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A network analysis of the academic publications on tourism

Un análisis de las publicaciones académicas sobre turismo

Sam F. Ward[1], Antonio Pelaez-Verdet[1]

[1] Universidad de Málaga, España

sam.periana@gmail.com , apv@uma.es

ABSTRACT. The following paper contains a detailed network analysis of the top academic publications found about tourism (according to their impact factor) of the Journal Citation Report, under the category of Hospitality, Leisure, Sport & Tourism. After collecting all the published papers from 2016 we study the relations between authors and the keywords highlighted in their papers, using methods that were mainly used to analyse social media so far. The goal was to diagnose the academic debate and its main indicators. Turned out that the field is still dominated by collaborative writing and that collaboration can mainly be strategic. The keywords outlined a number of relevant scientific debates which were also described.

RESUMEN. En este trabajo se desarrolla un análisis de redes muy detallada de las publicaciones académicas correspondientes a las revistas líder sobre turismo indexadas en el Journal Citation Report, en el área de turismo, ocio y recreación, acorde a su factor de impacto. Tras recopilar todas las revistas publicadas a lo largo de 2016 estudiamos la relación entre los autores y las palabras claves, utilizando métodos que hasta ahora solo se habían utilizado para analizar redes sociales, con el objetivo de diagnosticar el debate académico y sus principales indicadores. El análisis confirma que el campo del turismo sigue dominado por las coautorías y que estas coautorías son principalmente estratégicas. Las palabras claves describen una serie de debates científicos relevantes que son descritos.

KEYWORDS: Network analysis, Academic publications, Journals, Tourism, Journal Citation Report, Gephi, Atlas.TI.

PALABRAS CLAVE: Análisis de redes, Publicaciones académicas, Turismo, Journal Citation Report, Gephi, Atlas.TI.

1. Introduction

This paper expresses just how important the literary analysis is, when investigating about a certain field. This analysis allows us to determine the route that the different academic publications on tourism, published in 2016, under the category of "Hospitality, Leisure, Sport & Tourism", have taken.

The advance of any scientific discipline isn't an organised or planned task, except its one that takes place thanks to many spontaneous contributions from members of the community. Every investigation team approaches different themes and rejects or accepts various hypothesises depending on their capabilities, funding, habits…etc. It seems that every team has their own code of conduct and culture when it comes to their publications. The same about the themes they agree to write about. The result of these processes produces articles that are published in academic journals, which are in turn ruled by a statistical analysis that reflects the quality of these journals' bibliometrics. The main objective of the investigators is to maximise the number of publications, meanwhile the publisher tries to maintain its viability and it prestigious position in the rankings.

It's no surprise then, that this well-known phenomenon known as scientific investigation is a highly competitive business, in any field. But all this competition causes various authors to question whether there is too much emphasis but on instruments such as the impact factor, the number of publications or the number of citations. Many believe there should be a more holistic perspective toward the publications, meaning everything is viewed as a whole, and not just a combination of different parts.

According to Eugene Garfield, the founder of the Institute for Scientific Information and creator of the impact factor: "impact simply reflects the ability of the journals and editors to attract the best paper available" (Garfield, 1996). He also goes on pointing out that the impact factor (IF) can be "misused in evaluating individuals", because there is "a wide variation from article to article within a single journal". In addition, we also read "in an ideal world, evaluators would read each article and make personal judgments" (Garfield, 1996). All this highlights the fact that elements like the IF are simple objectives considered by the different publishers, and if a real judgment of a paper its to be made, it should be made by a person who has turned the page themselves (Sharma et al., 2014).

If we focus on the field of touristic investigation, we see that the misuse of the IF is even higher mainly because of the lack of resources that the field has at its disposal to orient its investigation. Tourism field lacks a discipline that allows us to create a national project that could be used as a guideline for our investigations. It also doesn't possess a large catalogue of high priority themes to investigate about.

To give a global vision of the themes investigated on in the touristic journals, the relation and connections between authors and keywords will be analysed. Focusing on the assumption that their authors have selected these keywords meticulously, as they are designed to represent the main idea of the article.

The system used in this analysis is still quite a novelty, as it has hardly been used by other authors. Social media models are used, instead of the classic bibliometric tools, to create extensive network maps which allows us to see with more detail relations between the authors and keywords.

Once obtained, the results will be useful for the researchers in the field, as it will allow them to discover which the less investigated themes are, arising new perspectives to reposition or reinforce their research, if they are considering doing so.

2. Objectives

The objective of this paper is to develop a literary revision and propose a method that allowed us to obtain an extensive vision of the different topics investigated on during the period of 2016, in relation to the articles published in top tourism journals. To achieve these objectives we set up the following research questions:

1.- Which are the main themes of the articles published in 2016?
2.- Who are the most fruitful authors of these articles?
3.- Are the most fruitful author also those who lead the debate?
4.- Has there been any changes in relation to 2015?

This analysis may help novice investigators in the field of tourism, or incentive promising ideas. Starting a career in any field can be a difficult task, yet alone one as an investigator with no clear idea on what themes to investigate about. Most frequently, neophyte investigators decide to investigate a broad selection of themes while the more experienced senior investigators like to focus on a specific debate. A clear overview towards different themes could be a very important support to a novice investigator taking his/her first steps in the academic debate. It would allow them to focus their efforts on questions of growing interest, avoiding topics that are no longer a challenge. This tool could not just be beneficial to investigators in the first steps of their careers, but also to the senior investigators, as it would help them also finding new niche themes and make decisions in relation to what themes need to be investigated even more, or using a different approach.

Another important factor for the development in this paper is the lack of investigation plans focused on the field of tourism. One of the biggest differences between investigation in tourism and other disciplines is that while many others are guided by financial strength and relevant investigation plans, tourism unfortunately isn't a field that has a set of guidelines outlined for the investigation under a specific academic criteria or professional interest. Consequently, researchers in tourism find it very difficult to obtain funding for ambitious projects compared to other fields. All this highlight the need for a specific tool that allows investigator to observe visually the main debates in question and the actors taking part. Not only does all this help the investigators better put together their projects, hypothesis and validation tools. It also help avoiding unnecessary themes, identifying topics already researched and closed debates within the field.

These academic publications are becoming ever more a very important resource for the academic community as it helps professionals to create a very real situation of the tourism industry, how its growing, what new technologies and techniques its using, and what innovations are taking place. However, there is a belief that these papers are only written for academic purposes and serve no purpose for touristic firms or destination management organizations (DMO's). It's well known that firm directors and managers of hotels, museums and other touristic firms do not read any academic journals, mainly because the language they use and the format they are in make them very unattractive for them. Therefore, another objective of this paper is to diagnose the applicability of the materials that are currently being investigated on. It could utterly help for dividing them into primary investigation in the field of tourism and scientific knowledge, which is applicable and transferable to touristic firms, destinations or educational institutions.

Apart from the primary objects already commented on, this analysis also has a series of secondary objectives. A very important one to propose improvements in the analysis of large quantities of data, by using tools from social media models, that enhance the bibliometric tools' performance which have been used up so far. There exists a number of studies that reveal that even though institutions use these tools to evaluate the researchers' performance, also assign funds projects and to promote their personnel according to them. Instruments like the H index (an author-level metric that attempts to measure both the productivity and citation impact of the publications of a scientist or scholar) and the impact factor (IF) become a goal by themselves, simplifying a more complex debate that has yet to come.

These social media models will give us a clearer vision when it comes to visualizing graphically the researching debate of 2016. This then becomes another of our secondary objectives as it allows us to analysis many aspects all in one go.

We considered thus a good idea to apply the methods widely used in social media analysis, because they are also very effective when it comes to analysing the connections between authors, keywords and themselves. The large catalogue of indicators used in the social media analysis can be exported, with very little change, to

the analysis of academic networks. Eventually both (social media and academic publications) represent a group of related elements, which present connections that represent a common debate.

Elements like the different indicators of centrality, such as betweenness, closeness and harmonic or other parameters that read close relations are useful to analyse and describe a debate when the number of conversations or participates is substantial. This is where we believed that the traditional bibliometric methods found their limits. If there is a large quantity of elements in a network, it could be difficult to find traditional tools to describe properly the processes within it. Therefore, we considered that time has come to explore new techniques of large data analysis; just like the social media model we will develop throughout the paper.

3. Literature Review

To understand better the process of investigating social structures, known as Social Network Analysis (SNA), we have first to analyse its roots, development and, more important, its use in the field of tourism, referring to a series of articles published throughout the years.

According to Evelien Otte and Ronald Rousseau (Otte & Rousseau, 2002), SNA is not a formal theory in sociology but rather a strategy for investigating social structures through the use of network and graph theories. They go on to specify that it is an idea that can be applied in many fields

SNA has its theoretical roots in the early 20th century, in the work of early sociologists such as Georg Simmel and Émile Durkheim, who wrote about the importance of studying patterns of relationships that connect social actors (Erikson, 2013). In the 1930s Jacob Moreno and Helen Jennings introduced basic analytical methods (Freeman, 2011).

A few decades later, in 1954, John Arundel Barnes started using the term systematically to create patterns of ties, using concepts traditionally used by the public and those used by social scientists, such as bounded groups, like tribes, and social categories, like gender (Barnes, 1969).

If we fast-forward to articles published in the 21st century, we see works like "The Analysis of Social Network" by Ronald Breiger, in which he describes different ways to analyse social networks (Breiger, 2004). In this moment of time, technological advances already anticipated the birth of ways to understand the analysis of social networks, which would positively complement the social sciences.

In 2007 this type of analysis started to be used to analyse the relations on online social networks (Mislove et al., 2007). In the years to come it would become a standard way to analyse, in certain fields of sociology and economics. Right afterwards, as the type of analysis became more popular the need to improve the centrality indices arose, which occurred in 2010 (Opsahl, Agneessens & Skvoretz, 2010).

With regard on the field of tourism, social network models have been used recently to analyze user behavior when it comes to searching for information about their holidays (Li, Yang, & Pan, 2015; Luz et al., 2013). Other recent uses have been in the field of the relation between firms and a more leadership role for innovation in their networks (Aarstad, Ness, & Haugland, 2015) The analysis in the field of tourism's own research has not been an issue specially addressed in the scientific literature, since it has been very clear from the outset that the scientific journals were clearly classified by their users, based on the criteria of knowledge and perceived quality (McKercher, Law & Lam, 2006).

The truth is that this type of investigations in tourism still hasn't found its feet and only a few authors have plucked up the courage to meta-analyze the scientific investigation, combining the results of multiple scientific studies. Recent evidence has shown that the investigation in the field of tourism is dominated by co-writers, that, in general, come from different backgrounds (McKercher et al., 2006).

One of the scarce uses of a social media network in tourism shows that linguistic similarities and close localization improves the chances of co-writing, and that women represent the majority of the scientific production in tourism (Santos & Santos, 2016), continued by (Peláez-Verdet & Ferrera-Blasco, 2017).

In a time dominated by Information and Communications Technologies (ICT) it's no surprise that this slowly growing phenomenon of social network analysis would take the form of a computer software. Network analysis software generally consists of either packages based on graphical user interfaces (GUIs), or packages built for scripting/programming languages. In the first few years of the 21st century the first SNA software was released, such as NetMiner, Cytoscape and Gephi (the software we will use in this analysis to graphicly represent our network) all widely used and well-documented GUI packages. Other SNA platforms, such as Idiro SNA Plus, have been specifically developed for industries such as telecoms and online gaming, where massive data sets need to be analysed (Huisman, 2003).

4. Methodology

To reach the objectives of this analysis the first step was to round up all the investigation articles published in the top twenty-one journals in the Journal Citation Reports (2014, Social Sciences Edition), under the category of "Hospitality, Leisure, Sport & Tourism". We selected these journals because of their clear focus onto tourism field, quite different from sport.

Even though the focus of this analysis was on the articles published throughout 2016 we had to use the Journal Citation Report of 2014, as we started investigating many months before the 2015 report would be published. Hereafter we will see a side by side comparison of both reports to highlight their differences (ones that do not have a negative effect on our investigation). Table 1.

Journals	Total Cites 2014	Impact Factor	Total Cites 2015	Impact Factor
Annals of Tourism Research	5074	2.685	6.308	2.275
Tourism Management	6944	2.554	8.910	3.140
Journal of Travel Research	3103	2.442	4.117	2.905
Journal of Sustainable Tourism	1808	1.959	2.158	2.480
International Journal of Hospitality Management	2368	1.939	3.199	2.061
Cornell Hospitality Quarterly	500	1.746	648	2.408
Tourism Geographies	641	1.695	708	1.235
International Journal of Contemporary Hospitality Management	1333	1.407	1.775	2.176
International Journal of Tourism Research	878	1.314	1,106	1.095
Journal of Hospitality & Tourism Research	622	1.188	913	1.540
Leisure Sciences	1099	1.177	1,193	0.967
Asia Pacific Journal of Tourism Research	341	1.023	523	1.290
Journal of Destination Marketing & Management	41	1.000	88	1.034
Current Issues in Tourism	643	0.918	842	1.733
Journal of Leisure Research	1243	0.907	1,283	0.688
Journal of Travel & Tourism Marketing	926	0.736	1.551	1.741
Leisure Studies	580	0.690	752	1.057
Tourist Studies	277	0.667	298	0.667
Tourism Economics	682	0.515	799	0.392
Scandinavian Journal of Hospitality and Tourism	266	0.432	309	0.518
Journal of Tourism and Cultural Change	78	0.361	130	0.474

Table 1. Top twenty-one journals of the Journal Citation Report in 2014. Source: Own Elaboration based on the JCR of 2014.

Once the journals had been selected, we embarked on a downloading process from february 2015 to march 2016, as we had to wait for the articles to be published. It is important to highlight that the articles used in this investigation are purely investigation articles, no other type of documents (such as reviews or research notes) were selected. Once we had finished downloading the articles, we ended up with a library of 1.134 articles. We needed a way of qualitatively analysing these articles in order to obtain the codes needed to create our network. Using ATLAS.ti, a qualitative analysis program, the articles were individually analysed, a process in which their authors and keywords were coded and then linked together.

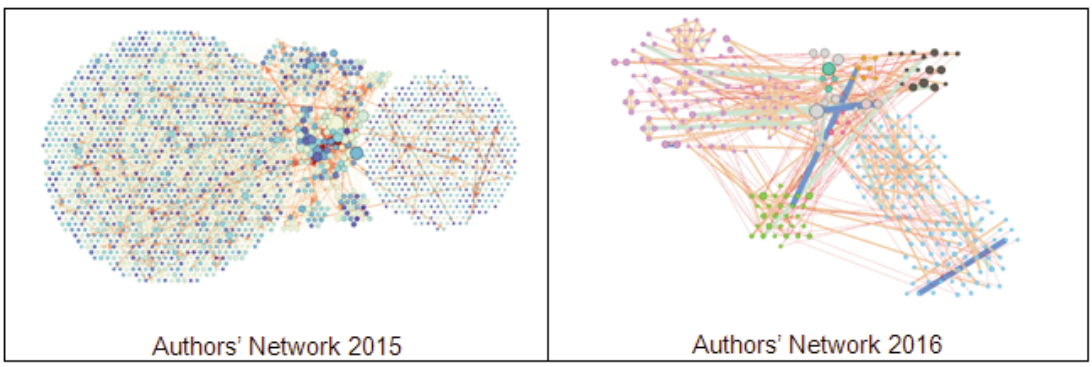
After completing the analysis, we had created a database of 2.075 authors and 3.377 keywords. Before we arrived at these amounts we had to purify our data by fusing together codes that were clearly the same but ATLAS understood them as different, for example, due to them being spelt differently. Due to the high number of codes, both authors and keywords, the decision was made to eliminate those keyword codes that only had appeared once, removing orphan authors consequently. This way our results would be much more reliable, and easier to display in complex graphs.

Once created and filtered, the database was exported into spreadsheets, thus creating the adjacency matrixes, which we would upload into Gephi to graphically represent our analysis. After that, we needed to play around with the distribution principals to represent our network more clearly. Firstly, we choose the "Circle Pack" layout, as it allows us to make the connected nodes attracted to each other and push the unattracted nodes apart to create clusters of connections, easing our visualization. For that, the parameter used to build the network was the clustering coefficient. Secondly, we calculated some statistics using the Gephi software in relation the network diameter and the modularity of our network. Once calculated, this allowed us to detect the direct connections between nodes and differentiate the communities by colours. These simple tools aimed to make our complex network easier to understand it visually.

5. Results and Findings

When peering the list of authors, compared to year 2015, we detected that only a small group of authors have a high number of publications and that most of them figured in the analysis only have one publication. A significant change is that the group of 9 authors particularly productive, who dominated the publications in 2015 (more than ten articles in the year) has been reduced to 3 in 2016. It seems, then, that the average number of authors is growing, with more co-authorships in 2016 compared to 2015.

The relations and connections between the authors and their respective communities are displayed in the following graph (Graph 1).



Graph 1: Collaborative Writing Networ. Source: Own Elaboration.

If we observe, we can see that each node represents an author, and any edge represents a co-authorship. A triangular loop could suggest either a paper authored by three different researchers, or two papers authored

by three in pairs. To differentiate it, the links are weighted in accordance to the frequencies of coincidences. If two authors had, for instance, authored two different papers, then the link between them is twice stronger than if they had only published a single paper, regardless other connections with any other author. This network was designed for displaying properly families of researchers with partial networks significantly marked. These different communities of authors have been given their own colour to help visualize their size within the network. On the outer rim of each network we can see the simpler communities of authors.

At first glance, if we compare 2016 with 2015 graph it is very difficult to appreciate the differences in the networks, caused mainly because of the size of the networks and more significantly that the graphs have very different formats, as the 2015 graph also contains orphan authors.

Even though this large-scale observation does not help when it comes to the detailed side to our analysis and the numerical side is much more clear, it does help us appreciate the advances in this type of software. The software used is equipped with tools that helps us differentiate the communities and highlight the bigger nodes, so at first glance, a very complicated network is not so menacing.

6. Results of the Keyword Analysis.

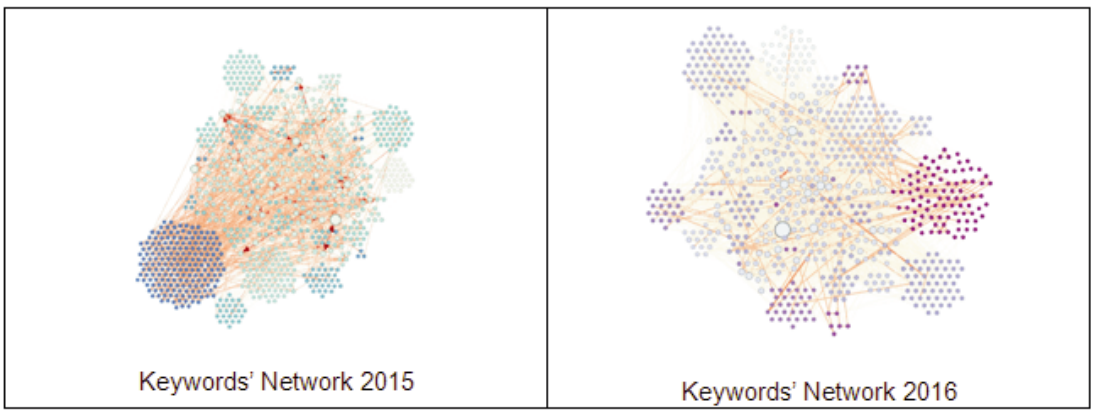
In relation to the keywords, the following tables represents the results from 2015 analysis and compares it to the findings for 2016. Table 2.

2015		2016	
Keywords	**Articles**	**Keywords**	**Articles**
Tourism	**62**	**Tourism**	**70**
Hotel	**39**	**China**	**29**
China	**36**	**Satisfaction**	**27**
Customer satisfaction	31	**Destination image**	**26**
Hotel industry	**27**	**Hospitality**	**25**
Service quality	27	**Hotels**	**22**
Social media	**24**	**Social media**	**18**
Rural Tourism	24	**Sustainability**	**17**
Destination image	**23**	**Behavioral intentions**	**17**
Behavioural intentions	**23**	**Hotel industry**	**17**
Leisure	**23**	Motivation	17
Satisfaction	**23**	**Hospitality industry**	**15**
Sustainable tourism	22	Gender	15
Identity	17	Tourism development	14
Loyalty	16	Experience	14
Hospitality	**16**	**Customer behavoir**	**14**
Sustainability	**16**	Destination marketing	13
Consumer behaviour	**15**	Trust	13
Restaurant	14	Authenticity	13
Hospitality industry	**14**	**Leisure**	**13**
Electronic word-of-mouth	14	Identify	12
Segmentation	14	Taiwan	12

Table 2. Most frequent keywords (2015 & 2016). Source: Own Elaboration.

It is no surprise that "Tourism" maintains the top spot and keywords like "China" (that is high up in the analysis mainly because of the large number of Chinese authors), "Satisfaction" and "Hospitality" are still themes very much investigated on. However, it is interesting to see the new themes that have grown in popularity since last years' analysis, for example, "Motivation", "Gender", "Experience" and "Trust". This just

shows how important it is becoming to study the motivations the tourists have when visiting a certain destination, to create a destination that creates unforgettable experiences and one that the tourists can trust, and last but not least, study the differences between genders when it comes to the tourism industry. We can observe the relations and connections between the keywords and their respective communities in the following graph (Graph 2).



Graph 2: Keywords Network 2016. Source: Own Elaboration.

Just like the authors network, this network represents the different keywords, as nodes, and their connections with other keywords. When two or more keywords are connected, this means that they have appeared together in an article. The size of the node increases as that specific keyword appears more and more in the articles analysed. We can also see that the different communities of keywords are color-coded.

If we compare the graphs from 2015 and 2016 we can see that they both share the same resemblance. The keyword "Tourism" is at the heart of the debate and directly or indirectly around 95% of the keywords are connected to it. Just like last year's results the keyword "China" plays a huge roll next to "Tourism" but doesn't have as many direct connections as one would think. "Tourism" has direct connections with our other biggest nodes, "China", "Sustainability", "Hospitality Industry", "Hospitality" and "innovation". These are the main themes that form the backbone to all our articles analysed in 2016.

As we have already seen in Table 4, there has not been a huge difference when it comes to the main keywords from 2015 to 2016. Alas is still a huge focus on the hospitality side of the industry and the study of the guests' satisfaction. In addition, a lot of effort has gone into the study of analysis of sustainability in the industry, looking for ways to make sure the goods and services of the industry are as sustainable as possible.

The study of innovation has also become very popular in recent years as the industry looks toward new technologies to grown and improve the tourists experience. Small wonder then that "Innovation" is one of the biggest nodes in both the 2015 and 2016 networks.

Turning our attention to the "China" node we see that it has a direct connection with the "Tourism" node along with connections to other important nodes like "Hospitality Industry", "Sustainability" and "Hotel Industry". Other interesting relations this node has is with ones like "Tourism development", "shopping" and important tourist destination "Taiwan" and "Japan".

Theses nodes help us understand that the articles published in 2016 that refer to tourism and China mainly focus on the hospitality industry and the development of the industry as a whole. Also, a lot of focus is put on Taiwan and Japan as growing tourism destinations and how shopping as a touristic activity is ever more important.

If we look back at last year's analysis, we can see that "China" and "Tourism" were still the two biggest

nodes. However, "China" had direct connections with different nodes, for example, "behavioural intentions" and "customer satisfaction". This just shows that even though China is still very focused on studying the tourism industry, it is shifting its interest on other specific areas of the industry.

Analysing the "Hotel industry" node we can see that it has connections with very unsurprising nodes, such as "Hotel performance", "Social media marketing", "pricing", "social media" and "eWOM". With the ever-growing impact that social media has on the tourism industry, the hotel experience and guest feedback, these are the relevant features in the hotel industries network. This network of nodes proves that nowadays it is a must to analyse the hotel industry putting emphasis on social media and the way hotel guests and tourist use it as a platform the express their feeling towards the hotel or the destination in question.

To conclude our keyword analysis, the "Andalucia" node and its connections have benn also under the spotlight of this research. We can see an obvious connection with "Spain" and then a selection of interesting connections in "Emerging urban cultural destination", "Tourists satisfaction" and "Destination management". This points out nicely that as a destination Andalucia is slowly being perceived by researchers a very complete destination, emerging as an urban cultural destination and not only a traditional sun and sea hot spot. It also shows that a lot of effort is going into managing the destination correctly.

7. Network indicators

When we analysed in much more detail the composition for both networks (authors and keywords), we stated that they presented several remarkable details. The statistics obtained for them are shown hereafter:

Indicator	Description	Authors network		Keywords network	
		2015	2016	2015	2016
Average degree (Diestel, 2005)	Average number of connections per node	2.665	2.383	8.579	7.67
Weighted average degree (Diestel, 2005)	Average number of connections per node, considering the weight of each connection	2.903	7.374	10.502	16.931
Network diameter (Brandes, 2001)	Longest distance between nodes in the network (considering 1 as node-to-node distance)	17	20	8	8
Graph density (Coleman & Moré, 1983)	If all possible connections are present, then the graph would be connected and the density would be 1	0.001	0.008	0.01	0.011
Modularity (Lambiotte, Delvenne, & Barahona, 2009)	Communities existence index (number of communities detected)	0.976 (526)	0.935 (70)	0.56 (21)	0.512 (15)
Connected components (Tarjan, 1972)	Strong or weak links altogether	519	63	5	5
Clustering coefficient distribution (Latapy, 2008)	"Small world" effect measure	0.902	0.662	0.51	0.438

After analysing the figures, we can conclude that both the number of relevant authors and the number of topics are growing. It is remarkable that the weighted average degree stated an increasing number of strong connections between researchers. It also showed a growing number of sound ties among keywords, which allows concluding that researching teams are getting strong, and the topics under research are a little more defined. This is also confirmed when considering the number of communities found by the statistics, which are less in 2016 than in 2015.

Another important idea comes from the network diameter, which is fixed in terms of the keywords, but seems to indicate a more complex net of connections between the authors, led by an increasing number of co-athorships. The fact that the graph density in 2016 than in the previous year confirms this idea, and provides

a measure that this phenomenon is stronger within the authors' network.

8. Conclusions

The objective of this paper was mainly focused on creating a network of authors and keywords to help highlight which authors dominate the network when it comes to publishing articles and what are the main themes of these papers, and finally compare the results to 2015. To conclude this paper in a clear and precise way it's important to structure our conclusion in various parts. First, we will focus on the conclusions from the authors network, followed by the keywords network and to finish we will see the improvements in the methodology and software used for this type of analysis which include a large amount of data complex matrixes.

Looking at our findings from the collaborative writing analysis we can see that just like last years' results, the field of tourism investigation is still dominated by collaborative writing. Meaning that close to all the articles analysed were written by two or more authors. New researchers who are starting their careers would do well if widening their list of connections, to maximize their academic success in a field dominated by collaborations.

It is also possible to point out that most, if not all, of the collaborations between authors are as much strategic. It is very likely that two small networks of three or four authors connected by a single relevant researcher will end up collaborating with each other in a short time. Such is the importance of collaborating with connected authors.

Collaborative writing seems to be the present and the future trend when it comes to investigation in the field of tourism. Any new investigator needs to pick their collaborations carefully as it could really influence in the chances of getting published.

If we turn our attention to the keyword analysis, we can conclude that there is still big focus on the keywords "Tourism" and "China". This is really no surprise when the field the articles belong to is tourism and more than half of the authors that publish articles in the field are from China. Perhaps, even though the western country is growing substantially as a destination, and has become a very interesting culture to study about, the sole number of Asian authors really does push this nodes numbers up high, creating a biased statistic. In the research to come, this should be an important issue to test.

On the other side, in a field where the information and communication technologies play a growing role there is important focus on keywords such as "social media", "social media marketing" and "eWOM". The network regarding these themes has grown since last year's analysis and thank to this year's results shows no sign of slowing down.

One of the characteristics of the keyword network is that the communities are extremely large, meaning that is extremely difficult to write about something in the field that is not connected to something else. Therefore, our network is so big, because most of the articles have around six or seven keywords.

Identifying tips for new researchers and providing an overview for them was the goal of this project. We think this goal was achieved with the combination of two methods: a traditional one (qualitative analysis) and an innovative one (network analysis). May this method inspire new researchers to improve this analysis and help to overcome the different limitations we have detected, such as the need for collecting manually the data or the lack of capacity for handling large amounts of information. Even though experiencing these contingencies, we must highlight, in the end, the positive changes detected in the networks themselves. We could detect fields of study more specific and more committed researching teams, which outlines a very promising scenario for the investigation on tourism.

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