



## Bibliometric Analysis of the Research Hotspots on Inbound Tourism from the Perspective of Globalization

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# **Bibliometric Analysis of the Research Hotspots on Inbound Tourism from the Perspective of Globalization<sup>i</sup>**

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**Abstract.** Using the research results from the many that have been published, this paper seeks to visualize the basic characteristics of articles and research hotspots on inbound tourism, and to analyze and summarize the causes and background of these hotspots as well as their effects on the development of tourism. Based on a bibliometric analysis of 1,232 articles on the Web of Science database between 1997 and 2020, this paper shows results that 1) inbound tourism can be divided into three main research stages, among which the research results in the last four years are particularly fruitful; 2) inbound tourism research is concentrated in a small number of countries/regions, and the research institutions and scholars in this field tend to do independent research, resulting in a global academic community that has not yet formed; 3) the research hotspots of inbound tourism can be summarized into two main directions and seven themes. Among them, studies related to COVID-19 focus on themes such as "inbound ecological and medical tourism", "natural environment of inbound tourism destination" and "the influence of negative social factors on inbound tourism", while the micro perspective of inbound tourism consumers received less attention. The findings can provide insights and suggestions for inbound tourism research in the post-epidemic period.

**Key words.** globalization, inbound tourism, bibliometric analysis, CiteSpace, research hotspots

## **1 Introduction**

Inbound tourism plays a key role in the development of a global

tourism industry, which not only represents the image of each country or region, but also reflects their comprehensive development level and competitiveness. In 2020, due to the impact of COVID-19, the global inbound tourism industry is facing distinct levels of threat, and the phenomenon of inbound tourism during the epidemic period has also attracted extensive attention from scholars. However, few scholars have systematically sorted out the global inbound tourism research, nor have they discussed the research situation of inbound tourism from the perspective of COVID-19.

This paper summarizes the basic characteristics of articles and research hotspots of inbound tourism, based on the 1,232 articles reviewed, to formulate a comprehensive grasp of the current situation and pattern of global inbound tourism research, and provide theoretical and practical inspiration for follow-up research in the field of global inbound tourism in the post-epidemic era.

## **2 Methodology**

### **2.1 Research Methods**

This paper uses bibliometric analysis and knowledge graph analysis methods. Bibliometric analysis is a quantitative research method based on literature analysis, which is used to analyze various external characteristics of literature, including authors, journals, and citations. (Wang, 2007). In bibliometrics analysis, frequency analysis, co-occurrence analysis, co-citation analysis and clustering analysis are often used (You and Liu, 2018).

The knowledge graph is a type of graphic representation depicting the development process of knowledge in a certain field and its structural relationship (Yao et al., 2017), and displays the knowledge network and structure through visualization technology. The knowledge graph analysis is a method of drawing knowledge graphs through visual analysis software and performing bibliometric analysis, which involves analysis of cooperative network graphs, co-occurrence network graphs, co-citation network graphs, and clustering network graphs. This paper uses CiteSpace software to draw knowledge graphs of articles on global inbound tourism. By describing the nodes, links, density, centrality and other information in the graph networks, research distributions and hotspots can be determined.

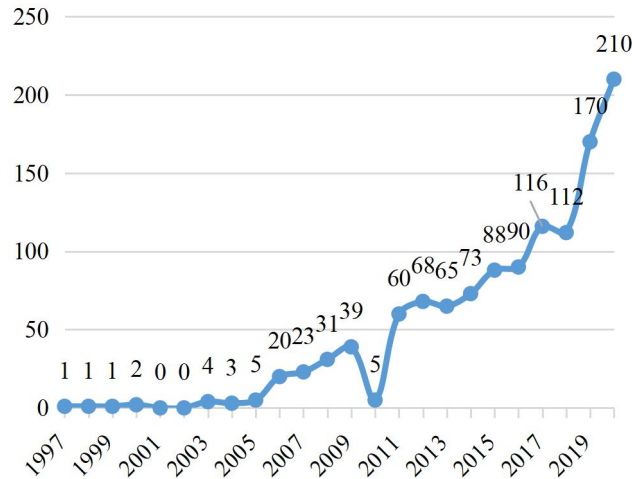
## 2.2 Data Sources

In order to ensure the authority and comprehensiveness of sample, this paper takes the SCI and SSCI journals in the Web of Science database between 1997 and 2020 as the data source, and then searches the subject terms: ‘inbound tourism’, ‘inbound travel’, ‘inbound visit’, ‘cross-border tourism’, ‘transnational tourism’ and ‘transnational travel’. From the 1,552 sources obtained, the type of literature was further refined to ‘ARTICLE’, resulting in 1,232 valid articles obtained.

## 3 Basic Characteristics of Articles

### 3.1 Trend of Publications

From Fig 1, the number of research publications on inbound tourism between 1997 and 2020 has maintained an upward trend. According to the increase in publications, this whole period can be divided into three stages. The first stage (1997-2005) is the germination stage of inbound tourism research. As scholars initially explore the field of inbound tourism, the number of publications is relatively small and the overall trend is slow. In the second stage (2006-2016), inbound tourism is in the exploration stage of research, and the number of publications breaks through double digits, showing an increasing trend. The third stage (2017-2020) is the rapid development of inbound tourism research. Both the number of publications and the increase rate have significantly increased. In this stage, an average of 152 articles was published each year, showing a rapid growth trend. Despite the disruption by the COVID-19 pandemic in 2020, academic research related to inbound tourism continued to increase.



**Fig 1.** Trend of the number of inbound tourism literature from 1997 to 2020.

### 3.2 Distribution of Countries/Regions

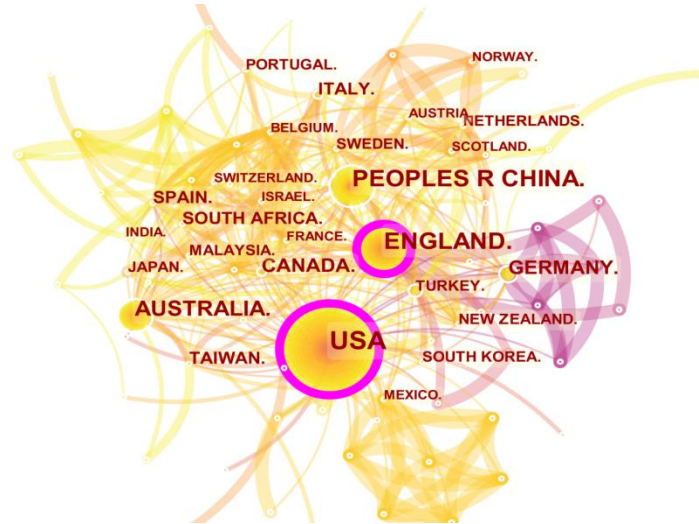
As popular destinations for inbound tourism, the United States (282), England (166), China (165) and Australia (128) are also the main countries/regions that focus on inbound tourism, as shown in Table 1. Among them, the United States ranks first with 282 articles published and is the leading force in inbound tourism research. Overall, these countries and regions published 1,044 articles, accounting for 84.74% of the total. This shows that global inbound tourism research is highly concentrated in the hands of a few economically developed countries/regions.

**Table 1.** Top Ten countries and regions of inbound tourism research.

Frequency	Countries / Regions	Frequency	Countries / Regions
282	USA	62	Germany
166	England	55	Spain
165	China	43	Taiwan, China
128	Austria	38	Italy
67	Canada	38	South Africa

Figure 2 reflects the research cooperation of major countries/regions on inbound tourism and represents the degree of globalization of inbound tourism research. According to the density of links, there are more links formed with the central nodes of the United States and England, and the centrality of the two nodes is 0.35 and 0.25 respectively, indicating that they

have engaged in research cooperation with other countries/regions. In general, the network density of the cooperation network graph is 0.0587, which indicates that the overall research relevance is strong, with strong global research cooperation.



**Fig 2.** Cooperation network of countries and regions.

### 3.3 Main Research Institutions

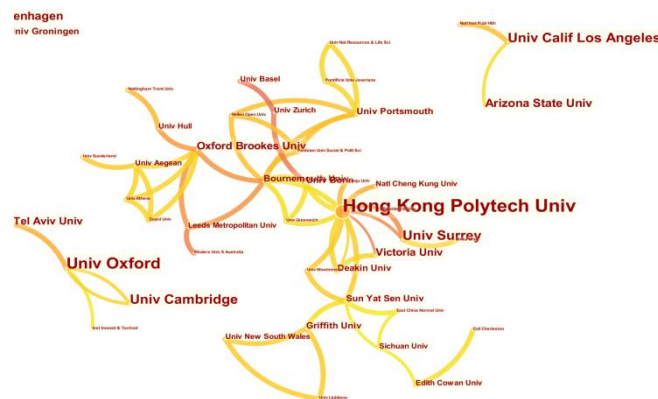
Research institutions are the primary research sources concerning inbound tourism, integrating the wisdom and wealth of multiple scholars. Among them, ten research institutions have published twelve or more articles related to inbound tourism (Table 2), including Hong Kong Polytechnic University (34), University of London (31), and the University of California System (24). The number of publications of Hong Kong Polytechnic University far exceeds that of others, and it is the backbone of long-term research on inbound tourism, mainly focusing on ‘behavior and experience of inbound tourists’, ‘inbound tourism demand and forecast’, ‘inbound health tourism’, and other topics, covering a wide range of topics.

**Table 2.** The top 10 research institutions of inbound tourism.

Frequency	Institutions	Frequency	Institutions
34	Hong Kong Polytechnic University	16	University of New South Wales Sydney
31	University of London	16	University of Surrey
24	University of California System	13	Griffith University

18	University of Texas System	13	Sun Yat-Sen University
17	Monash University	12	University Of California Los Angeles

Fig 3 shows the research cooperation among various institutions. The largest network cluster in the graph is centered on the node of Hong Kong Polytechnic University, and the node has formed many links outwards, which indicates that Hong Kong Polytechnic University has conducted research cooperation with other universities such as Bournemouth University, University of Surrey, and Sun Yat-Sen University. The density of the overall network is 0.0027, reflecting that the global cooperation among various institutions is not close, and they still mainly conduct related research independently.



**Fig 3.** Cooperation network of research institutions.

### 3.4 Core Research Authors

As shown in Table 3, among research authors in the field of inbound tourism, Ming-Hsiang Chen (11) and Valorie A. Crooks (10) have the highest number of publications, followed by Jeremy Snyder (9) and Larry Dwyer (8). They have created rich academic achievements in global inbound tourism research and are representatives of the core research forces in this field.

**Table 3.** Main authors of inbound tourism research.

Frequency	Main authors	Frequency	Main authors
11	Ming-Hsiang Chen	7	Yang Yang
10	Valorie A Crooks	7	Khalid Zaman
9	Jeremy Snyder	6	Susan Frohlick

8	Larry Dwyer	6	Giray Gozgor
7	Gang Li	6	Haiyan Song

According to Fig 4, the whole network is loose and sporadic, where a few authors form network clusters but fail to form a strong global academic research community.



Fig 4. Cooperation network of authors.

#### 4 Research Hotspots of Articles

Statistics and clustering of main keywords or main subject terms of inbound tourism articles can be used to summarize the research hotspots of inbound tourism, and help sort out the development process of research hotspots.

##### 4.1 Analysis of Keywords and Subject Terms

As significant words for retrieving articles, there are differences between keywords and subject terms. Keywords refer to words that appear frequently in the articles, usually identified by the authors themselves, while subject terms are a series of standardized professional words. To an extent, both keywords and subject terms can be used to analyze research hotspots, but there are differences in the clustering effects of the two. Therefore, this paper will compare the two through two indicators, frequency and network correlation, to select the more appropriate one for cluster analysis of research hotspots. Through CiteSpace, main keywords and main subject terms with the frequency of the top twenty are counted and filtered, and then low-representation and low-relevance general words are excluded, resulting in the data in Table 4.



**Table 4.** The top twenty keywords and subject terms of inbound tourism research.

Frequency	Keywords	Frequency	Subject terms
48	migration	23	inbound tourists
38	model	22	international tourism
37	impact	21	Hong Kong
26	gender	19	in-depth interviews
25	transnational terrorism	18	medical tourism
24	politics	16	tourism demand
23	demand	15	south Africa
22	identity	15	global south
18	policy	15	tourism development
18	governance	13	terrorist attacks
17	experience	13	national borders
17	geography	12	north America
17	city	12	global north
16	state	12	transnational mobility
16	migrant	12	tourist arrivals
16	destination	12	transnational perspective
16	mobility	11	southeast Asia
15	network	11	European union
14	space	11	South Korea
14	Place	10	economic growth

Table 5 presents the statistical results of the maximum frequency, minimum frequency, range and average of keywords and subject terms. The larger the overall span of the words, the more obvious the cluster boundary forms, and the better the final clustering effect. The number of main keywords and main subject terms are not equal and the range of keywords (34) is significantly higher than the range of subject terms (13), suggesting the effect of selecting keywords for cluster analysis is better. In addition, the frequency of words can reflect the degree of activity in the research field. Generally, the higher the frequency, the more active the research field will be. Because the average value of keywords (21.85) is higher than that of subject terms (14.65), research hotspots of inbound tourism based on cluster analysis using keywords will be more active and typical.

**Table 5.** The frequency, range and average of the top twenty keywords and subject terms.

	Maximum frequency	Minimum frequency	Range	Average
Keywords	48	14	34	21.85
Subject terms	23	10	13	14.65

To judge the suitability of keywords and subject terms to be used in the cluster analysis, it is also necessary to perform network correlation analysis. Fig 5 shows the co-occurrence network graphs of keywords and subject terms. It can be seen that the density of the co-occurrence network of keywords (Fig 5a) is 0.0124, indicating that there is a strong correlation among keywords; the density of the co-occurrence network of subject terms (Fig 5b) is 0.005, reflecting that network structure composed of subject terms is relatively loose and the correlation among them is weak, so that there may be a large deviation of cluster themes during cluster analysis. Therefore, by comparing the network relevance of keywords and subject terms, keywords are more suitable for cluster analysis of research hotspots on inbound tourism.



a) Co-occurrence network of keywords

b) Co-occurrence network of subject terms

**Fig 5.** Co-occurrence network of keywords and subject terms.

In summary, comparing the two indicators of frequency and network relevance, keywords can meet requirements better than subject terms, so keywords were chosen as the object of cluster analysis in the research hotspots of this paper.

#### 4.2 Cluster Analysis of Research Hotspots

Clustering of keywords with strong relevance can clearly reflect research hotspots. CiteSpace software has the function

of automatic clustering of keywords, but to further ensure the accuracy of clustering effect, this paper uses a combination of two methods, which are automatic clustering with CiteSpace and artificial classification. First, this paper applies clustering function of CiteSpace to automatically classify keywords through an algorithm, and then divides clusters of different topics according to the meaning of keywords, as shown in Fig 6.

The clustering network shows the top fourteen clusters with the largest number of keywords, which represent fourteen research hotspots. In descending order of number of keywords, the cluster labels of research hotspots in inbound tourism are: #0 ecotourism, #1 sex tourism, #2 air pollution, #3 tourism demand, #4 input-output mode, #5 happiness, #6 ethnography, #7 urban poverty, #8 service quality, #9 gmm estimators, #10 international political economy, #11 surrogacy, #12 neoliberalism, #13 gender. Considering that above-mentioned clustering themes obviously have a large deviation from inbound tourism, the seven cluster themes with low representation and low relevance were eliminated: #1 sex tourism, #6 ethnography, #7 urban poverty, #9 gmm estimators, #11 surrogacy, #12 neoliberalism and #13 gender. The remaining seven clusters and corresponding high-frequency keywords will be the focus of discussion and analysis.

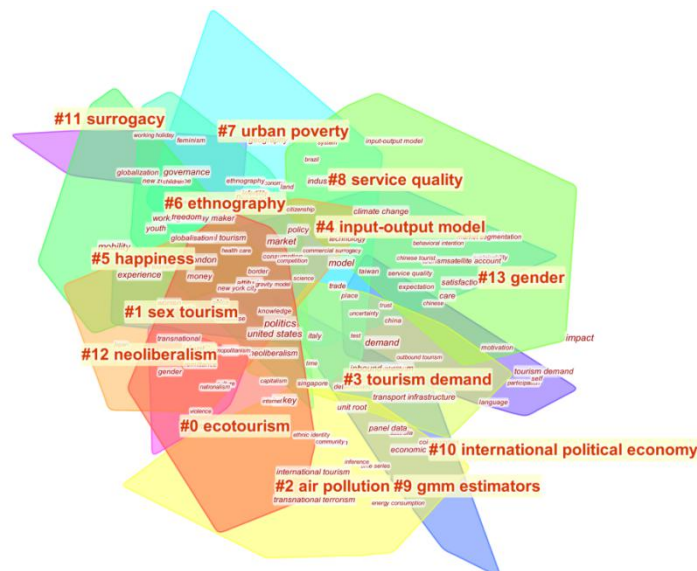


Fig 6. Clustering network of keywords.

### 4.3 Keywords Cleaning and Coding Classifications

When CiteSpace performs automatic clustering, the algorithm of the software may have problems such as improper

classification and fuzzy clustering boundary. Therefore, this paper firstly uses CiteSpace for automatic clustering, and then analyzes the correlation among keywords by reading the articles in which keywords are located, and finally to optimize and manually code the keywords in seven cluster plates. For the optimized main keywords, this paper renames clustering themes and constructs a classification coding table of keywords (Table 6), in addition, the clustering themes and keywords are divided into seven main classes and several subclasses.

**Table 6.** Classification and coding table of research hotspots on inbound tourism.

Code	Main class	Subclass
G1	Inbound ecological and medical tourism	ecotourism, ecoculture, culture of medicine, surgery, global health, conservation, health care delivery, cross-border healthcare, wildlife tourism
G2	Natural environment of inbound tourism destination	air pollution, greenhouse gas, carbon emission, water efficiency, carbon efficiency, natural resources, climate change, life-cycle assessment, nature, environmental extended input-output model, carbon footprint, water
G3	The influence of negative social factors on inbound tourism	terrorism, domestic terrorism, h1n1 flu, transnational terrorism, terrorist attacks, long-run impacts, short-run impacts, uncertainty, conflict, HIV, disruption, vulnerability
G4	Demand and forecast of inbound tourists	tourism demand, inbound tourism demand, tourist arrivals forecasting, airfare, shopping spending, transport cost, airline competition, prices, exchange rates, demand models, forecasting, price of substitutes, hotel room rates, relative domestic prices, price variables, behavioral intention
G5	Service and marketing of inbound tourism	service quality, technical efficiency, quantitative destination marketing, performance appraisal, production function, brand equity, destination marketing, online

		order batching, service gaps, tourism marketing, market segmentation, tourism promotion, brand image, brand awareness
G6	Consumption behavior and psychology of inbound tourists	revisit intention, customer satisfaction, brand loyalty, perceived value, satisfaction, perceived quality, dining experience, decision-making, tourist satisfaction, happiness, well-being, cultural intimacy, wellbeing, life satisfaction, emotion, trust, sense of community, happiness index
G7	Immigrants and cross-border tourists	Chinese outbound tourism, international second home retirement, transnational leisure, international tourism, immigrants, youth mobility, immigration, mobility, transnational migration, transnationalism, return migrants, international migration, Korean diaspora, racialized mobility

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#### **4.4 Analysis of Research Hotspots on Inbound Tourism**

##### **4.4.1 Inbound ecological and medical tourism**

In the field of inbound tourism, some scholars have based their discussions on ecotourism and medical tourism. Among them, scholar Valorie Crooks, as the representative of this research field, has made an in-depth study of inbound medical tourism and published several articles. According to the related literature, the reason scholars are keen to study this field is that with the continuous transformation of concepts of life, production and consumption, people tend to seek better healthy and medical services in other countries. A negative consequence of this trend is that many global infectious diseases, such as the ongoing COVID-19 pandemic, are largely attributable to inbound tourism. With the normalization of COVID-19 control, people's awareness of environmental protection and health preservation is becoming a constraining factor to inbound tourism.

For the above reasons, global health, ecotourism, and medicine have gradually become the research hotspots in inbound tourism. The popularity of this field reflects that attention to global health has become a general trend, which is of great significance for each country in strengthening the

awareness of ecological protection and risk prevention of inbound tourists, as well as in formulating coping strategies.

#### 4.4.2 Natural environment of inbound tourism destination

Keywords like greenhouse gas, air pollution, and carbon emission are highly related to the natural environment, and much of the research is from the perspective of interaction and influence between natural environment and inbound tourism. Pintassilgo et al. (2016) analyze the impact of climate change on the tourism industry of inbound countries. Yang et al. (2020) show the effects of relative air quality on vacationers' perceived destination restorative qualities. Research on the natural environment of China's inbound tourism mainly focuses on Beijing, where the haze phenomenon is frequent. Zhou et al. (2019), Dong et al. (2019), Tang et al. (2019) and Ruan et al. (2020) respectively describe the impact of air pollution in Beijing on the economic growth of inbound tourism.

The reason the natural environment attracts so much attention in the field of inbound tourism is mainly that the image of inbound tourism destinations, especially the image of the natural environment, will affect the perception and evaluation of overseas tourists. When the destination's natural environment is seriously damaged, it will reduce its attraction to them. Therefore, relevant exploration from this perspective can provide specific suggestions for the protection of the natural environment and the improvement of air quality of inbound tourism destinations, and provide ideas for tourism departments to expand the inbound tourist market.

#### 4.4.3 The influence of negative social factors on inbound tourism

In the research on the influence of negative social factors on inbound tourism, many scholars have focused on the phenomenon of terrorism, sudden diseases like COVID-19, and political instability. Representative studies include the following: Drakos et al. (2003) focus on three countries with a high incidence of terrorism in the Mediterranean and find that terrorism reduces the number of inbound tourists. Saha et al. (2014) discuss the combined effects of political instability and terrorism on the development of inbound tourism. Shi et al. (2017) evaluate how the outbreak of MERS affects Chinese tourists to South Korea.

The COVID-19 pandemic also belongs to a research hotspot in the field of inbound tourism. Some scholars, such as Johan et al. (2020) and Zhang et al. (2020) have studied the impact of

COVID-19 on inbound tourism and developed an imported risk index under the background of COVID-19. Others, such as Sun et al. (2020), analyzed the main tourism factors causing the COVID-19 outbreak. Based on the research conclusions, some scholars have put forward recommendations on epidemic prevention and control for inbound tourism. There is no doubt that COVID-19, as a serious negative factor, has had an impact on the global inbound tourism industry. Tourism academia might start from the actual needs and guide the practice through theoretical research, to put forward countermeasures for the development of inbound tourism in the post-epidemic period.

#### 4.4.4 Demand and forecast of inbound tourists

Predicting demands and motivations of inbound tourists through price, exchange rate, cost and other factors have always been the themes of extensive research by scholars, and they usually construct different demand models for analysis. Seetanah et al. (2010), Claveria et al. (2015), Kim et al. (2017), etc., start with various levels of international tourism demand and conduct research on tourist attraction and key demand factors. In addition, Song et al. (2008) found that seasonal factors are a major focus of tourism demand analysis in their research. Peng et al. (2015) explore the relationship among the accuracy of a tourism demand forecasting model, data characteristics and research characteristics.

In the era of globalization, the needs of inbound tourists are constantly changing and unpredictable. For each tourism enterprise, accurate prediction of inbound tourists' demand is the key to their sustainable development. Therefore, such a hot research area is worth exploring in any context, especially in the current situation of COVID-19 normalization.

#### 4.4.5 Service and marketing of inbound tourism

As marketing strategies and service contents adopted by tourism destinations are different, the impact on inbound tourists will also be diverse. Some scholars, for example, Kim et al. (2018), have conducted relevant surveys based on this field. They investigate the factors affecting the brand image of inbound tourism destinations of Korea and find that marketing strategies such as price, word of mouth, and advertising have positive impacts on the shaping of destination brands. Chen et al. (2018) put forward the shortcomings of services around three major service contents of group tourism in their research. Their research takes inbound group tourists from mainland

China to Macau as their research object and investigate the shortcomings of services received by these tourists. Shapoval et al. (2018) use a data mining tool to analyze the behavior of inbound tourists to better develop effective destination marketing strategies in the future.

Overall, although many inbound tourism marketing strategies and tools have been designed and applied, there is still a lack of research on services and marketing in the context of COVID-19, which should become the focus of scholars' attention in the future.

#### 4.4.6 Consumption behavior and psychology of inbound tourists

Satisfaction, loyalty, well-being, dining experience are keywords that belong to tourists' consumption behavior and psychology. With widespread appearance of these keywords, studies on individual travel consumers are gaining more and more attention. Musa et al. (2012) conducted an in-depth survey on medical service satisfaction of inbound tourists visiting Kuala Lumpur for treatment. Wang et al. (2012) did a comprehensive analysis of perceived value and behavioral characteristics of inbound tourists and local tourists from the perspective of the influence of tourists' perceived value on behavior intentions in large-scale activities. Hussain et al. (2018) explored the satisfaction of foreign inbound tourists with the services provided by Chinese restaurants. Abranches et al. (2014) think Guinea-Bissau's food and other products have brought happiness and security to immigrants from Portugal. Chen et al. (2018) analyzes the issue of whether happy inbound tourism destinations can bring happiness to tourists.

Research on inbound tourism has long been based on a macro perspective, but in recent years, more studies on the micro-level of inbound tourism consumers have emerged, which indicates that the research on inbound tourism is more focused and closer to reality. However, other aspects such as inbound tourists' perceptions under the COVID-19 pandemic, still require further attention, as a deeper understanding of individuals at the micro-level is more conducive to the development of macro strategies.

#### 4.4.7 Immigrants and cross-border tourists

Inbound tourism can be understood as a combination of cross-border tourism and transnational tourism. Immigrants also belong to the category of inbound tourists, so immigrants and cross-border tourists are also the research hotspots in



global inbound tourism. Wong et al. (2015) investigate the motivation of British and Japanese retirees to regard Malaysia as their international second hometown. Huang et al. (2015) take Chinese Americans as the research object and investigate the experiences of second-generation immigrants' transnational tourism and leisure. Seetaram et al. (2012) explore the connection between immigration and international inbound tourism by explaining dummy variables such as income, real exchange rates, and air fare prices. Balli et al. (2016) find in their research that inbound tourists from various countries are affected by the number of immigrants to the country. The above studies show that scholars are interested in the links between immigrants and inbound tourism, as well as the impact of immigration.

#### **4.5 Relationships among Research Hotspots**

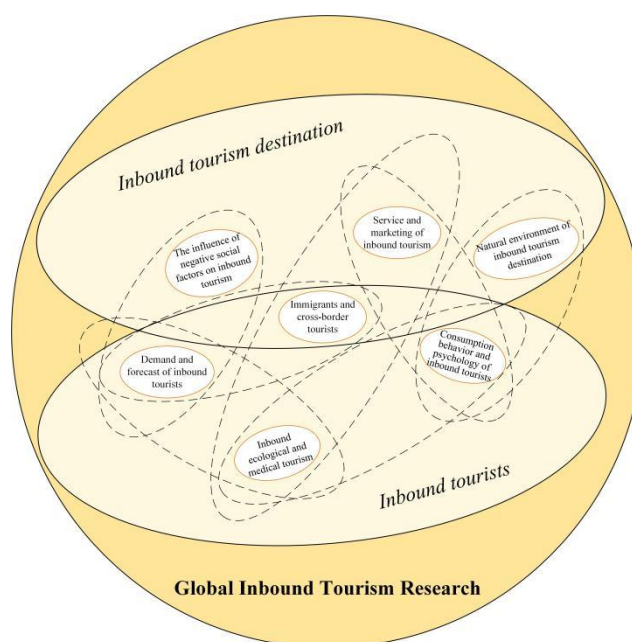
Scholars discuss the phenomena existing in the field of inbound tourism from different perspectives, covering a wide range of themes such as:

- Consumption behavior and psychology of inbound tourists
- Service and marketing of inbound tourism
- Natural environment of inbound tourism destination
- The influence of negative social factors on inbound tourism
- Service and marketing of inbound tourism
- Demand and forecast of inbound tourists
- Consumption behavior and psychology of inbound tourists
- Representatives of new inbound tourism formats such as 'inbound ecological and medical tourism'

Since 'immigrants and cross-border tourists' refers to the flow between inbound tourists and inbound tourism destinations, and can be seen as a bridge between them, so it belongs to research field of either.

Fig.7 shows the various levels and connections among the research hotspots of inbound tourism, with the colors of circles from dark to light representing the levels from high to low. The outer circle is at the first level and contains all fields of inbound tourism studies. The two inner circles at the second level are 'inbound tourism destination' and 'inbound tourists', representing two mainstream directions of inbound tourism studies. The seven research hotspots are at the third level and are mainly discussed by scholars based on the two mainstream directions. Some of these research hotspots partially overlap with each other. For example, the intersection of 'natural

environment of inbound tourism destination’ and ‘consumption behavior and psychology of inbound tourists’ represents relevant studies on the perception and evaluation of inbound tourists to inbound tourism destination environment; the intersection of ‘the influence of negative social factors on inbound tourism’ and ‘demand and forecast of inbound tourists’ represents relevant studies on the influence of negative social factors on consumers' motivation and demand.



**Fig 7.** Relational network of research hotspots on inbound tourism.

In the future, scholars may still start from the two mainstream directions of inbound tourism destination and inbound tourists but will likely carry out more in-depth and detailed research around different fields or cross-fields, to continuously expand the research topics thus extending more branches and making the research system of inbound tourism more diverse. In addition, these research areas may also have new theoretical and practical value in the context of COVID-19 normalization. Making it very meaningful to discuss traditional hot topics based on the context of the new era.

## 5 Conclusion

The present study tries to visualize and analyze the basic characteristics of articles and research hotspots of inbound tourism by bibliometric analysis software of CiteSpace. First, the research on global inbound tourism can be divided into three stages, and the number of articles published in each new

stage was a great leap, the average number of articles published between 2017 and 2020 is 152. In 2020, the number of publications reaches its highest level, with many excellent works related to the COVID-19 outbreak.

Secondly, the United States, England, China, and other countries with high international influence are the main forces of inbound tourism research, while other countries or regions are less involved in this field. Among research institutions or authors, only a partially centralized and overall decentralized cooperative network has been formed, indicating that their cooperative relationships are not close, and they tend to conduct independent research.

Finally, through cluster analysis, this paper summarizes 2 main directions and 7 hotspots of inbound tourism research and finds that they are closely related to each other. At the same time, this study discusses the relationship between the COVID-19 pandemic and inbound tourism research, among them, studies on the impact of COVID-19 as a negative factor on inbound tourism are common, while there are few studies on the needs, marketing and individual behaviors of inbound tourists during the period of COVID-19. Therefore, scholars need to make more reflections on these aspects in the future, to provide theoretical contribution and practical enlightenment for the sustainable development of inbound tourism industry.

In terms of future research directions, the selection of databases and journals should not be limited to the scope of Web of Science and core journals., Master's and Doctoral literature and related monographs may also be considered, which are conducive to improving the objectivity and scientific basis of data. Moreover, in the application of software functions in the future, scholars can try to apply more data processing software, to enrich the content of bibliometric analysis on inbound tourism. Finally, inbound tourism research can be compared with relevant conference topics and expert interviews, to analyze the correlation between theoretical research and practical topics.

## References

1. Wang, C.: Research progress of China's inbound tourism since 2000——Based on the visual analysis of knowledge graph[J]. Journal of Hubei University of Arts and Science, 40(11): 20-24+43 (2019)
2. Yu, L., Tao, Y.: Research progress of inbound tourism based on CiteSpace

- knowledge graph[J]. *Journal of Tangshan Normal University*, 53(6): 733-746 (2014)
3. Wang, Y.: *Comprehensive research of bibliometrics and content analysis*[D]. Nanjing University of Science and Technology (2007)
  4. You, Y., Liu, H.: *Research on hot spot and development of inbound tourism based on Cite Space*[J]. *Xinjiang Finance*, (05): 41-49 (2018)
  5. Yao, X., Xu, C., Li, J., et al.: *Establishing the user base of core candidate authors of a sci-tech journal based on Price Law and Pareto' s Law and online submission system*[J]. *Acta Editologica*, 29(01): 64-66 (2017)
  6. Zhong, W.: *Standardized research on application of co-word analysis method—Comparative analysis of clustering result of subject headings and keywords*[J]. *ACTA EDITOLOGICA*, 55(06): 114-118 (2011)
  7. Pintassilgo, P., Rossello, J., Santana-Gallego, M., et al.: *The economic dimension of climate change impacts on tourism: The case of Portugal*[J]. *Sustainability*, 22(4): 685-69 (2016)
  8. Yang, Y., Chen, G.: *In search of fresher air: The influence of relative air quality on vacationers' perceptions of destinations' restorative qualities*[J]. *International Journal of Tourism Research* (2020)
  9. Zhou, X., Jiménez, Y., Rodríguez, J., et al.: *Air pollution and tourism demand: A case study of Beijing, China*[J]. *International Journal of Tourism Research*, 21(6) (2019)
  10. Dong, D., Xu, X., Wong, Y.: *Estimating the Impact of Air Pollution on Inbound Tourism in China: An Analysis Based on Regression Discontinuity Design*[J]. *Sustainability*, 11(6): 1-18 (2019)
  11. Tang, J., Yuan, X., Ramos, V., et al.: *Does air pollution decrease inbound tourist arrivals? The case of Beijing*[J]. *Asia Pacific Journal of Tourism Research*, 24(6) (2019)
  12. Ruan, W., Kang, S., Song, H.: *Applying protection motivation theory to understand international tourists' behavioural intentions under the threat of air pollution: A case of Beijing, China*[J]. *Current Issues in Tourism*, 23(16)(2020)
  13. Drakos, K.: *Regional Effects of Terrorism on Tourism in Three Mediterranean Countries*[J]. *Journal of Conflict Resolution*, 47(5): 621-641 (2003)
  14. Saha, S., Yap, G.: *The Moderation Effects of Political Instability and Terrorism on Tourism Development*[J]. *Journal of Travel Research*, 53(4): 509-521 (2014)
  15. Shi, W., Li, K.: *Impact of unexpected events on inbound tourism demand modeling: evidence of Middle East Respiratory Syndrome outbreak in South Korea*[J]. *Asia Pacific Journal of Tourism Research*, 22(3) (2017)
  16. Johan, F., Jaume, R., María, S.: *Fatal Attraction: How Security Threats Hurt Tourism*[J]. *Journal of Travel Research*, 59(2) : 209-219(2020)
  17. Zhang, L., Yang, H., Wang, K., et al.: *Measuring imported case risk of COVID-19 from inbound international flights --- A case study on China*[J]. *Journal of Air Transport Management*, 89 (2020)

18. Sun, Z., He, G., Huang, N, et al.: Impact of the Inflow Population From Outbreak Areas on the COVID-19 Epidemic in Yunnan Province and the Recommended Control Measures: A Preliminary Study[J]. *Frontiers in Public Health* (2020)
19. Seetanah, B., Durbarry, R., Ragodoo, J.: Using the Panel Cointegration Approach to Analyse the Determinants of Tourism Demand in South Africa[J]. *Tourism Economics*, 16(3): 715-729 (2010)
20. Claveria, O., Monte, E., Torra, S.: Common trends in international tourism demand: Are they useful to improve tourism predictions?[J]. *Tourism Management Perspectives*, 16 (2015)
21. Kim, J., Lee, C.: Role of tourism price in attracting international tourists: The case of Japanese inbound tourism from South Korea[J]. *Journal of Destination Marketing & Management*, 6(1): 76-83 (2016)
22. Song, H., Li, G.: Tourism demand modelling and forecasting—A review of recent research[J]. *Tourism Management*, 29(2) (2007)
23. Peng, B., Song, H., Crouch, G.: A meta-analysis of international tourism demand forecasting and implications for practice[J]. *Tourism Management*, 45 (2014)
24. Kim, H., Lee, T.: Brand Equity of a Tourist Destination[J]. *Sustainability*, 10(2) (2018)
25. Chen, H., Weiler, B., Young, M.: Examining service shortfalls : A case study of Chinese group package tours to Australia.[J]. *Journal of Vacation Marketing*, 24(4): 371-386 (2018)
26. Chen, H., Tsai, B., Liou, G., et al.: Efficiency Assessment of Inbound Tourist Service Using Data Envelopment Analysis[J]. *Sustainability*, 10(6) (2016)
27. Shapoval, V., Wang, M., Hara, T., et al.: Data Mining in Tourism Data Analysis: Inbound Visitors to Japan.[J]. *Journal of Travel Research*, 57(3): 310-323 (2018)
28. Musa, G., Doshi, D., Wong, K., et al.: How Satisfied are Inbound Medical Tourists in Malaysia? A Study on Private Hospitals in Kuala Lumpur[J]. *Journal of Travel & Tourism Marketing*, 29(7) (2012)
29. Wang, C., Lu, L., Xia, Q.: Impact of Tourists' Perceived Value on Behavioral Intention for Mega Events: Analysis of Inbound and Domestic Tourists at Shanghai World Expo[J]. *Chinese Geographical Science*, 22(06): 742-754 (2012)
30. Hussain, K., Jing, F., Parveen, K.: How do foreigners perceive? Exploring foreign diners' satisfaction with service quality of Chinese restaurants[J]. *Asia Pacific Journal of Tourism Research*, 23(6) (2018)
31. Abranches, M.: Remitting wealth, reciprocating health? The “travel” of the land from Guinea-Bissau to Portugal[J]. *American Ethnologist*, 41(2) (2014)
32. Chen, Y., Li, X.: Does a happy destination bring you happiness? Evidence from Swiss inbound tourism[J]. *Tourism Management*, 65 (2018)
33. Wong, K., Musa, G.: International Second Home Retirement Motives in Malaysia: Comparing British and Japanese Retirees[J]. *Asia Pacific Journal of Tourism*

Research, 20(9) (2015)

34. Huang, W., William, N., Gregory, R., et al.: Transnational Leisure Experience of Second-Generation Immigrants: The Case of Chinese-Americans[J]. Journal of Leisure Research, 47(1): 6179-6179 (2015)
35. Sektaram, N.: Immigration and international inbound tourism: Empirical evidence from Australia[J]. Tourism Management, 33(6) (2012)
36. Balli, F., Balli, H., Louis, R.: The impacts of immigrants and institutions on bilateral tourism flows[J]. Tourism Management, 52 (2016)

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2. Major Cultivation Project of Central Universities ‘Study on International Tourism Attraction of National Image of Beautiful China’ (C2200640).
3. Double First-class University Project ‘Study on the International Tourism Attraction of the City Image of Guangdong-Hong Kong-Macao Greater Bay Area’ (K5201100).
4. Guangzhou Philosophy and Social Science Project ‘ Study on the Mutual Benefit and Cooperation Mechanism of Cruise Tourism Promoting the Coordinated Development of Tourism in Guangdong-HongKong-Macao Greater Bay Area’ (2018GZYB23).
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