Railways Transport Infrastructures for Supporting Tourism: A Bibliometric Analysis

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Abstract. In this paper, we present a bibliometric analysis of the Railway Transport Infrastructure model for supporting tourism. We identify the its research evolution for past decade, including; source, document type, journal name, publisher name, topic trends, and author collaborations. Bibliometric analysis was used to analyze 48 articles published from 2013 to 2023. Railway Transport Infrastructure for Tourism is the main keyword used in article titles, abstracts, and keywords to get metadata retrieved from the Scopus database. The tools used in this bibliometric analysis are Harzing's Publish or Perish to extract data from the Scopus database and VoS Viewer for data visualization and further used for citation and metric analysis. The results of this study show that most articles related to railway transport infrastructure for tourism are published in scientific journals, compared to others, where they received the highest citations. Based on network visualization, the most dominant term is `tourism development` as the key term related to several other issues of railway transport, tourism, transport infrastructure, and economic growth. Meanwhile, when viewed from the overlay visualization, the dominant keywords are `transportation infrastructure, data panels, social networks, air transportation, high speed rail, and economic growth`. Based on the findings presented in network visualization and overlay visualization, it can be concluded that articles with the topic railway transport infrastructure for tourism have not been widely studied, so they can be used as an interesting keyword for further research.

Keywords: Bibliometric analysis · Tourism · Railways transportation · VoS Viewer · Scopus

1 Introduction

Transportation means moving people and goods from one place to another by land, water, or air. Meanwhile, trains are one of the means of land transportation that moves people in mass. Railway infrastructure as a support for tourism referred to here is the

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use of railway assets to be used partially or fully to support tourism. According to Severino's research, *et al.* [1] on rail transportation routes related to passenger demand. In the study, it tried to develop a multi-stage model of tourist activities to optimize the development of railway companies. The result of the study is the realization of models that can be developed such as the introduction of tourist routes in accordance with infrastructure and consideration of other income from railway tourism businesses. Wu, *et al.* [2] in their study of people traveling by train and the effect of rail transport infrastructure on passenger consumption and long-term economic growth. The study found that investment in railways and railway infrastructure directly boosts long-term economic development but also indirectly increases tourism. While study of Knežević's, *et al.* [3] on transit tourism in Gorski Kotar. In the study presented the development period of transit tourism, namely the development of carriage traffic in Carolina in 1732 and Lujzijana in 1811 then the railway line in Zagreb-Karlovac-Rijeka which became the main transit line in 1875. Furthermore, it is proven that transit tourism on the railway, brings the greatest economic benefits and lifts supporting service facilities at railway stations. Then Kozłowski, *et al.* [4] examined the innovation of railway transportation companies in Poland related to tourism development. Infrastructure, the organization of transport, as well as economic, social, ecological, and political factors, are the basis for the development of tourism. The results revealed that a rather low level of innovation in the development of railway transport companies in Poland. Different from the research of Ronzoni [5] which revealed that the railway line on the Noto-Pachino line in Syracuse Province, Sicily along 27.5 km was abandoned in 1986. Various types of trains that have been known consist of three types as shown in Fig. 1 below:

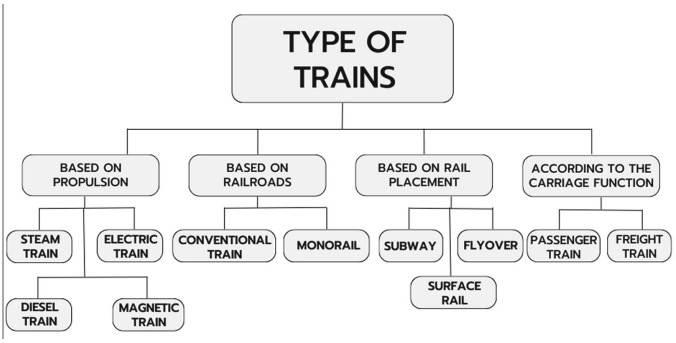

Fig. 1. Type of Trains

In Fig. 1 above, it can be explained that train types are divided into 3 types:

a. By Drive Type consists of steam trains, electric trains, diesel trains, and magnetic power trains
b. Based on the Railway, it consists of conventional rail trains and monorail trains
c. Based on Rail Placement consists of subways, elevated railways, and surface railways

d. By Function The carriages consist of passenger trains and freight trains

Trains are one of the important things in encouraging the growth and development of tourist destinations. This is partly because it is supported by new technological developments in the field of railway transportation which greatly help improve the tourism sector. One of the reasons for this new technological development is the demand for newer, faster, and more efficient modes of travel. According to the study of Masson, *et al.* [6] on high-speed trains that can be a tourist attraction in Perpignan (France) and Barcelona (Spain), revealed that high-speed fire sledding allows for the reduction of transportation costs as well as can be a tool for tourism development by allowing improvement accessibility. While Lee, *et al.* [7] conducted a study on the factors that determine the tourist attraction of trains. The study shows that the provision of heritage train attractions, both onboard and offboard, is an important component and adds to the experience of traveling by train. While the smoothness and comfort of travel by train plays a supporting role in improving the determination of tourist attraction. Pagliara, *et al.* [18] in exploring the interdependence between the rail system of high speed and tourism in Italy. The results showed that the impact of high-speed rail on the number of Italian visitors and the number of nights spent at destinations (tourist) was positive in all cities. While Albalate, *et al.* [9] conducted a study on whether the relationship between tourism and high-speed rail can increase local visitors in Spain. The evolution of tourism at the local level in Spain. The results showed that the effect of the introduction of high-speed rail corridors on the number of visitors and their total and average stay in some medium-sized cities compared to visitors who did not have such infrastructure.

Most tourism studies on railways define trains to facilitate tourism mobility and railway facilities as supporting tourist comfort [10–20]. In this case, the railway as transportation acts as a link between, on the one hand as a tourist destination center and on the other hand as a tourist generating center [21–25]. Research by Becker, *et al.* [10] on rapid rail transit and tourism development in the United States. The research highlights the planned development of a rapid transit rail system connecting the continental US and discusses the exploration of the impact of the system on tourism development. Similarly, the study of Su, *et al.* [11] evaluated the impact of increased accessibility on travelers' travel decisions, as well as experiences in Tibet. The study also discussed the importance of trains for tourists' choice of destinations in Tibet as well as their overall travel experience. Another study from Sun, *et al.* [12] examines the effect of highspeed rail on individual travel patterns of tourists in Taiwan. The study revealed that highspeed rail has a weak influence on travel distance and length of stay per trip, and a reduction of about 10% in transport carbon emissions through intermodal substitution. Peira, *et al.* [13] in their study on tourism and tourism, revealed the dynamics of railway heritage recovery, the dynamics of train tourism and the relationship between sustainability and railway tourism. The result of the study is to highlight that the process of railway tourism always comes from railway heritage restoration projects, and to perhaps maintain its authenticity. In the study, it was also found that many tourists are interested in train tourist destinations because they want to feel memorable experiences related to nostalgia.

The works mentioned above focus on trains as a means of tourism mobility in many aspects and places, unfortunately, there has not been much discussion about trains in terms of infrastructure as supporting tourism in bibliometric analysis. The novelty of

this work is that, unlike the above work, we explored the VoS viewer as a tool for our analysis. For this, this paper presents a bibliometric analysis of railway infrastructure as a supporter of tourism. In summary, this work made the following contributions:

a. We present a bibliometric analysis of railway infrastructure in support of tourism
b. We explain the comparison of matrices of publications
c. We present the documents types of publications
d. We describe the sources types of publications
e. We present the top 10 cited articles
f. We present 5 publishers which publish articles related to railway infrastructure in supporting tourism
g. We present 5 journals related to railway infrastructure in supporting tourism
h. We present keywords that represent each cluster
i. We present the countries of research location and research domain

The remainder of the paper is organized as follows. In Sect. 2, we describe our proposed research method. Section 3 presents our obtained results and following by complete discussion. Finally, we conclude our work and highlight future work in Sect. 4.

2 Proposed Method

In this paper, we adopt bibliometrics analysis method which are widely used in previous works [26–41]. Our method consisting of six stages as depicted in Fig. 2 below.

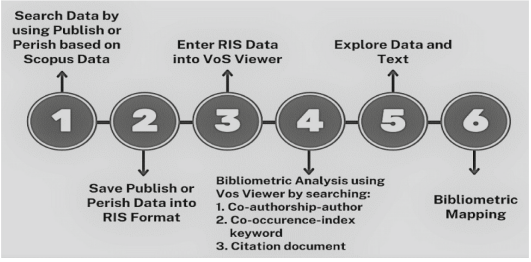

Fig. 2. Flow Chart of the proposed method

3 Results and Discussion

This section describes the results obtained from this work, which includes publications and citations, visualizations, authors and networks, research locations, and research domains.

3.1 Publications and Citations

To determine the comparison of the citation matrix with data taken through Scopus, we create a table in which contains the number of articles, the number of citations, the number of citations per year, the number of authors per year, the H index, the G index, the normal hI, and the annual hI at the beginning of the search and improvement of results. The comparison data matrix in the search for starting results and searching for results after improvement can be seen in Table 1 below:

Table 1. Comparison Matrix

Data	Initial Search Results	Search Results Repair
Database	Scopus	Scopus
Year publishing	2013–2023	2013–2023
Year citation	10	10
Number of Articles	48	33
Number citation	359	220
Number Citation per Year	35.90	22.00
Number Authors per Year	2.75	2.91
H index	9	8
G index	18	14
hI Normal	5	4
hI Annual	0.50	0.40

From Table 1 above, it was found that within a period of 10 years i.e., from 2013–2023 there were 48 articles with 359 citations and an average number of authors per year of 2 people. Next, the search is corrected or the results are re-selected by observing one by one articles related to the topic. Articles obtained after improvement and selection obtained as many as 33 articles with a total of 220 citations or an average of 22.00 per year and an average of 2 authors per year. The index for measuring the productivity or impact of work that has been published by scientists or academics (Hirsch's h-Index) is 8. Furthermore, based on the distribution of citations received by publications or research articles (Egghe's g-Index) obtained as many as 14. To find out the year of publication can be seen in Table 2 below which provides a more detailed explanation of Table 1.

From Table 2 above, in 2021 there were the most publications, namely 8 total publications, and in 2020 and 20the 22 most publications were 7 total publications. While the number of most cited articles is in years 2021 and the number of articles least cited is in years 2013, 2015, 2016, and 2023. While the 2014 article did not get any citations. For the total number of citations, the highest were in 2021 and the fewest in 2013, 2015, 2016, and 2023. Furthermore, to find out the description of the publication and citation bar chart can be seen in the chart presented in Fig. 3 below.

Table 2. The Statistics Descriptive of Publication

Year	TP	% (N = 33)	NCP	TC	C/P	C/CP
2013	1	0.03	1	3	3,00	3,00
2014	0	0.00	0	0	0.00	0.00
2015	1	0.03	1	6	6,00	6.00
2016	1	0.03	1	66	66.00	66.00
2017	3	0.09	3	35	11.67	11.67
2018	2	0.06	0	0	0.00	0.00
2019	2	0.06	1	7	3.50	7.00
2020	7	0.21	7	41	5.86	5.86
2021	8	0.24	6	34	4.25	5.67
2022	7	0.21	5	28	4.00	5.60
2023	1	0.03	0	0	0.00	0.00
	33	100%				

Note: TP = total number of publications; NCP = number cited publications; TC = total quotes; C/P = average citations per publication; C/CP = average citation per cited publication

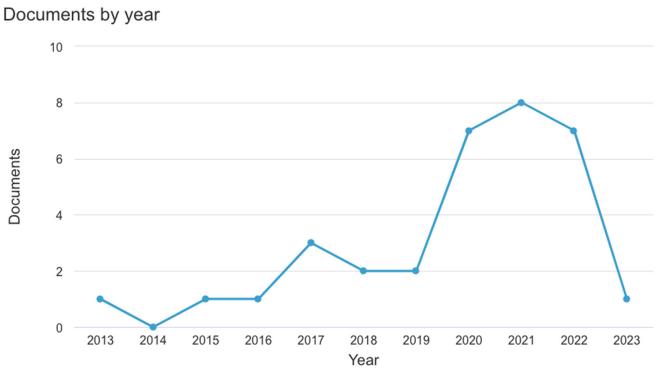

Fig. 3. Publication and Citations Form 2013–2023

It can be seen from Fig. 3 above that the publication and citation bar chart for the 10-year period from 2013–2023 experienced a fluctuating graph. The number of documents annually changes up and down. In 2021 the publication and citation bar increased to reach the top position with the same number of documents, namely on chart number 8. Meanwhile, in 2013, 2015, 2016, and 2023 the publication and citation bars decreased the number of documents in chart 1. In 2018 and 2019 the publication and citation bars are in the same position and center, which is number 2. To see an overview of the document based on its subject field, you can see more clearly in Fig. 4 below.

It can be explained from Fig. 4 above that the subject of Social Science is the subject that plays the most role in writing articles using the keyword Railway Transport Infrastructure for Tourism with a percentage of 35.5%. Next, in second place followed

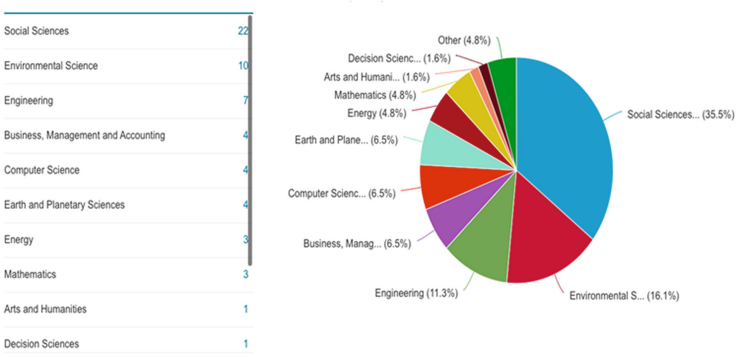

Fig. 4. Documents by Subject Area Form 2013–2023

by Environment subjects with a percentage of 16%. Then in third position is the subject of Engineering with a percentage of 1 1.3%. While the lowest ranks are Arts and Humanities and Decision Sciences with a percentage of 1. 6%. Furthermore, to find out the type of document can be seen from the presentation of the citation matrix of scientific publications related to railway transport infrastructure for tourism in 2013–2023 in Table 3 below.

Table 3. Type Document

Type	Number	Percentage
Article	23	0.70
Conference Paper	7	0.21
Book Chapter	2	0.06
Conference Review	1	0.03
	33	100%

From Table 3 above, From Table 3 above, the types of documents we present are original documents derived from Articles, Conference Papers, Book Chapters and Conference Reviews. We summarize in the description of Table 3 above, the article holds dominance in showing its role with 23 contributions with a percentage of 7 0%, followed by Conference Paper with a total of 7 with a percentage of 21%. Book Chapter occupies the third position with a total of 2 and a percentage of 06%, and in the last position is occupied by Conference Review with a total of 1 and a percentage of 0.3%. Meanwhile, we present in Table 4 below all documents classified into 5 types of publication sources in the form of Journals, Books, Conference Proceedings, and Series.

From Table 4 above, it can be observed that the Journal is the document that has the largest contribution with a total of 23 or equivalent to 70%, followed by Conference Proceedings with a total of 5 or equivalent to 15%, followed by the Book Series with a total of 4 or equivalent to 12%, and the last is Book as much as 1 or equivalent to 0.3%.

Table 4. Type Source

Type	Number	Percentage
Journal	23	0.70
Conference Proceeding	5	0.15
Book Series	4	0.12
Book	1	0.03
	33	100%

In presenting this data, we also present a ranking of journals with the names that most often arise from the selection results of the 33 articles mentioned above. To know more details about article citations included in the top 20 list, see table 5 below.

Table 5. Top 20 Cited Articles of Railway Transport Infrastructure for Tourism

Citation	Author	Title	Year	Journal Name	Publisher
66	J.L. Campa, M.E. López-Lambas, B. Guirao	High speed rail effects on tourism: Spanish empirical evidence derived from China's modelling experience	2016	Journal of Transport Geography	Elsevier
32	W. Tang, T. Zhou, J. Sun, Y. Li, W. Li	Accelerated urban expansion in Lhasa City and the implications for sustainable development in a Plateau City	2017	Sustainability (Switzerland)	MDPI
14	A. Severino, L. Martseniuk, S. Curto, L. Neduzha	Routes planning models for railway transport systems in relation to passengers' demand	2021	Sustainability (Switzerland)	MDPI

(*continued*)

Table 5. (*continued*)

Citation	Author	Title	Year	Journal Name	Publisher
13	X. Li, Z. Wu, X. Zhao	Economic effect and its disparity of highspeed rail in China: A study of mechanism based on synthesis control method	2020	Transport Policy	Elsevier
13	J. Zhang, Y. Zhang	Tourism, transport infrastructure and income inequality: A panel data analysis of China	2022	Current Issues in Tourism	Routledge
9	S. Chen, J. Xi, M. Liu, T. Li	Analysis of Complex Transportation Network and Its Tourism Utilization Potential: A Case Study of Guizhou Expressways	2020	Complexity	Hindawi
8	F. Tian, Y. Yang, L. Jiang	Spatial spillover of transport improvement on tourism growth	2022	Tourism Economics	SAGE
8	C. Wu, N. Zhang, L. Xu	Travelers on the railway: An economic growth model of the effects of railway transportation infrastructure on consumption and sustainable economic growth	2021	Sustainability (Switzerland)	MDPI

(*continued*)

Table 5. (*continued*)

Citation	Author	Title	Year	Journal Name	Publisher
7	D.N. Nguyen, M. Esteban, M. Onuki	Resiliency in tourism transportation: Case studies of Japanese railway companies preparing for the 2020 Tokyo Olympics	2019	International Journal of Disaster Risk Reduction	Elsevier
6	M.K. Anser, M.A. Khan, A.A. Nassani, S.E. Askar, M.M.Q. Abro, K. Zaman, A. Kabbani	The mediating role of ICTs in the relationship between international tourism and environmental degradation: fit as a fiddle	2021	Environmental Science and Pollution Research	Springer
6	P. Coppola, A. Carbone, C. Aveta, P. Stangherlin	Assessing transport policies for tourist mobility based on accessibility indicators	2020	European Transport Research Review	Springer
6	T. Perzyński, A. Lewiński, Z. Łukasik	Safety analysis of accidents call system especially related to in-land water transport based on new telematic solutions	2015	Communications in Computer and Information Science	Springer
5	O.Z. Ouariti, E.M. Jebrane	The impact of transport infrastructure on tourism destination attractiveness: A case study of Marrakesh City, Morocco	2020	African Journal of Hospitality, Tourism and Leisure	Africa Journals

(*continued*)

Table 5. (*continued*)

Citation	Author	Title	Year	Journal Name	Publisher
4	O. Pshinko, T. Charkina, L. Martseniuk, O. Orlovska	Hubs as a Key Tool for Improving the Quality of The Service and Development of Multimodal Passenger Traffic	2022	Transport Problems	Silesian University of Technology
4	J. Procházka, Š. Hošková-Mayerová, D. Procházková	The risks connected with accidents on highways and railways	2020	Quality and Quantity	Springer
3	R. Knežević, R. Grbac Žiković	Changes in the economic importance of transit tourism in Gorski Kotar	2013	Hrvatski Geografski Glasnik	Croatian Geographical Society
3	D. Michniak, M. Więckowski	Changes of transport in cross-border tourist regions in the polish– slovak borderland: An (un)sustainable development?	2021	Transport and Sustainability	Emerald
2	M. Pasetto, G. Giacomello, E. Pasquini, A. Baliello	Feasibility and preliminary design of a new railway line in the dolomites area of veneto region	2017	Transport Infrastructure and Systems - Proceedings of the AIIT International Congress on Transport Infrastructure and Systems, TIS 2017	CRC Press

(*continued*)

Table 5. (*continued*)

Citation	Author	Title	Year	Journal Name	Publisher
2	Z. Liu, F. Wang, P. Xue, F. Xue	Using multi-layer nested network to optimise spatial structure of tourism development between urban and rural areas based on population mobility	2022	Indoor and Built Environment	SAGE
2	Kozłowski, M., Pawełczyk, M., Piotrowska-Piątek, A	Innovativeness of railway transport in the context of the development of tourism in Poland	2020	Quality and Quantitiy	Springer

From Table 5 above, the article written by Campa, *et al*. who studied on the effects of high-speed rail on tourism in Spain derived from the experience of Chinese modeling, published MDPI in 20 16 years has attracted the highest attention of other authors with a total number of citations of 66. Furthermore, an article written by Tang, *et al*. with a study of accelerated urban expansion in Lhasa City and its implications for sustainable development in Highland Cities, was published by MDPI in 2017 with a total number of citations of 32, then an article written by Severino, *et al*. with their studies on route planning for rail transport systems related to passenger demand published by MDPI in 2021 with a number of citations of 14; and followed by articles written by Li, *et al*. who studied on economic effects and disparities about high-speed railways in China was published by Elsevier Ltd in 20 20 years with a total number of quotations of 13. Then to see the results of publishers who are included in the list of the top five that publish articles related to railway transport infrastructure for tourism, can be seen in the presentation Table 6 below.

Table 6. Top Five Publishers on The Related Field

No	Publisher	Number of Articles	Percentage
1	Springer	7	0.37
2	Elsevier	4	0.21
3	CRC Press/Balkema	3	0.16
4	MDPI	3	0.16
5	Routledge	2	0.11
		19	100%

Based on Table 6, the top 5 publishers contributed the most, with a total of 19 articles published. Then we find 7 articles or 37% published by Springer taking the top spot, followed by publisher Elsevier with 4 articles, or 21%. This was followed by publisher CRC Press/Balkema with 3 articles or 1.6%. Fourth position by MDPI publisher with 3 articles, or 1.6%. Then the fifth position 2 articles or 1.1% published by Routledge publishers. Then, to find out the results of the top five journals related to Railway Transport Infrastructure for Tourism can be seen in Table 7 below.

Table 7. Top Five Journals Ranking within Railway Transport Infrastructure for Tourism

No	Journal Name	Number of Articles	Percentage
1	Sustainability (Switzerland)	3	0.38
2	Quality and Quantity	2	0.25
3	Transportation Research Procedia	1	0.13
4	Transport Policy	1	0.13
5	Transport and Sustainability	1	0.13
		8	100%

Based on Table 7 above, it can be presented that the names of the most influential journals in the writing of this journal and found the top 5 with a total accumulation of 8 articles. Sustainability (Switzerland) is the journal that most actively publishes journals related to railways, especially the theme of railway transport infrastructure with 8 articles or equivalent to 3.8%. Then, the journal Quality and Quantity with 2 articles, or 2.5%, followed by Transportation Research Procedia, Transport Policy, and Transport and Sustainability with 1 article or 13% each.

3.2 Visualization Topics Use VoS Viewer

Figure 5 below this show visualization of topic areas using network visualization from VoS Viewer.

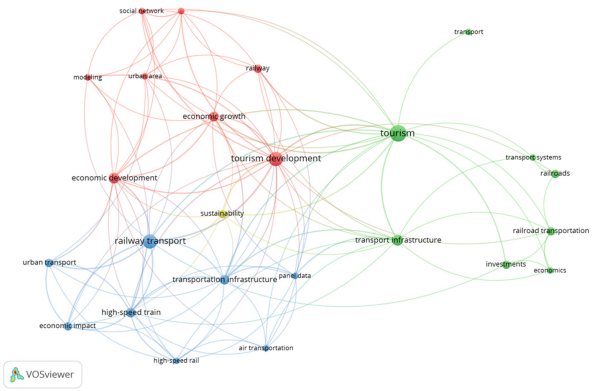

Fig. 5. Visualization Topic Area using Network Visualization

From Fig. 5 above, this study examines the titles and abstracts of documents collected based on the number of occurrences using Vos Viewer. This analysis uses the binary number method in entering data in Vos Viewer. The results of network visualization show that a tourism development is the main term that is the search result related to several other issues, namely railway transport, tourism, transport infrastructure, and economic growth. To see which keywords each cluster represents, we present the results in detail in Table 8 below.

Table 8. Item Number in Clusters

Cluster	Color	Number of Items
1	Red	8
2	Green	8
3	Blue	8
4	Yellow	1

From Table 8 above, it can be said the size at the point indicates the magnitude of occurrence of the item or term, while the line shows the strength of the relationship between items. The color in the visualization shows a cluster of items, where there are 4 clusters of 25 items. Items with cluster 1 have connecting lines and red dots. Cluster 1 has 8 items, cluster 2 is green with a total of 8 items, then cluster 3 is represented in blue with a total of 8 items, then the fourth position is occupied by cluster 4 with a total of 1 item. Furthermore, Fig. 9 below presents a visualization of the topic area based on

the overlay visualization. Figure 6 as follow describes the visualization topic area using overlay visualization from VoS Viewer.

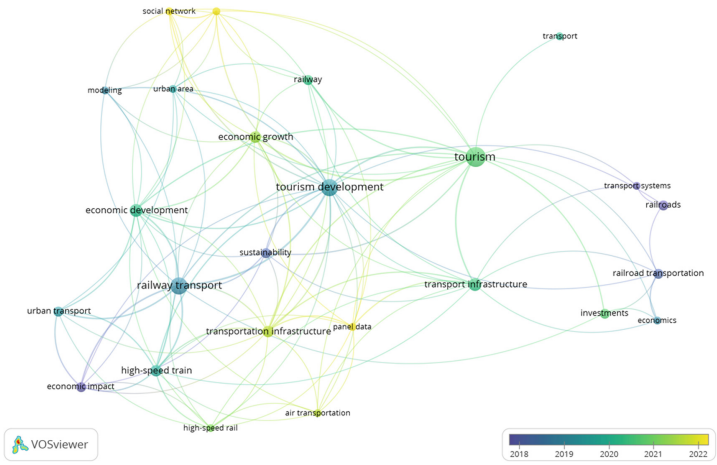

Fig. 6. Visualization Topic Area using Overlay Visualization

From Fig. 6 above, the topic of Railway Transport shows an upward trend. This overlay visualization shows the keyword update with the study year as the research base year, so it can also be seen that the keywords Transportation Infrastructure, Data Panel, Social Network, Air Transportation, High Speed Rail, and Economic Growth are the themes for the current study year. Figure 7 as follow describes the visualization topic area using density visualization from VoS Viewer.

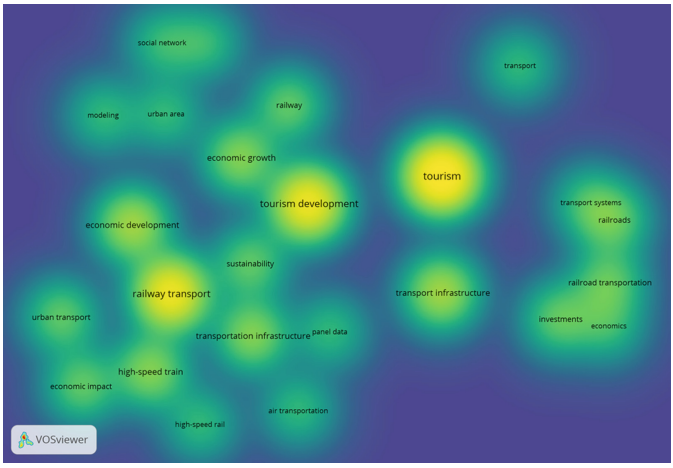

Fig. 7. Visualization Topic Area using Density Visualization

From Fig. 7 above, the brighter color, the more articles published research. Hence, it can be concluded that topics/keywords regarding Transportation Infrastructure, High Speed Train, Sustainability, Air Transport, and High-Speed Rail are keywords with the latest articles/journals to be researched.

3.3 Author's Relationship

Figure 8 below depicts overlay visualization of the author and co-author using VoS Viewer.

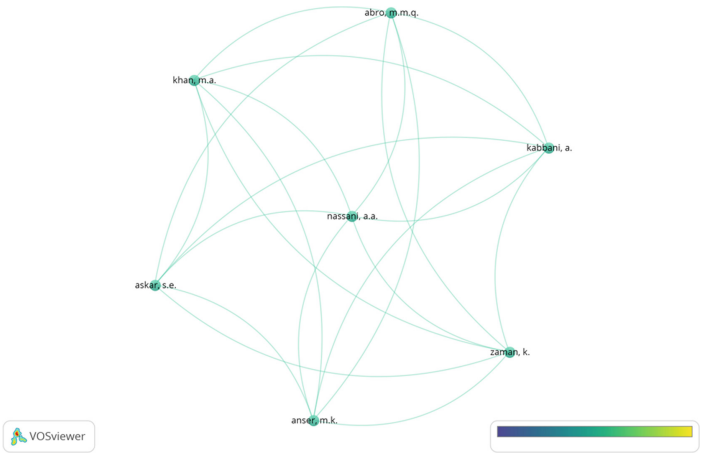

Fig. 8. Visualization of authors and co-authors

From Fig. 8 above, there is a network visualization map relationship from one author to another so that Nassani is the author who collaborated with many co-authors. Research with keywords used and authors with the most recent publication year who write about topics or keywords related to railway transport infrastructure for tourism.

3.4 Research Locations and Research Domains

Figure 9 below depicts the author's country of origin.

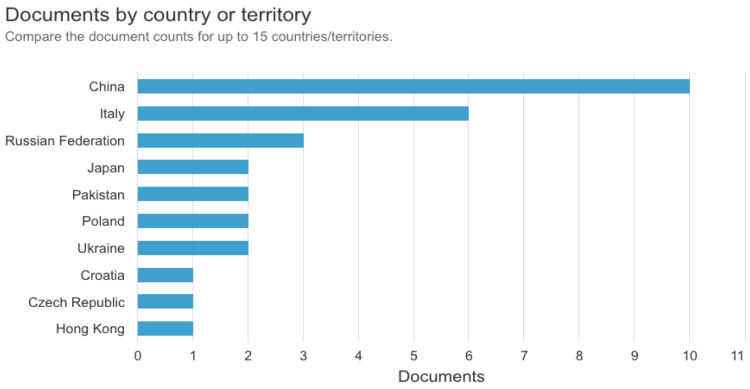

Fig. 9. Country of Origin

Figure 10 below depicts the map of author's country of origin.

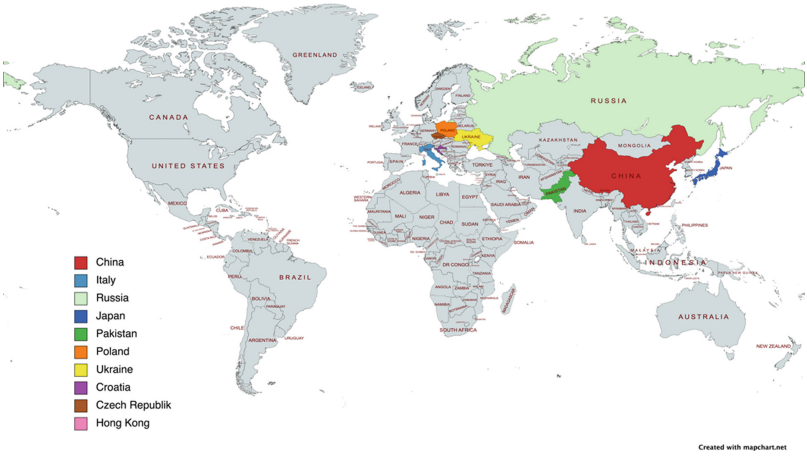

Fig. 10. Map of country of origin

From Figs. 10 above, it shows that distribution and distribution by country is related to the writing and publishing of journals related to Railway Transport Infrastructure for Tourism. It is shown that China is the country of origin with the highest number of authors. Then the second author was Italy, and followed by the Russian Federation in third position. Japan, Pakistan, Poland, and Ukraine are the author's home countries in fourth place. All writers from Croatia, Czech Republic, and Hong Kong came in fifth. Table 9 below presents the country of research location and their respective research domain.

Table 9. Country of Location Research and Research Domain

No	Country	Number of Articles	Research Domain
1	China	10	Tourism Development, Tourism, Economic Development, Transportation Infrastructure, Railway Transport, Urban Transport, High-Speed Train, Economic Growth
2	Italy	6	Tourism, Railroads Transportation, Railroads, Investments, Economics, Transportation Planning, Transport Solution, Transport Policy
3	Russia	3	Water Treatment, Transport Systems, Transport Infrastructure, Tourism, Social Impact, Recreational Activities, Railway Tourism
4	Japan	2	Tourism, Tourism Development, Investments, International Tourism, Urban Transport, Railway Tourism, Transport Safety
5	Pakistan	2	Tourism, Sustainable Development Goal, Resource Depletion, Natural Resources, Logistics, International Tourism
6	Poland	2	Wireless Telecommunication Systems, Transportation, Transport Systems, Transport Safety, Tourism Development, Telematic Transport Systems
7	Ukraine	2	Railway Transport, Transportation Planning, Tourist Transportations, Tourism, Profitability, Policy Implementation
8	Croatia	1	Transportation System, Transit Tourism, Tourism Development, The Economic Sustainability, Sustainability
9	Czech Republic	1	Transport, Safety, Risk of Accidents, Investments, Competition
10	Hong Kong	1	Belt And Road Initiative, Community Perceptions, Sustainable Tourism Development

Based on Table 9 above, China is the country with the highest article publication rate with 10 articles, followed by Italy with 6 articles. Then in the next position is the Russian Federation with 3 articles. Next is Japan, Pakistan, Poland, and Ukraine which have the same number of articles, namely 2 articles. Then, was followed by Croatia, Czech Republic, and Hong Kong with 1 article.

4 Conclusion and Suggestion

Studies and research on Railway Transport Infrastructure for Tourism have been studied before, although not widely studied. This paper has successfully presented a bibliometric analysis related to Railway Transport Infrastructure for Tourism. We found that most articles related to the topic were published in scientific journals, compared to other publications. Related articles Railway Transport Infrastructure for Tourism published in scientific journals have received the highest citations compared to others. Based on network visualization, the most dominant term is tourism development as the main or key term that becomes the center of search results related to several other issues of railway transport, tourism, transport infrastructure, and economic growth. Meanwhile, when viewed from the Overlay Visualization, more shows that Transportation Infrastructure, Data Panels, Social Networks, Air Transportation, High Speed Rail, and Economic Growth are themes for the current study year. Based on the findings presented in Network Visualization and Overlay Visualization, it can be concluded that articles with the topic Railway Transport Infrastructure for Tourism have not been widely studied, so they can be used as a gap for further research.

This study has found out the topic of Railway Transport Infrastructure for Tourism, by limiting the year of publication and the relevance of the title to the theme of the journal as well as to find out the latest data on Railway Transport Infrastructure. Based on several previous studies related to journals in the Scopus database, it shows fluctuating movement patterns in the period 2013–2023. This pattern is evidenced by an increase in 2020 years and reaching the highest peak in 2021. However, after that, the trend experienced an initial decline starting in 2022 and 2023 (as of this writing). The data in the articles comes from journals with a total accumulation of 23 articles from a total of 33 articles as references.

This research is focused on publications using the keyword Railway Transport Infrastructure for Tourism, then by using the Scopus database which is one of the largest databases for publishing articles with high quality and is one of the most trusted and quality databases in finding references related to the desired topic. This research will have an impact on further research on Railway Transport Infrastructure for Tourism which will be discussed in future studies. Bibliometric analysis has its own identity and characteristics, which is to use articles that have been discussed to find gaps or find out the research that has been discussed previously to find out the limitations or gaps that you want to find solutions to with this.

This paper still has shortcomings that are expected to be improved in the future so that more accurate data appears and can be used as a measurement for future journals. These shortcomings including Scopus sometimes providing keyword suggestions that do not match the keywords intended. The suggestion given for future research is the need to study Railway Transport Infrastructure more broadly and in depth in the field of tourism, including bibliometric analysis. Since there has not been much researches on Railway Transport Infrastructure for Tourism, this can be used as a gap to propose new research on Railway Transport Infrastructure for Tourism.

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