

## **Peruvian universities and their scientific production in the tourism area**

### **Universidades peruanas y su producción científica en el área de turismo**

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#### **Abstract**

Taking into account the growing importance that tourism acquires for the development of Peru, and that at present every model of tourism development must be fed by tourism research, it is evident the need to analyze the production of the Peruvian universities that have carried out in the field of tourism. This research analyzes published articles related to tourism by professors affiliated to Peruvian universities in national and international indexed scientific journals. The search was performed using Scopus and Scielo databases during the period from 2008 to 2018. The analysis allowed us to identify those universities and authors that have made a greater effort of research and dissemination in tourism, the journals in which they are published these works, citations and international impact of articles and authors. According to what was analyzed, despite the fact that Peru has been an internationally recommended tourist destination for a long time, tourism research by Peruvian universities has been low and has slow growth, being less than the growth of the countries in our environment.

**Keywords:** Tourism, Investigation, Peruvian universities, university professor, indexed journals.

#### **Resumen**

Teniendo en cuenta la creciente importancia que adquiere el turismo para el desarrollo del Perú, y que en la actualidad todo modelo de desarrollo turístico se debe alimentar de la investigación turística, es evidente la necesidad de analizar la producción de las universidades peruanas que han realizado en el campo del turismo. La presente investigación analiza los artículos publicados relacionados al turismo por docentes afiliados a universidades peruanas en revistas científicas indizadas, tanto de ámbito nacional como internacional. La búsqueda se realizó utilizando las bases de datos de Scopus y Scielo durante el periodo de 2008 a 2018. El análisis nos permitió identificar aquellas universidades y autores que han realizado un mayor esfuerzo de investigación y difusión en turismo, las revistas en las que se publican estos trabajos, las citas e impacto internacional de los artículos y autores. Según lo analizado, a pesar que hace buen tiempo el Perú es un destino turístico recomendado internacionalmente, la investigación en turismo por parte de las universidades peruanas ha sido bajo y tienen un crecimiento lento, siendo inferior al crecimiento de los países de nuestro entorno.

**Palabras clave:** Turismo, Investigación, universidades peruanas, docentes universitarios, revistas indizadas.

## Introduction

The tourism is an area that impacts towards the increasing and the economic development in a country. (Brida, Rodríguez-Brindis, Mejía-Alzate & Zapata-Aguirre, 2017). It is an activity that influences the total GDP growing, promoting the dynamic management, giving job position. (Aznar, Bagur & Rocafort, 2016), turning into the most economical income activities that have the most expectations, both local government and the population (Tinoco, 2003).

Because of the fast and standard growing of this tourism sector, the academical community has paid attention and interest to the tourism area so universities are offering the Tourism school to get the degree, the master degree and doctor in Tourism (Jafari, 2005). The tourism researches have been increased in other countries for these years, we can see it because of lots published articles in scientific tourism or nontourism journals. So little by little the scientific community in tourism has been set (Hernández, Campón & Folgado, 2011).

On the other hand, the bibliometric is very important to diffuse the researches because the valuable measure of the result of this scientific activity. This allows us to build ranking according to the researcher production, institutes and any other institutions or other elements that can be compared (Ardanuy, 2012). This can also serve as a guide for students or research staff who want to know the most prestigious institutions to carry out training stays or formalize agreements (Albacete-Saéz & Fuentes-Fuentes, 2010).

The bibliometric indicators of scientific production measure the results of the research as published in the publications, mainly in journal articles, but also in other types of documents such as books, book chapters, theses, etc. The most recurrent and most feasible indicator to obtain is the number of published works by an institution, author, country or subject area, so it allows to know and be aware of their activity from this value. The systematization of these publications informs us about the activity of the evaluated indicator, depending on whether the value increases, decreases or remains constant. Data about the scientific production can be known at any given time, or through its evolution over time, either annually or for periods (Aleixandre-Benavent, Gonzáles, Castelló, Navarro, Alonso-Arroyo, Vidal-Infer & Lucas-Domínguez, 2017).

At present, every type of tourism development must be powered by scientific research, with a correlation between the world position of tourism of a country and its research production in this subject, so the countries where produce most, dominate the tourism industry (Vargas-Sánchez, 2014).

In this sense, academic publications are vital to transmit the academic findings that will form the pillars of knowledge in a sector (Moreno & Picazo,) in addition, the published researches, quantity and quality, and the number of quotes that have done of these, are an indicator and indispensable tool in measuring the productivity of academic and professors of the institutions, becoming an important role in the research careers of many academics, in addition, it is decisive for the international recognition of universities and their educational programs (Picazo-Peral & Moreno-Gil, 2013A).

On the other hand, Peru is a tourist destination of international relevance that has a great diversity of touristic products and services that are running the development and consolidation of the tourism industry. More than 2.7 million international tourists arrived in Peru in 2018. Machu Picchu ruin was the most visited place by these tourists and the largest visitors were from the United States. Related to South America, the most preference destination for Chilean tourists was Peru, more than Brazil and Argentina.

For this reason, tourism is one of the main resource of the Peruvian economy, turning into the third economic resource that contributes 4% of GDP and it is recognized as a national priority (Promperu, 2019).

Despite this, tourism research in Peru is limited and insufficient in relation to the challenges and specific characteristics of the sector. In studies conducted on the analysis of productivity and tourism research in Iberoamerica, Brazil and Spain are the countries that have the highest position as potential in tourism research (Picazo-Peral & Moreno-Gil, 2013B). It is necessary the attention and priority for the generation of knowledge and innovation in the Peruvian universities, as was established in the article 86 of University Law 30220, the objective of the study was to analyze the scientific production of Peruvian universities related to tourism published in indexed journals

that we will allow identify several key aspects to understand the current global situation of tourism research in Peru and its evolution in recent years (2008-2018).

### Theoretical framework

In recent years, tourism has become one of the most important activities in developing countries, directly impacting the economic sector, and indirectly in other sectors related to this activity, improving the quality of life of the population, and helping to conserve natural attractions (Sancho, 2001; Julca-Meza, 2012). It is an activity that generates significant incomes in foreign currency, promotes business activity, creates new jobs, and increases public incomes, thus becoming a mechanism to attract foreign direct investment, especially of large hotel chains, generating many positive effects in various sectors, such as health and culture, forming part of the social and cultural dynamics of the beneficiary populations (Orgaz 2013).

Research is a necessary tool in all growth processes and technological development of companies and economic sectors, not only for those with a strong industrial content, but for all those who must adapt to the new demands of today's world (Hernández et al., 2011).

Bibliometric is the mathematics application and statistical methods to the results of scientific research in order to quantify and be able to analyze the progress and significance of scientific publications of a scientific nature, so that in this way it can serve as support for making decision and the target of research, to designate better the economic resources with a measurable basis. At the end of a bibliometric study, the results allow comparing the different scenarios of scientific development, this between countries, regions, authors, etc., and measure their progress or delay objectively (Dávila, Guzmán, Macareno, Peñeres, Barranco & Caballero-Uribe, 2009).

Vallejo-Ruiz (2005), developed a classification for bibliometric indicators, organized into five categories: personal indicators, productivity indicators, reference indicators, content indicators and methodological indicators, which can be considered as suggestions for bibliometric studies.

Another interesting bibliometric indicator that is currently using a lot, is the h-index, which was proposed by Hirsch (2005), is an indicator that estimates the number of important works published by a researcher increasing as the requirement as its value.

It considers quantitative and qualitative aspects or visibility at the same time. You can say, that there is a correlation between this index and the success of a researcher appreciated by their pairs and, furthermore, it can be considered as a predictive value of future success. After this proposal was published, this index began to have great acceptance by the scientific community, at present the measurement of the h-index can be obtained in the most important databases (Dorta-González & Dorta-González, 2010).

In order to carry out the bibliometric analysis, a large amount of bibliographic information is needed, in general, bibliographic databases are usually used where the published scientific production, mainly of journals, through scientific articles are indexed. One of the most prestigious bases of international scope is Scopus, from the Elsevier publishing house, created in 2004, it currently has an approximate coverage of 22,000 quality scientific journals in all fields of knowledge, from more than 5,000 international publishers. Scopus is the largest database of references and abstracts of refereed literature and high quality sources (Cañedo, Rodríguez & Montejo, 2010; Miguel, 2011).

On the other hand, we have the Scientific Electronic Library Online - Scielo, developed by FAPESP-BIREME Brazil, which originated in the late 1990s, and it has already implemented in more than ten Ibero-American countries. It works as an online electronic library that offers open access to the full text of the articles of some 822 journals (Miguel, 2011).

In addition to these two databases, in November 2004, Google Inc, launched Google Scholar, which, unlike other databases, it does not delete the contents of journals, but rather systematically explores the web. Two services converge in this product, a search of scientific publications. This point is very important regarding the impact of the publications, it is not the same to be named

in a scientific document than in another type of document. This database has recently incorporated Google Scholar citations, that compiles the scientific information by a researcher and provides an added web site, expanding information on the number of citations of each publication (Ardanuy, 2012).

## Method

### Data collection techniques and university selection

A bibliometric study was carried out in order to study tourism research in Peru. The study consisted of collecting and analyzing articles related to tourism published in indexed scientific journals, during the 2008-2018 period, signed by at least one author from Peruvian universities. The selected Peruvian universities were those that are in the Ibero-American Ranking of Higher Education Institutions. (SIR-IBER) published in 2018 and prepared by the research group of Scimago (2018).

### Procedure

Only research articles were collected, not taking into account, other types of documents such as books, book chapters or conference chronicles, the usual practice was in bibliometric studies (Maltrás, 2003). Next, the production of Peruvian universities was analyzed taking into account the following: number of published articles, university affiliation of Peruvian authors, articles with the greatest impact, the scientific journals where they have been published, and the prolific authors. The research and analysis was carried out between January and May 2019, and as source of scientific information the bibliographic databases were used: Scopus and Scielo.

In a first stage, the published articles were selected, by selected Peruvian universities, in specialized tourism indexed journals in Scopus. Almost all of these journals are included in the category of "Tourism, Leisure and Hospitality Management" by Scopus (López-Bonilla, Granados-Perea & López-Bonilla, 2018). The exploration was done by placing the name of the

university in the search condition, once the results were obtained, those belong to the thematic area of "Business, Management and Accounting" were filtered, then those who belong to the category of "Tourism, Leisure and Hospitality Management" were identified by registering the journal, through the Scimago Journal & Country Rank website (scimagojr.com). In the second stage, scientific articles related to tourism issues were chosen, published in the Scopus database in different categories of the "Tourism, Leisure and Hospitality Management" The search was carried out by placing the name of the university in the institutional affiliation category using the following keywords identified by the tourism research: "Tourism" and "tourist", and their Spanish translation (López-Bonilla et al., 2018). In the third stage, the Scielo database was used, setting the search of mentioned keywords in the previous point adding the word "Peru".

For the identification of the selected universities that have careers related to the tourism field, their academic offer was entered and verified in each of the institutional web sites.

Finally, to evaluate the level of productivity and / or impact of the articles and authors, the Scopus and Google Scholar databases were used, databases that allow interdisciplinary bibliographic searches to be carried out and to analyze the frequency they have been referenced in other specialized sources.

## Results

According to the SIR-IBER in 2018, 77 (53.84%) 143 authorized Peruvian universities in that time by the National Superintendence of Higher University Education (SUNEDU), have published their research results in indexed journals in the database of Scopus in different areas of knowledge. Table 1 shows the list of these Peruvian universities, which includes the total number of indexed publications in Scopus in the 2008-2018 period, the number of articles in Business, Management area and Accounting (BMA) and the category of Tourism, Leisure and Hospitality Management (TLHM).

**Table 1.**  
*Scientific production of Peruvian universities in 2008-2018 period.*

N°	Universities	Published papers		
		Total	BMA	TLHM
1	Universidad Peruana Cayetano Heredia	2,964	4	-
2	Universidad Nacional Mayor de San Marcos*	2,328	14	-
3	Pontificia Universidad Católica del Perú	1,945	111	-
4	Universidad Peruana de Ciencias Aplicadas*	758	11	-
5	Universidad Nacional Agraria La Molina	438	1	-
6	Universidad Científica Del Sur*	383	1	-
7	Universidad de San Martín de Porres*	457	9	-
8	Universidad Nacional de Ingeniería	286	2	-
9	Universidad Nacional de San Antonio Abad del Cusco*	264	-	-
10	Universidad Nacional de San Agustín	277	2	-
11	Universidad Nacional de Trujillo	202	-	-
12	Universidad del Pacífico	270	61	1
13	Universidad de Piura	177	18	-
14	Escuela de Administración y Negocios para Graduados	92	40	-
15	Universidad Ricardo Palma*	171	4	1
16	Universidad Nacional de la Amazonia Peruana*	149	-	-
17	Universidad Católica San Pablo	147	3	-
18	Universidad de Ingeniería y Tecnología	156	2	-
19	Universidad Nacional Federico Villarreal	122	1	-
20	Universidad Privada Antenor Orrego	110	-	-
21	Universidad Católica de Santa María	72	2	-
22	Universidad Nacional de Piura	92	2	-
23	Universidad Nacional Pedro Ruiz Gallo	85	-	-
24	Universidad San Ignacio de Loyola*	148	11	5
25	Universidad Nacional del Altiplano*	73	1	-
26	Universidad de Lima*	80	6	-
27	Universidad Nacional San Luis Gonzaga	80	-	-
28	Universidad Nacional de Cajamarca*	50	-	-
29	Universidad de Ciencias y Humanidades	158	1	1
30	Universidad Católica Santo Toribio de Mogrovejo*	37	-	-
31	Universidad Nacional Jorge Basadre Grohmann de Tacna	25	-	-
32	Universidad Nacional Micaela Bastidas de Apurímac	29	-	-
33	Universidad Nacional Amazónica de Madre de Dios*	30	1	1
34	Universidad Nacional Santiago Antúnez de Mayolo*	26	-	-
35	Universidad Nacional de Huancavelica	32	-	-
36	Universidad Privada del Norte*	97	1	-
37	Universidad La Salle, Arequipa*	31	4	-
38	Universidad César Vallejo*	45	-	-
39	Universidad Continental de Ciencias e Ingeniería	15	-	-
40	Universidad Católica Los Ángeles de Chimbote	30	-	-
41	Universidad Nacional San Cristóbal de Huamanga	37	-	-
42	Universidad Nacional del Centro del Perú	39	1	-
43	Universidad Científica del Perú*	15	-	-
44	Universidad Nacional de Educación Enrique Guzmán y Valle	14	-	-
45	Universidad Privada San Juan Bautista*	28	1	-
46	Universidad Nacional Daniel Alcides Carrión	15	-	-
47	Universidad Alas Peruanas*	23	1	-
48	Universidad Nacional del Callao	13	-	-
49	Universidad Nacional Agraria de la Selva	28	-	-
50	Universidad Nacional Hermilio Valdizan*	15	-	-
51	Universidad Antonio Ruiz de Montoya*	7	-	-
52	Universidad Privada de Tacna	19	-	-
53	Universidad Nacional de Ucayali	21	-	-
54	Universidad Peruana Los Andes	12	-	-
55	Universidad Peruana Unión	20	-	-

56	Universidad Privada Antonio Guillermo Urrelo	7	-	-
57	Universidad Tecnológica del Perú*	17	-	-
58	Universidad Nacional José Faustino Sánchez Carrión*	19	-	-
59	Universidad Nacional Toribio Rodríguez de Mendoza de Amazonas	12	-	-
60	Universidad Nacional Intercultural de la Amazonia	10	-	-
61	Universidad Católica Sedes Sapientiae*	14	1	-
62	Universidad Privada Norbert Wiener*	11	-	-
63	Universidad Inca Garcilaso de la Vega	12	1	-
64	Universidad Andina del Cusco*	10	-	-
65	Universidad de Chiclayo*	11	-	-
66	Universidad Nacional de San Martín*	9	-	-
67	Universidad Nacional de Tumbes	18	-	-
68	Universidad Autónoma del Perú*	12	4	-
69	Universidad Nacional José María Arguedas	3	-	-
70	Universidad Nacional del Santa	16	-	-
71	Universidad Señor de Sipán*	15	-	-
72	Universidad Nacional Tecnológica del Cono Sur de Lima	2	-	-
73	Universidad Particular Tecnológica de los Andes*	2	-	-
74	Universidad Nacional Autónoma de Chota	5	-	-
75	Universidad San Pedro*	1	-	-
76	Universidad de Ayacucho Federico Froebel*	1	-	-
77	Universidad Andina Néstor Cáceres Velásquez	7	-	-

\*Peruvian universities that have careers related to tourism

It can be seen that 77 universities, 34 (44.16%) have a career related to tourism. Likewise, 13,451 articles have been published in different areas of knowledge, 322 articles in the Business area, Management and Accounting, and only 9 articles published in journals that are in the category of Tourism, Leisure and Hospitality Management, the last mentioned that has distributed in five universities, so three (3) of them have a career related to tourism, that is the Universidad San Ignacio de Loyola with the highest number of publications (5) in this category. For the thematic

Business area, Management and Accounting, the Pontificia Universidad Católica del Perú is in the first position that leads in publications (111), and at a general level the Universidad Peruana Cayetano Heredia (2,964) (Table 1).

Table 2 shows the list of scientific articles published by Peruvian universities with the names of the authors of their universities, in the Tourism, Leisure and Hospitality Management category of the Scopus database.

**Table 2.**

*Scientific papers published in the Tourism, Leisure and Hospitality Management category.*

Universities	Authors	Paper title	Year	Journal
Universidad del Pacífico	Ítalo Raúl Arbulú Villanueva	The euro crisis, fiscal devaluation, and impacts on the tourism sector in the Spanish economy	2016	Tourism Economic (Q2)
Universidad Ricardo Palma	Wesley M. Collins	The Center as Cultural and Grammatical Theme in Mam (Maya)	2010	Space and Culture (Q2)
	Sandra Sotomayor	Surf travel behavior and destination preferences: An application of the Serious Leisure Inventory and Measure	2013	Tourism Management (Q1)
		An Exploratory Examination of Serious Surfers: Implications for the Surf Tourism Industry	2016	International Journal of Tourism Research (Q1)
Universidad San Ignacio de Loyola	Claudia Gil Arroyo	Agrotourism, Farm Visit, or.. ? A Branding Assessment for Recreation on Farms	2016	Journal of Travel Research (Q1)

	Sandra Zubieta	Hospitality Bankruptcy in United States of America: A Multiple Discriminant Analysis-Logit Model Comparison	2017	Journal of Quality Assurance in Hospitality and Tourism (Q2)
		Evaluating the impact of mega-sporting events on hotel pricing strategies: the case of the 2014 FIFA World Cup	2017	Tourism Review (Q2)
Universidad de Ciencias y Humanidades	Vincent Bax	Environmental predictors of forest change: An analysis of natural predisposition to deforestation in the tropical Andes region, Peru	2018	Applied Geography (Q1)
Universidad Nacional Amazónica de Madre de Dios	Andrea Birgit Chávez	Smallholder policy adoption and land cover change in the southeastern Peruvian Amazon: A twenty-year perspective	2014	Applied Geography (Q1)

Of the papers published in journals in the Tourism, Leisure and Hospitality Management category (Table 2), 7 authors have been identified, three (3) of them belong to the same university. The articles are distributed in 8 journals, 50% of these with high impact (Q1). Most of the articles (66.67%) were published between 2016 and 2018.

Table 3 shows the impact of the scientific papers mentioned in the previous Table (2), according to the quotes of these in other publications, using the Scopus database and Google Scholar.

**Table 3.**  
*Impact of the papers of tourism according to the number of citations.*

Papers	Scopus	Google Scholar
The euro crisis, fiscal devaluation, and impacts on the tourism sector in the Spanish economy	-	1
The Center as Cultural and Grammatical Theme in Mam (Maya)	2	2
Surf travel behavior and destination preferences: An application of the Serious Leisure Inventory and Measure	48	108
An Exploratory Examination of Serious Surfers: Implications for the Surf Tourism Industry	7	17
Agritourism, Farm Visit, or.? A Branding Assessment for Recreation on Farms	5	13
Hospitality Bankruptcy in United States of America: A Multiple Discriminant Analysis-Logit Model Comparison	3	5
Evaluating the impact of mega-sporting events on hotel pricing strategies: the case of the 2014 FIFA World Cup	2	2
Environmental predictors of forest change: An analysis of natural predisposition to deforestation in the tropical Andes region, Peru	6	6
Smallholder policy adoption and land cover change in the southeastern Peruvian Amazon: A twenty-year perspective	6	12

Regarding the impact of the papers, “Surf travel behavior and destination preferences: An application of the Serious Leisure Inventory and Measure”, whose author is Sandra Sotomayor, a professor at the Universidad San Ignacio de Loyola-USIL, is the one that presents the greatest impact with a high number of citations, over the

average, both in Scopus and in Google Scholar (Table 3).

Table 4 shows the production in publications, the authors of the articles mentioned in Table 2, taking into account the total number of citations of their articles and the h-author’s index.

**Table 4.**  
*Production and impact of the authors.*

Authors	Scopus			Google Scholar		
	Total Publications	Total Citations	h-index	Total Publications	Total Citations	h-index
Italo Raul Arbulú Villanueva	7	48	4	-	-	-
Wesley M. Collins	1	2	1	-	-	-
Sandra Sotomayor	5	69	3	-	-	-
Claudia Gil Arroyo Marquez	4	57	2	10	142	2
Sandra Zubieta	2	5	2	-	-	-
Vincent Bax	8	23	3	-	-	-
Andrea Birgit Chávez	8	58	4	-	-	-

In the case of production and impact, most of the authors present an index  $h \geq 2$ , this for the total of their published articles in various areas in Scopus. Italo Raul Arbulú and Andreas Birgit Chávez are the authors with the highest impact index in all areas of publication, unlike them, Sandra Sotomayor is the best positioned as author of Peruvian universities, because almost all the articles she has published are found with USIL affiliation. It is worth mentioning, that many of the authors do not

appear in Google Scholar, because contrary to the Scopus database, which automatically generates a code and includes the author, in Google Scholar the researcher has to register (Table 4).

Table 5 shows a list of scientific articles, published by Peruvian universities, related to the field of tourism and published in indexed journals in Scopus in a category other than Tourism, Leisure and Hospitality Management.

**Table 5.**  
*Publications related to the field of tourism in categories other than Tourism, Leisure and Hospitality Management.*

Universities	Paper title	Journal	Year
Universidad peruana Cayetano Heredia	Self-Reported health problems among travelers visiting Cuzco: A Peruvian Airport survey	Travel medicine and infectious disease (Q1)	2009
	Mycobacterium abscessus complex cutaneous infection	Current Tropical Medicine Reports (Q2)	2018
Pontificia Universidad Católica del Perú	Link between customer loyalty and customer service in tourist hotels	Espacios (Q3)	2018
	Ethical predicaments for anthropologists: The Peruvian case	Development in Practice (Q2)	2009
Universidad Peruana De Ciencias Aplicadas	Family dynamics and social practice theories: An investigation of daily practices related to food, mobility, energy consumption, and tourism	Nature and Culture (Q3)	2014
Universidad Científica del Sur	Charting the course for a blue economy in Peru: a research agenda	Environment, Development and Sustainability (Q2)	2018
Universidad de san Martín de Porres		Journal of Landscape Ecology (Czech Republic) (Q3)	2018
Universidad Nacional de la Amazonia Peruana	Predation risk by gastronomic boom - Case Peru		
Universidad Nacional de San Antonio Abad del Cusco	Pre-travel advice concerning vector-borne diseases received by travelers prior to visiting Cuzco, Peru	Journal of Infection and Public Health (Q1)	2016
	Acute mountain sickness impact among travelers to Cusco, Peru	Journal of Travel Medicine (Q1)	2012



Universidad Ricardo Palma	Características asociadas a la consulta pre viaje de turistas que visitan Cusco, Perú	Revista Chilena de Infectología (Q4)	2016
	Pre-travel advice concerning vector-borne diseases received by travelers prior to visiting Cuzco, Peru	Journal of Infection and Public Health (Q1)	2016
Universidad Federico Villarreal	Escape the Lion cage: Social networks by catch zones of small-scale fisheries in the oil settlement of Lobitos (Peru)	Marine Policy (Q1)	2017
Universidad Nacional Santiago Antúñez de Mayolo	Archaeological heritage at risk: Preservation, destruction and perspectives for Pre-Columbian sites from the periphery of Trujillo, Peru	Complutum (Q1)	2016

Regarding publications in a category other than Tourism, Leisure and Hospitality Management, and that are related to the field of tourism, a total of 13 articles were found published in indexed journals in areas such as medicine, arts and humanities, economics, etc., of which 46.15% (6) are published in Q1 journal, 23.08% (3) in Q2 and Q3, respectively, and 7.69% (1) in Q4, it should

be noted that in the article “Predation risk by gastronomic boom - Case Peru”, two universities share authorship (Table 5).

Table 6 shows a list of articles, related to the field of tourism, published by authors from Peruvian universities in indexed journals in the Scielo database.

**Tabla 6.**  
*Publications in the Scielo database related to the field of tourism.*

Universities	Paper title	Journal	Year
Universidad Nacional del Altiplano Puno	Evaluación de la Ciudad de Puno como Destino Turístico – Perú	Comuni@cción	2017
	Valoración Económica Ambiental Según la Disponibilidad a Pagar por el Turismo Rural Vivencial en la Isla Taquile – Perú, 2013	Comuni@cción	2014
	Beneficios Socioeconómicos y Ecológicos del Turismo en la Isla Amantani – Perú, 2013	Comuni@cción	2014
Universidad Nacional San Antonio Abad del Cusco.	Turismo y el Riesgo de Propagación del Virus Chikungunya en una Provincia del Perú	Revista Médica Herediana	2017
Universidad Peruana Cayetano Heredia	Fiebre Amarilla, dos formas clínicas diferentes de una misma enfermedad. A propósito de 2 casos	Acta Médica Peruana	2016
Universidad Nacional Agraria la Molina	Evaluación del potencial turístico del distrito de Huarango – San Ignacio, Cajamarca-Perú	Ecología Aplicada	2016
Pontificia Universidad Católica del Perú	Los yagua en el contexto del turismo étnico. La construcción de la cultura para el consumo en el caso de Nuevo Perú	Anthropologica	2008

Regarding the publications in Scielo (Table 6), a total of 7 articles were found published in five (5) journals, all of them Peruvian, in areas such as social sciences (Comuni@cción), medicine (Revista Médica Herediana, Acta Médica Peruana), Ecology (Ecología Aplicada) and Anthropology (Anthropologica). These publications are distributed in 5 universities, so the Universidad Nacional del Altiplano Puno with the highest production (3 articles). These publications, the article entitled “Los yagua en el contexto del turismo étnico. La construcción de la cultura para

el consumo en el caso de Nuevo Perú”, is the one with the best impact, with 8 citations in Google Scholar

### Discussion

Scientific production is considered as the materialized part of the generated knowledge. It is also considered that it includes all the academic and scientific activities of a researcher. The bibliometric study of scientific production has been intensified and systematized since the

last two decades (Piedra & Martínez, 2007). In Peru, some universities are already implementing research units in bibliometrics in order to monitor the scientific production of the universities and generate information on Science and Technology indicators (Pacheco-Mendoza & Alhuay-Quispe, 2019).

In recent years, Peru has had a positive trend in scientific production, being the universities that have careers related to health sciences the ones that published the most (Mayta-Tristán, Toro-Huamanchumo, Alhuay-Quispe & Pacheco-Mendoza, 2019). Regarding production in the tourism area, the evolution has been slowly, as shown in Tables 1 and 2, with a productivity of 9 articles in 2008-2018 period, and this is corroborated by the research carried out by Picazo-Peral and Moreno-Gil (2013B), where they evaluate the tourism productivity of Ibero-American countries in 2006-2011 period, where Peru presents only three (3) articles, it should be noted that these articles were published between 2008 and 2011, with an average of one (1) article per year, thus demonstrating the little interest of universities in working and/or publishing in this field.

Comparing the scientific production in tourism in Peru with countries that lead in this field in the world, such as the United States and the United Kingdom, the difference is high (Corral-Marfil, 2014). At the level of Ibero-American countries, Spain also far exceeds us since it has an annual average of 156 published articles in the area of tourism (López-Bonilla et al., 2018), by the Catalan universities, 12 in total, those with the highest production with an annual average of 39 articles on tourism (Corral-Marfil & Cànoves, 2013). At the Latin American level, Brazil leads with an annual average of 130 publications (Picazo-Peral & Moreno-Gil, 2013B).

At the level of publications in indexed journals in Scopus in the category of tourism, leisure and hospitality management, Peruvian authors have published in English-speaking journals, benefiting them in the impact and visibility of their work at an international level, as is the case of *Tourism Economics and Tourism Management*, a high impact journal (Q1), widely used by authors from leading countries in tourism research (Moreno

& Picazo, 2012; López-Bonilla et al., 2018). It is worth mentioning that there are also journals in Spanish language, such as the Spanish journal "Cuaderno de Turismo" that is indexed in Scopus, which could be used by authors from Peruvian universities who carry out research in tourism to increase their scientific production as authors from other institutions in countries such as Brazil and Mexico do it (Picazo-Peral & Moreno-Gil, 2013A; Picazo-Peral, Moreno-Gil & León-González, 2012). At the Latin American level, there are also tourism journals with a great international projection such as the Argentine journal "Estudios y Perspectivas de turismo", which found in WoS (Comparato, 2019).

At the level of authors there is a great difference respecting to the productivity of articles against to universities and institutions in other countries, as shown in Table 2, only 7 authors from Peruvian universities published in specialized tourism journals in 2008-2018 period, being Sandra Sotomayor and Sandra Zubieta, both professors at the Universidad San Ignacio de Loyola, the ones who published the most with two articles each. These results are very low if we compare it with Spain, in the work carried out by López-Bonilla et al. (2018), which during the 2002-2013 period, found that 43 authors from different Spanish universities published in specialized tourism journals and indexed in the Scopus database, with a total of 759 articles, being the most prolific in those 12 years, JL Nicolau (Universidad de Alicante) and J. Rosselló (Universidad Islas Baleares) with 27 and 24 articles, respectively

Few Peruvian universities are publishing in tourist indexed journals in Scopus, the Universidad San Ignacio de Loyola is the one with the best projection, largely thanks to the incorporation of experienced researchers as professors at university.

Regarding the publications in Scielo, where all the articles found belong to Peruvian journals, they also indicate the low productivity of our universities in the field of tourism, is a reflection of the scientific production of our country at the Latin American level, since although in general it has improved, but comparing with other countries such as Brazil, Mexico and Argentina, it is still low (Robles-Alfaro, Vela-Alfaro, Huapaya-Huertas & Chacón-Torrico, 2015).

A limitation in the development of this study is related to the possibility that there are other articles on tourism in Peru, carried out during the study period, which were not taken into account because the journals where they were published are not indexed in the databases of Scopus or Scielo, or because the title, abstract and /or keywords did not contain the words used in the search criteria.

## Conclusions

According to the analysis, and taking into account the total publications in tourist and non-tourist journals of the two databases with which we worked, it is concluded that the production of research in tourism of Peruvian universities in the recent years it is low and has had a slow growth, this despite the growth of the tourism sector in our country. Therefore, there is still an important way to go, making it necessary to strengthen research groups, especially in universities that have a career related to the area of tourism, to improve the scientific visibility of the university, and in this way be favored in the rankings where scientific production is evaluated. This study is the first report on a general diagnosis of tourism research developed by Peruvian universities, which should continue to be carried out in the future, given the growing importance of tourism in the academic world.

## Conflicts of interest

174 The authors declare that they have no conflict of interest.

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