay attention to the scenic spots, regions, and awareness issues that tourists are interested in. However, paying attention to the source countries of tourists and how to serve tourists from different countries are the main work contents of developing Thai tourists.

**Table 3.** Theme coding process of the development of tourists

Theme coding level	Theme	No. of files	No. of references
Level 1	The development of tourists	4	188
	International tourist	4	115
Level 2	Singaporean tourists	2	4
	French tourists	1	1
	Korean travelers	2	5
Level 3	Indian travelers	2	13
	Chinese travelers	1	2
	Russian tourists	3	12
Level 2	Pre-COVID-19 tourists	2	2
Level 2	Tourist market	1	5
Level 2	Haul tourists	2	6
Level 2	Tourist attractions	4	13
Level 2	Tourist visa	4	8
Level 2	Domestic tourists	4	8
Level 2	Bringing tourists	2	4
Level 2	Tourist locations	1	1
Level 2	Tourist spots	1	2
Level 2	True traveler	2	2
Level 2	Pent-up travelers	4	4
Level 2	Traveler awareness	2	4

After coding and analyzing the content in the tweet, 392 references were obtained that can explain the development of travel, which is involved in almost every file. Table 4 describes the ten secondary theme codes in the development of travel.

The development of travel is a concept of deals, options, restrictions, destinations, guidelines, agents, insurance, methods, entertainment, and issues. Among them, travel deals and guidelines have the most reference points. Secondly, travel restrictions are the content social media users pay attention to. Similarly, tourism destinations and attractions are also prominent in the development of travel, indicating that the tourism industry should cultivate the role of destinations and attractions for tourists. Finally, tourism methods and entertainment are also closely related to tourism development and are essential components.

**Table 4.** The theme coding process of the development of travel

Theme coding level	Theme	No. of files	No. of references
Level 1	The development of travel	6	392
	Travel deals	4	83
	Travel options	3	5
	Travel restrictions	4	35
	Travel destinations	4	43
Level 2	Travel guidelines	6	89
	Travel agents	4	28
	Travel insurance	2	9
	Travel method	2	53
	Travel entertainment	6	28
	Travel issues	2	19

As one of the leading guides to attract tourists in the process of tourism development, tourism stories are prominent in thematic analysis with 153 reference points. Tourist stories cover a wide range of subjects. Table 5 uncovers that travel stories are information that can ignite the optimistic moods of tourists, such as Fascinating stories, Poignant stories, Full stories, Great stories, Top stories, and Success stories in Level 2 theme codes. Amazing travel stories and Travel legends convey the attractiveness of travel stories in Thai tourism development as one of the main contents; building and digging into tourism stories is vital.

**Table 5.** The theme coding process of the tourism story

Theme coding level	Theme	No. of files	No. of references
Level 1	Tourism story	6	153
	Fascinating story	4	12
	Poignant story	4	30
	Full story	2	40
	Great story	2	62
Level 2	Top story	2	2
	Success story	1	4
	Amazing travel story	1	1
	Travel legend	2	2

The development of Thai tourism is a concept mainly serving the Thai tourism economy. After analyzing the tweets coding, a level 1 code named Thailand perspective is extracted. Table 6 indicates that Thai policies, operators, Thai people, trips, markets, and Thai language schools are involved under this code. Specifically, Thailand’s perspectives reveal that the minds of social media users are that Thailand’s tourism development has a positive impact on all aspects of Thai development and has a role for the people, policy, market, and even language schools. On the contrary, Thailand should actively encourage attention to these contents to promote its tourism development.

**Table 6.** The theme coding process of the Thailand perspective

Theme coding level	Theme	No. of files	No. of references
Level 1	Thailand perspective	4	26
Level 2	Thai tourism	2	4
	Thailand policies	2	2
	Thai tourism operators	1	1
	Thai people	2	6
	Visited Thailand	2	4
	Thailand trip	2	2
	Pergi Thailand	1	1
	Thai markets	2	4
	Thai language school	1	1

Table 7 summarizes the theme of the development of cities, abstracted from the tweets. Social media information reflects the importance of

urban development in Thai tourism development. Thai urban development, with several concepts such as Lopburi, Tranquil, 50 cities worldwide, Monkey City, Charming City, and Ruined City, means that social media users have a multifaceted, positive, and negative understanding of Thai urban development. Since 339 reference points describe the development of Thai cities, which inspires the need to strengthen the construction of Thai cities, this is also an essential step in developing Thai tourism.

**Table 7.** The theme coding process of the development of cities

Theme coding level	Theme	No. of files	No. of references
Level 1	The development of cities	5	339
	Thai cities	2	320
Level 2	Lopburi City	2	4
	Tranquil City	1	2
	50 cities worldwide	1	1
	Monkey City	1	1
	Charming city	2	6
	Ruined city	2	2

Elephants are an essential part of Thai tourism because elephants are not only an animal in Thailand but also a collateral cultural tourism value. Indeed, the coding of elephant tourism development with 312 reference nodes was extracted from tweets. Table 8 explains the understanding of elephants in Thai tourism development through social media tourism from multiple perspectives. Elephant tourism (230) has naturally become the first central theme. Wild elephants and British elephant torture in Thailand are significant concerns. Although miracle elephants, elephant performances, and unforgettable elephant travel are actively conscious of Twitter users, the damage to elephants and problems with the wildlife environment caused by Thai tourism development are more likely to draw their attention. Therefore, while developing tourism, Thailand needs to pay attention to the protection and care of elephants, try to get along with them in harmony and use their talents to create more distinctive and attractive cultures.

**Table 8.** The theme coding process of the elephant tourism development

Theme coding level	Theme	No. of files	No. of references
Level 1	Elephant tourism development	6	312
	Wild elephants	6	24
	Elephant rides	3	6
	Elephant tourism	2	230
	Captive elephants	2	6
Level 2	British elephant torture in Thailand	2	40
	Cruel elephant tourism	6	6
	Unforgettable elephant experience	2	2
	Elephant bathing	2	2
	Majestic elephants	2	2

Among the tweets on Thai tourism development, 143 reference points on cannabis were extracted. As a level 1 code, cannabis is the result of the legalization of Thai cannabis. Currently, many studies are focusing on the development of Thai cannabis. Even social media tweets claim that Bangkok will become Amsterdam in Southeast Asia. In Table 9, cannabis discrimination (62) and cannabis businesses (68) become the main secondary headings, which means that the issue of cannabis should be taken into account in tourism development in Thailand. In addition, the cannabis market, industry, and investment also gradually appear in the Thai tourism process. A social media interpretation of cannabis in Thailand’s tourism development should make the Thai government aware of these issues.

**Table 9.** The theme coding process of the cannabis

Theme coding level	Theme	No. of files	No. of references
Level 1	Cannabis	5	143
	Exciting cannabis market	1	9
	Cannabis decriminalization	2	62
Level 2	Cannabis businesses	4	68
	Cannabis industry	1	2
	Cannabis investment	1	1
	Cannabis allowed	1	1





world. In addition, under the influence of digitization and social media, animal sightings, food, sex, islands, photos, and weed are popular consumption content of Thai tourists. Thai tours are generally exciting and comfortable, but chaos does harm tourists.

Using automatic coding facilitates the rapid recognition of emotional expressions in tweets. Auto-coding moods can determine if the text's overall tone is positive or negative (Stolard, 2020). Content analysis is a complex process. Through the sentiment analysis of tweets, it is easier to reveal the accuracy of users' perceptions of Thai tourism development.

The study used Nvivo 12.0 to conduct sentiment analysis on all the level 1 theme coding and yielded the results in Table 11. From the social media perspective, the results reveal that those negative emotions are more evident than positive emotions regarding tourism development in Thailand. Twitter users are particularly harmful about elephant tourism, tourist development, and tourism for Asian development because they have the most reference points. There are still some unreasonable aspects in dealing with elephants, tourists, and tourism patterns in Thai tourism. In order to further promote the development of Thai tourism, Thailand may need to take further measures to solve these problems.

Table 11 highlights the extreme recognition of cannabis in Thai tourism development in social media. One hundred thirty reference points belong to "strongly negative," but more active ones support the existence of cannabis in Thai tourism development. On the other hand, Thai tourism has been booming in creating stories because 60

positive points of reference support social media users' feelings about Thai stories. From sentiment analysis of travel development perspectives, positive emotions are higher than negative ones.

Therefore, Table 11 not only penetrates Twitter users' support for Thai tourism development as a whole but also expresses the problems they see in Thai tourism, which provides suggestions for the next steps of Thai tourism development.

Cluster analysis is an exploratory technique that can visualize patterns in a project by grouping files or codes that share similar words, attribute values, or codes encoded by similar codes (O'Kane et al., 2021). Cluster analysis diagrams provide graphical representations of files or codes to see similarities and differences easily. In a clustering diagram, files or codes close to each other are more similar than separate files or codes (O'Kane et al., 2021).

By Pearson correlation coefficient analysis, the study concludes that cannabis and the development of cities have some similarities and form a cluster, indicating that there may be some relationship between them.

The similarity between Thailand's and travel development perspectives indicates that Thai tourism is closely related to the development of Thailand, forming a cluster. On this basis, this distance cluster continues to cluster with the developed tourism industry. It describes that the development of the Thai tourism industry impacts all aspects of Thai development.

In the same way, there is a similar relationship between tourism for Asian development and the development of tourists, which means that the de-

**Table 11.** Results of sentiment analysis

Theme code	Sentiment			
	Strongly negative	Negative	Positive	Strongly positive
The development of cities	0	2	4	6
Elephant tourism development	2	46	10	0
Thailand perspective	4	0	8	0
The development of the tourism industry	12	33	2	2
Tourism story	0	0	66	0
The development of tourist	144	86	13	9
Tourism for Asian development	76	26	36	0
Travel development perspective	12	60	94	16
Cannabis	130	0	147	9

velopment of tourists is linked to the development of Thai tourism in Asia, thus forming clusters. Moreover, this cluster forms a large cluster with travel stories. This result reveals that travel stories, tourists, and patterns in Thailand are related, and there may be some relationship between them.

Therefore, the similarity between the first-level themes abstracted from tweets builds the concept of Thai tourism development. From a social media perspective, the study formally proposed that Thai tourism development is a multi-concept involving industries, tourists, scenic spots, and stories. Furthermore, Thai tourism development should take on the mission of tourism development in Thailand, the Thai people, and even Asian countries. At the same time, attention should be paid to elephant and cannabis tourism in tourism development. Since COVID-19, Thailand's tourism development has faced many opportunities and challenges. Active use of social media content analysis makes it easier to find measures to solve the tourism problems in the digital age.

## 4. DISCUSSION

This study makes a content analysis of tweets on Thai tourism development and extracts the connotations and dimensions of Thai tourism development by using theme coding. Then, it uses the word frequency analysis to interpret Twitter's hot spots and main content on the development of tourism in Thailand. Based on the sentiment analysis, this study demonstrates social media users' positive and negative feelings on different dimensions of Thai tourism development. Finally, standard features in subject coding are identified by cluster analysis. While interpreting the development of tourism in Thailand, the study also puts forward some suggestions for the development of tourism in Thailand.

As one of the world's tourist countries, Thailand has permanently attached great importance to studying tourism development in academic circles (Sun et al., 2022). The problems, strategies, and future of tourism development in Thailand have been revealed through case analysis, literature (Brown et al., 2017), quantitative analysis, and other methods. This study uses social media content to construct a dimension of Thai tourism development. Although the use of

social media in the study of tourism development is not new, as a significant tourist country, Thailand seems critical for this section's content. Therefore, this paper enriches the study of social media services in tourism development in Thailand.

Current achievements mainly focus on the environmental problems caused by island tourism, ecotourism, and agricultural tourism in Thailand and have tried to solve the dilemma through some research. However, tourists and social media play an increasingly important role in the digital age, and tourist reviews and views are essential in destination choices (Pencarelli, 2020). Few studies have focused on the connotation and dimension of Thai tourism development from the social media perspective. In terms of sustainable tourism ecology in Thailand, this paper finds that social media users are particularly concerned about the living environment of elephants, monkeys, and other animals.

As an important tourism destination, destination image, food, satisfaction, and policy have become the main factors affecting the tourism destination in Thailand. This paper explores the importance of Bangkok, Pattaya, and Phuket as tourist destinations from social media. The attractiveness of these destinations is important in Twitter as well as from natural landscapes.

In addition, current research focuses on Thailand's attractiveness and influencing factors as a tourist destination. However, little attention has been paid to the tourism and social problems caused by tourists, sex, marijuana, riots, and how to avoid these problems, which also pose challenges to the development of Thai tourism.

Nevertheless, the analysis is just about tweeting. Twitter is one of the leading social media representatives and only summarizes some social media's understanding of Thai tourism development. Although this study provides a new way to answer the tourism question in Thailand, there is still much social media to explore.

Secondly, the study has excavated a lot of information conducive to Thai tourism development, such as scenic spots, cooperation, markets, destinations, and other concepts. Future research can quantitatively explore the correlation between these contents and

Thai tourism development to build a Thai tourism development model under social media. Finally, as the primary source of tourism revenue, improving the satisfaction of tourists is the primary channel for the profit of tourism operations. This paper uses dynamic analysis to determine Twitter users' positive and negative feelings about tourism in Thailand.

Therefore, future research can seek ways of improving social media users' satisfaction with tourism in Thailand. At the same time, different tourist attraction modes should exist for different countries. Therefore, the role of social media in tourism development in Thailand is just the beginning, and there is still much to discuss and explore in the future.

---

## CONCLUSION

The research objective was to scrutinize the evolution of Thailand's tourism sector through a content analysis of user-generated discourse on social media platforms. From the tweet, this paper digs and codes the content related to Thai tourism and studies nine dimensions that can reveal the development of Thai tourism. From the result of the theme code, tourism development in Thailand is a comprehensive concept involving tourism, travel, travelers, and scenic spots. It may impact the Thai economy, the Thai people, and Asian countries. Moreover, Thailand is facing many opportunities and challenges in tourism development. With its rich tourist attractions, Thailand has received many tourists from Russia and Asia. It has actively participated in tourism cooperation, establishing opportunities for Japan-Thailand and Thailand-Europe tourism cooperation.

Under the Tourism Expo and APEC background, there are more opportunities for Thai tourism development. However, with the rapid development of the tourism economy, the study emphasizes the possible problems. For example, sex, drugs, turmoil, tourists, ecological destruction, and animal injury may negatively impact tourism development, but tourists are also more concerned about the content. At the same time, the study further defined the responsibility and mission of Thai tourism development. Thai tourism development should further emphasize the concept of sustainability and actively integrate into Asian countries' tourism development cooperation to encourage more countries to join the sustainable tourism development camp. Finally, the study encourages Thai tourism development to pay attention to the role of social media and intensify the research on social media to promote Thai tourism development. The Thai government and tourism departments should further standardize the tourism market to create a more peaceful environment. At the same time, these stakeholders need to devote more enthusiasm to policy and management to obtain tourism benefits and create healthy sexual and medical tourism models to attract more international tourists. At the same time, as a world-class tourism country, it undertakes the mission of sustainable development, seeks more opportunities for international tourism cooperation, creates a perfect ecological tourism circle, and forms a high-quality image of the tourism country.

## AUTHOR CONTRIBUTIONS

Conceptualization: Haiying Fu, Xiaoe Zhu.

Data curation: Haiying Fu.

Formal analysis: Haiying Fu, Meizhi Ma, Xiaoe Zhu.

Funding acquisition: Haiying Fu.

Investigation: Haiying Fu, Meizhi Ma, Xiaoe Zhu.

Methodology: Haiying Fu, Xiaoe Zhu.

Project administration: Haiying Fu, Xiaoe Zhu.

Resources: Haiying Fu.

Software: Haiying Fu.

Supervision: Haiying Fu, Meizhi Ma.

Validation: Haiying Fu.

Visualization: Haiying Fu.

Writing – original draft: Haiying Fu.

Writing – review & editing: Haiying Fu, Meizhi Ma, Xiaoe Zhu.

## REFERENCES

- Adewole, K. S., Han, T., Wu, W., Song, H., & Sangaiah, A. K. (2020). Twitter spam account detection based on clustering and classification methods. *The Journal of Supercomputing*, 76(7), 4802-4837. <https://doi.org/10.1007/s11227-018-2641-x>
- Agyeiwaah, E., Otoo, F. E., Sontikul, W., & Huang, W.-J. (2019). Understanding culinary tourist motivation, experience, satisfaction, and loyalty using a structural approach. *Journal of Travel & Tourism Marketing*, 36(3), 295-313. <https://doi.org/10.1080/10548408.2018.1541775>
- Brown, N. A., Rovins, J. E., Feldmann-Jensen, S., Orchiston, C., & Johnston, D. (2017). Exploring disaster resilience within the hotel sector: A systematic review of literature. *International Journal of Disaster Risk Reduction*, 22, 362-370. <https://doi.org/10.1016/j.ijdr.2017.02.005>
- Buathong, K., & Lai, P.-C. (2017). Perceived attributes of event sustainability in the MICE industry in Thailand: A viewpoint from governmental, academic, venue and practitioner. *Sustainability*, 9(7), 1151. <https://doi.org/10.3390/su9071151>
- Chaisawat, M. (2006). Policy and planning of tourism product development in Thailand: A proposed model. *Asia Pacific Journal of Tourism Research*, 11(1), 1-16. <https://doi.org/10.1080/10941660500500576>
- Chansuk, C., Arreeras, T., Chiangboon, C., Phonmakham, K., Chotikool, N., Buddee, R., Pumjampa, S., Yanasoi, T., & Arreeras, S. (2022). Using factor analyses to understand the post-pandemic travel behavior in domestic tourism through a questionnaire survey. *Transportation Research Interdisciplinary Perspectives*, 16, 100691. <https://doi.org/10.1016/j.trip.2022.100691>
- Charoensukmongkol, P., & Sasatanun, P. (2017). Social media use for CRM and business performance satisfaction: The moderating roles of social skills and social media sales intensity. *Asia Pacific Management Review*, 22(1), 25-34. <https://doi.org/10.1016/j.apmr.2016.10.005>
- Chun Tie, Y., Birks, M., & Francis, K. (2019). Grounded theory research: A design framework for novice researchers. *SAGE Open Medicine*, 7. <https://doi.org/10.1177/2050312118822927>
- Claster, W. B., Pardo, P., Cooper, M., & Tajeddini, K. (2013). Tourism, travel and tweets: Algorithmic text analysis methodologies in tourism. *Middle East Journal of Management*, 1(1), 81-99. <https://doi.org/10.1504/MEJM.2013.054071>
- Ditta-Apichai, M., Kattiyapornpong, U., & Gretzel, U. (2020). Platform-mediated tourism micro-entrepreneurship: Implications for community-based tourism in Thailand. *Journal of Hospitality and Tourism Technology*, 11(2), 223-240. <https://doi.org/10.1108/JHTT-05-2019-0079>
- Fakfare, P., & Wattanacharoensil, W. (2023). Low-carbon tourism for island destinations: A crucial alternative for sustainable development. *Sustainable Development*, 31(1), 180-197. <https://doi.org/10.1002/sd.2382>
- Feizollah, A., Mostafa, M. M., Sulaiman, A., Zakaria, Z., & Firdaus, A. (2021). Exploring halal tourism tweets on social media. *Journal of Big Data*, 8(1), 72. <https://doi.org/10.1186/s40537-021-00463-5>
- Fethi, S., & Senyuçel, E. (2021). The role of tourism development on CO2 emission reduction in an extended version of the environmental Kuznets curve: Evidence from top 50 tourist destination countries. *Environment, Development and Sustainability*, 23(2), 1499-1524. <https://doi.org/10.1007/s10668-020-00633-0>
- Gelbman, A., & Timothy, D. J. (2010). From hostile boundaries to tourist attractions. *Current Issues in Tourism*, 13(3), 239-259. <https://doi.org/10.1080/13683500903033278>
- Gong, J., Detchkhajornjaroensri, P., & Knight, D. W. (2019). Responsible tourism in Bangkok, Thailand: Resident perceptions of Chinese tourist behaviour. *International Journal of Tourism Research*, 21(2), 221-233. <https://doi.org/10.1002/jtr.2256>
- Hays, S., Page, S. J., & Buhalis, D. (2013). Social media as a destination marketing tool: Its use by national tourism organisations. *Current Issues in Tourism*, 16(3), 211-239. <https://doi.org/10.1080/13683500.2012.662215>
- Hunt, C., & Stronza, A. (2014). Stage-based tourism models and resident attitudes towards tourism in an emerging destination in the developing world. *Journal of Sustainable Tourism*, 22(2), 279-298. <https://doi.org/10.1080/09669582.2013.815761>
- Intason, M., Coetzee, W., & Lee, C. (2021). The development, implementation and challenges to water-saving practices in a water-stressed destination: A case study of the Songkran Festival, Thailand. *International Journal of Event and Festival Management*, 12(3), 279-296. <https://doi.org/10.1108/IJEFM-10-2020-0065>
- Lai, P.-H., Morrison-Saunders, A., & Grimstad, S. (2017). Operating small tourism firms

- in rural destinations: A social representations approach to examining how small tourism firms cope with non-tourism induced changes. *Tourism Management*, 58, 164-174. <https://doi.org/10.1016/j.tourman.2016.10.017>
20. Leelawat, N., Jariyapongpaiboon, S., Promjun, A., Boonyarak, S., Saengtattim, K., Laosunthara, A., Yudha, A. K., & Tang, J. (2022). Twitter data sentiment analysis of tourism in Thailand during the COVID-19 pandemic using machine learning. *Heliyon*, 8(10), e10894. <https://doi.org/10.1016/j.heliyon.2022.e10894>
  21. Li, M., Fu, H., & Jiang, S. (2023). What is sustainable tourism in social media? Evidence from tweets. *Problems and Perspectives in Management*, 21(1), 204-218. [http://dx.doi.org/10.21511/ppm.21\(1\).2023.18](http://dx.doi.org/10.21511/ppm.21(1).2023.18)
  22. Luekveerawattana, S. (2012). Cultural landscape for sustainable tourism case study of Amphawa community. *Procedia – Social and Behavioral Sciences*, 65, 387-396. <https://doi.org/10.1016/j.sbspro.2012.11.139>
  23. Martin-Domingo, L., Martín, J. C., & Mandsberg, G. (2019). Social media as a resource for sentiment analysis of Airport Service Quality (ASQ). *Journal of Air Transport Management*, 78, 106-115. <https://doi.org/10.1016/j.jairtraman.2019.01.004>
  24. Mishra, R. K., Urolagin, S., Jothi, J. A. A., Neogi, A. S., & Nawaz, N. (2021). Deep learning-based sentiment analysis and topic modeling on tourism during Covid-19 pandemic. *Frontiers in Computer Science*, 3. <https://doi.org/10.3389/fcomp.2021.775368>
  25. Muangasame, K., & McKercher, B. (2015). The challenge of implementing sustainable tourism policy: A 360-degree assessment of Thailand's "7 Greens sustainable tourism policy". *Journal of Sustainable Tourism*, 23(4), 497-516. <https://doi.org/10.1080/09669582.2014.978789>
  26. Nusair, K., Butt, I., & Nikhashemi, S. R. (2019). A bibliometric analysis of social media in hospitality and tourism research. *International Journal of Contemporary Hospitality Management*, 31(7), 2691-2719. <https://doi.org/10.1108/IJCHM-06-2018-0489>
  27. O'Kane, P., Smith, A., & Lerman, M. P. (2021). Building transparency and trustworthiness in inductive research through computer-aided qualitative data analysis software. *Organizational Research Methods*, 24(1), 104-139. <https://doi.org/10.1177/1094428119865016>
  28. Park, J., & Oh, I.-K. (2012). A case study of social media marketing by travel agency: The salience of social media marketing in the tourism industry. *International Journal of Tourism Sciences*, 12(1), 93-106. <https://doi.org/10.1080/15980634.2012.11434654>
  29. Pencarelli, T. (2020). The digital revolution in the travel and tourism industry. *Information Technology & Tourism*, 22(3), 455-476. <https://doi.org/10.1007/s40558-019-00160-3>
  30. Pholphirul, P., Rukumnuaykit, P., Charoenrat, T., Kwanyou, A., & Srijamdee, K. (2022). Service marketing strategies and performances of tourism and hospitality enterprises: Implications from a small border province in Thailand. *Asia Pacific Journal of Marketing and Logistics*, 34(5), 887-905. <https://doi.org/10.1108/APJML-01-2021-0064>
  31. Picco-Schwendener, A., Kalbaska, N., Hasenzahl, L., & Cantoni, L. (2022). e-Government and tourism. In Z. Xiang, M. Fuchs, U. Gretzel, & W. Höpken (Eds.), *Handbook of e-Tourism* (pp. 1629-1644). Springer International Publishing. [https://doi.org/10.1007/978-3-030-48652-5\\_101](https://doi.org/10.1007/978-3-030-48652-5_101)
  32. Ram, J., & Titarenko, R. (2022). Using social media in project management: Behavioral, cognitive, and environmental challenges. *Project Management Journal*, 53(3), 236-256. <https://doi.org/10.1177/87569728221079427>
  33. Ryu, K., Promsivapallop, P., Kannaovakun, P., Kim, M., & Insuwanno, P. (2023). Residents' risk perceptions, willingness to accept international tourists, and self-protective behaviour during destination re-opening amidst the COVID-19 pandemic. *Current Issues in Tourism*, 26(8), 1367-1383. <https://doi.org/10.1080/13683500.2022.2054782>
  34. Sobaih, A. E. E., Elshaer, I., Hasanein, A. M., & Abdelaziz, A. S. (2021). Responses to COVID-19: The role of performance in the relationship between small hospitality enterprises' resilience and sustainable tourism development. *International Journal of Hospitality Management*, 94, 102824. <https://doi.org/10.1016/j.ijhm.2020.102824>
  35. Stolar, M. (2020). *Business Intelligence: The Influence of Sentiment Analysis on Small Businesses*. Capella University. ProQuest LLC.
  36. Sudsawasd, S., Charoensedtasin, T., Laksanapanyakul, N., & Pholphirul, P. (2022). Pro-poor tourism and income distribution in the second-tier provinces in Thailand. *Area Development and Policy*, 7(4), 404-426. <https://doi.org/10.1080/23792949.2022.2032227>
  37. Sun, S., Zhong, L., Law, R., Li, X., Deng, B., & Yang, L. (2022). Health tourism evolution: A review based on bibliometric analysis and the China national knowledge infrastructure database. *Sustainability*, 14(16), 10435. <https://doi.org/10.3390/su141610435>
  38. Taecharungroj, V., & Mathayomchan, B. (2019). Analysing TripAdvisor reviews of tourist attractions in Phuket, Thailand. *Tourism Management*, 75, 550-568. <https://doi.org/10.1016/j.tourman.2019.06.020>
  39. Xu, F., Buhalis, D., & Weber, J. (2017). Serious games and the gamification of tourism. *Tourism Management*, 60, 244-256. <https://doi.org/10.1016/j.tourman.2016.11.020>
  40. Yan, H., Wei, H., & Wei, M. (2021). Exploring tourism recovery in the post-COVID-19 period: An evolutionary game theory approach. *Sustainability*, 13(16), 9162. Retrieved from <https://www.mdpi.com/2071-1050/13/16/9162>