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Cumulative advantage of the impact of the Latin American and Caribbean science system on JCR journals outside the region

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Abstract
The objective of the study is to compare the growth of the citation impact of articles published by the Latin American and Caribbean science system in JCR journals outside the region with the impact of those published in journals within the region. 299,843 articles that received 1,421,045 citations were analyzed. To measure the impact, a fixed, three-year window of citations was considered for each article. 81% of the articles published appear in JCR journals outside the region, which accumulate 95% of the citations. The results confirm the existence of an accumulate advantage of articles published in JCR journals outside the region. When the number of articles in journals within the LAC region is doubled, the impact only increases 1.41 times. However, when the number of articles in JCR journals outside the region is doubled, the impact increases 3.60 times. The results constitute a warning to the committees of journals in the regions that compete with JCR journals located in the countries with the most developed economies, primarily the USA and the UK. LAC research assessment organizations should aim to enhance a mix of quantitative and qualitative indicators for more insightful evidence-based research journal quality evaluation, and avoid overuse of the journals' impact factors on the research assessment processes, as the San Francisco Declaration on Research Assessment suggests (DORA).

Keywords Allometry · Citation-based impact · Power-law · Self-similarity · JCR journals

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Introduction

The "publish or perish" threat currently seems to be a driving force behind the performance of scientists (Bukowska & Lopaciuk-Gonczaryk, 2018). The groups that finance and manage scientific activity demand high-impact results. So, research is not only measured by the number of documents published, but by the number of citations it attracts. This pressure encourages researchers to submit their best results to journals with the most international recognition (De-Moya-Anegón, 2020; Larivière, 2019). In this way, regional journals are at a competitive disadvantage against the established ones, generally located in the United Kingdom (UK) and the United States of America (USA). Both countries accumulate 60% of the journals indexed in the Journal of Citation Report (JCR, 2017 edition). This fact is suggestive of a monopoly on the dissemination of new scientific knowledge worldwide and constitutes a threat to the survival of regional journals. As Vessuri et al. (2014) claim: "Scientific competition is largely managed through journals and their reputation. Therefore, designing a science policy for Latin America (and for any 'peripheral' region of the world) necessitates paying special attention to the mechanisms underpinning the production, circulation, and consumption of scientific journals. So-called 'international' or 'core' journals are of interest, while local, national, or even regional journals must struggle to find their place in this peculiar publishing ecosystem."

Despite the USA and UK monopoly of the industry of scientific disclosure through journals in the Main Collection of the Web of Science (WoS), Latin America and the Caribbean (LAC) show a significant increase in the number of journals included in the JCR (Collazo-Reyes, 2014) and have crossed local borders and moved into the international arena (Collazo-Reyes et al., 2017). However, only 2% of LAC journals are in the first two JCR quartiles, which represents a significant weakness to be overcome in the immediate future. In order to increase the competitiveness of LAC journals in the JCR, the editorial committees have backed the increase in the number of journals in the Directory of Open Access Journals (DOAJ) (Sanchez-Tarrago et al., 2016). Currently, 60% of the LAC journals in the JCR are open access.

Prior research has analyzed the scientific production patterns of one LAC country in particular or the publications in an area of research in the journals of a country and outside it (Bukowska & Lopaciuk-Gonczaryk, 2018; Lin & Li, 2014; Rey-Rocha & Martin-Sempere, 2004). Studies on the comparison of the impact of articles published in journals within a region against those published outside it are scarce in the literature consulted. Due to this, information must be provided on the growth rate patterns of the impact of scientific production of a region in journals of that region and outside it, and all scientific domains must be considered. The objective of this research is to compare the growth rate of the impact of LAC publications in JCR journals within the region against the impact of publications in JCR journals outside the region.

The research question that embodies the objective is: Which impact of the Latin American and Caribbean science system grows at a faster rate, that of publications in journals (JCR) within the LAC region or those in JCR journals outside it? The results of the research are directed towards editorial committees of the regional journals, particularly in Latin America and the Caribbean, to scientific research managers and financiers in LAC, research assessment institutions and students and academics of the research and technology areas assessed.

Background

The impact of articles in domestic versus foreign journals

There are few studies that compare the number of citations received by articles published by the scientific community of a region in journals within that region against the articles published in journals outside that region. Uzun et al. (1993) reported that, on average, articles from Turkey that appear in U.S. and European journals are cited at higher rates than articles in journals within the country or the region. Strehl et al. (2016) determined regarding the Latin American and Caribbean region that Brazilian articles in foreign journals have a higher impact. Also, they report that the impact of the articles on some subfields in foreign journals exceeds the average global impact of the country.

In this study, we expect that the number of citations of articles from the LAC science system published in JCR journals that belong to countries located outside the region grows at a faster rate than citations of publications in Latin American and Caribbean journals. This is established as hypothesis 1.

H1 The number of citations of articles from the LAC science system in JCR journals located outside the region will grow at a faster rate than the impact of publications in JCR journals within it.

Materials and methods

Unit of analysis

Scientific production and impact based on citations from the LAC region science system in journals within and outside the region. The Scimago classification was used to demarcate the region ("Appendix"). The WoS database was used to allocate articles to Latin American and Caribbean countries, using the field C1 (addresses). An article is from the LAC region if at least one signatory author is affiliated to an institution from a country located in the LAC region. Articles published by Latin American authors who work at institutions outside the LAC region and who sign representing an institution of a country within the LAC region are also included in the database.

Timeframe

The study timeframe covers 24 years. Seven years of data was compiled at 4-year intervals, 1993, 1997, 2001, 2005, 2009, 2013 and 2017. The scientific production of the year included, not of the range of years of the interval, is measured. This was done to include the maximum possible number of recent years.

Variables

Dependent variable

Impact The impact of an article is its recognition by other articles. The quantitative value of the recognition received by an article is the number of times that it is cited in other publications. For this research, the impact of the LAC science system is the number of citations of citable documents published by Latin American and Caribbean authors in JCR journals within and outside the region. Citable documents are understood to be the categories Article, Review, Letter and Note, following the guidelines of (Van Raan, 2014). This type of document is submitted to rigorous assessment by evaluating peers. To count citations, the Science Citation Index Expanded and Social Science Citation Index were used. The Arts & Humanities Citation Index and Emerging Sources Citation Index were not used.

To calculate the impact of each document, a fixed three-year citation window was used. This is the number of citations received by each article in the year it is published and in the following two years. For example, the LAC scientific production in 2017 is the number of citable documents for that year (articles, reviews, letters, and notes).

There are two difficulties in calculating the impact and the compilation of the information. The first is that to calculate the impact of each article, a citation report must be created, and WoS restricts the maximum number of records to analyze to 10,000. In this study, there are years that exceed that number. To resolve this difficulty, the records are first ordered according to the publication date of the article or the number of times it is cited from more to less, or vice-versa. This operation avoids including duplications in the database. Then, using the "add to the list of marked records" tab, 10,000 records at a time are added until the citations report containing all the articles for the year is obtained.

Once the citations report is complete for all the documents published in the year analyzed, there is a second difficulty: WoS only allows up to 500 records to be downloaded at once. Due to this, the information from the report of the 10,000 documents analyzed had to be downloaded 500 records at a time in Excel format. We restricted the lower limit of the citations report to the year being calculated. This is vitally important, since WoS by defect makes the lower limit of the report the first year of the database, independently of the year being analyzed. For example, if citations of articles in the year 2000 are being analyzed, the database includes the first year available until the last one in the Excel table.

When it is necessary to analyze more than 10,000 documents, if the initial year is not defined, every time that new documents are added to the list of marked records, the citations corresponding to one year can be mixed with those of another. For example, for 2017, 14,553 documents were analyzed. The analysis required 10,000 records to be first added in the first group and then 4553 in the second. In each case, the tab was defined as since: 2017, which ensured that the count of citations for each article began in 2017. If for example, 2017 is not defined as the start year for the second group, WoS allocates the first year recorded, not 2017.

Once the citations reports were downloaded, the researcher had to verify that no data column in the records had moved. In the data of this study, several records were detected where the title of the article in the IT column moved, which means that the name of the journal and number of citations moved from the column and caused differences in the number of citations. To avoid this type of error, the researcher filtered to detect this possible error and made manual corrections prior to analyzing the data to avoid errors leading to loss of information.

Independent variable

Location of the journal Regional journal: a journal is considered to belong to the LAC region when it is allocated to a country in the region in the country field of the Journal of Citation Reports of Clarivate Analytics Web of Science. The 2017 JCR report contains 244 Latin American and Caribbean journals. The journals indexed in the Emerging Source Citation Index are not considered, because it only contains citation reports since 2015.

Foreign journal: A journal is foreign when it belongs to a country that is not located within the LAC region. A similar procedure is used as when allocating journals to the Latin American region. 14,551 journals appear in the JCR 2017 report in the Social Science Citation Index and in the Science Citation Index Expanded. Authors from countries in the LAC region published articles in 11,655 foreign journals in the years selected.

The model

To compare the growth rate of the impact of articles published by the LAC science system in JCR journals in the region against the impact of articles in the JCR journals outside it, an allometric analysis was performed. Formula 1 shows the model used.

$$X = kY^{\alpha} \tag{1}$$

The variable X is used to determine whether the growth rate of the impact is higher for articles published in LAC region journals or in those outside it. The model used is similar to that used by (Coccia & Bozeman, 2016) to compare the growth rate of the impact of articles with international collaboration against those published with domestic collaboration.

To interpret the results of the solution to the allometric equation, the following reasoning is used: if the exponent α is greater than 1, the impact of the articles published in the journal (within/outside the region) represented by the variable X grows at a faster rate than variable Y. The opposite occurs if α is less than 1.

In order to guarantee the accuracy of the results and the effectiveness of the model, Leguendre's equation was used (Leguendre & Leguendre, 2012). For this, a comparison of the value of the regression slope was conducted, comparing the value obtained through the minimum least square method and the standardized major axis. If the value of the slope is similar in both cases, it is concluded that the model used is correct and there is a correlation in accordance with a power-law.

Results

General descriptive results

Table 1 shows scientific production and the impact of the Latin American and Caribbean science system in JCR journals within the region and outside it. The results indicate that the number of articles in regional journals and in foreign journals increased steadily.

The impact of articles in LAC regional journals in 1993, 1997 and 2001 is less than productivity. This result confirms the findings of Ronda-Pupo (2021), who concludes that the

Table 1 Scientific production and impact of the LAC articles in JCR journals in the region and outside it. *Source*: Articles published in journals in the Science Citation Index Expanded and Social Science Citation Index

Year	Scientific production		Impact (t0 + 2)	
	Within the region	Outside the region	Within the region	Outside the region
1993	1383	11,129	431	25,471
1997	2210	17,284	1000	45,745
2001	3189	23,829	2319	78,144
2005	4579	31,959	5067	130,996
2009	14,279	44,542	18,261	224,949
2013	15,078	58,906	19,323	333,712
2017	14,553	78,699	23,785	554,499

The JCR Report, 2017 edition was used for publications in Latin American and Caribbean journals

rate of growth of the impact in the journals within the LAC region is below the growth rate of the scientific production disseminated through these journals.

Table 2 shows the distribution of scientific production of the LAC science system in regional and foreign journals according to the citations index. The results indicate that the LAC science system is concentrated in journals of the applied, natural and health science areas. Scientific production in social science journals in journals within and outside the region is low. Only 20% of domestic LAC region journals are in the Social Science Citation Index.

Also, the results show that 23% of LAC scientific production in multidisciplinary journals is outside the region. This type of journal attracts a large number of citations since this category groups the journals with the most international impact. The Science, Nature, PLOS ONE, PANAS and Frontiers journals, among others, are in this group.

Table 3 shows the distribution of LAC publications in JCR journals within and outside the region according to the magazine quartile. 52% of the articles published in journals outside the region appear in the first quartiles. Scientific management and assessment groups extol publications in journals in quartiles 1 and 2. This is a significant warning for JCR journals in the region to attract high-impact research results, which will contribute with an increase in the number of citations, as well as an increase in the

Table 2 Distribution of the number of journals and articles according to the citations index. *Source*: Science Citation Index Expanded and Social Science Citation Index and the JCR report, 2017 edition

Citations index	Within the LAC region				Outside the LAC region			
	No. journals	% total journal (%)	No. articles	% total articles (%)	No. journals	% total journals (%)	No. articles	% total articles (%)
SSCI	48	20	5023	9	1263	13	7,479	3
SCIE	176	72	43,957	80	5825	62	180,801	74
SSCI/SCIE	20	8	6290	11	2281	24	54,731	23
Total	244	100	55,270	100	9369	100	243,011	100

Table 3 Distribution of journals according to quartile. *Source*: JCR report, 2017 edition

Quartile	Within the LAC region				Outside the region			
	No. journals	% total journal (%)	No. articles	% total article (%)	No. journals	% total journals (%)	No. articles	% total article (%)
Q1	4	2	1427	3	2385	25	68,244	28
Q2	14	6	2595	5	2465	26	61,850	25
Q3	47	19	12,448	23	2401	26	59,947	25
Q4	179	73	38,800	70	2118	23	52,970	22
Total	244	100	55,270	100	9369	100	243,011	100

number of Latin American journals indexed in the first two quartiles of the JCR. This result suggests that science systems in LAC countries should not focus on the Impact Factor of journals within the region as the most important evidence for assessing the quality of publications, but should instead focus on alternative metrics based on the impact of the article, not of the journal, as has been suggested in the San Francisco Declaration on Research Assessment.

Table 4 shows the ten Latin American countries with the highest scientific productivity in JCR journals within and outside the region. These countries concentrate over 90% of the region's scientific productivity. Brazil and Mexico are at the top of the list. Costa Rica, which is placed 7th in productivity in journals within the region, is not listed among the ten Latin American countries with the highest productivity in JCR journals outside the region. While Ecuador, which is not listed among the countries with the highest scientific productivity in JCR journals within the region, is placed 10th in productivity in journals outside the region.

LAC countries with higher scientific productivity have more developed economies, are larger geographically, and also have better social development indicators. This result suggests an association between scientific-technological development and countries' economic progress (Benes, 1989).

Table 4 The ten Latin American countries with the highest scientific productivity in JCR journals within and outside the region

Rank	Within the LAC region		Outside the region	
	Country	Papers	Country	Papers
1	Brazil	37,086	Brazil	127,718
2	Mexico	6492	Mexico	50,210
3	Chile	4232	Argentina	37,903
4	Argentina	3586	Chile	24,355
5	Colombia	1902	Colombia	11,808
6	Venezuela	431	Venezuela	6564
7	Costa Rica	340	Cuba	4329
8	Cuba	283	Peru	3703
9	Peru	247	Uruguay	3589
10	Uruguay	230	Ecuador	2737

Full credit is allocated to each participating country for papers in which several Latin American countries participated

Table 5 The ten countries with highest participation in scientific productivity of the LAC science system in JCR journals within and outside the region

Rank	Within the LAC region			Outside the region		
	Country	Region	% participation LAC publications (%)	Country	Region	% participation LAC publications (%)
1	USA	Northern America	3.36	USA	Northern America	18.00
2	Spain	Western Europe	1.54	Spain	Western Europe	7.13
3	UK	Western Europe	0.71	France	Western Europe	5.59
4	France	Western Europe	0.67	Germany	Western Europe	5.10
5	Germany	Western Europe	0.60	UK	Western Europe	5.01
6	Canada	Northern America	0.58	Italy	Western Europe	3.51
7	Portugal	Western Europe	0.45	Canada	Northern America	3.42
8	Italy	Western Europe	0.31	Australia	Pacific region	2.09
9	Australia	Pacific region	0.22	Netherlands	Western Europe	1.95
10	Netherlands	Western Europe	0.16	Switzerland	Western Europe	1.67
			8.60			53.47

Each country is allocated to a region using the Scimago country rank. Available at https://www.scimagojr.com

The results in Table 5 suggest that Latin American countries direct their international collaboration principally towards disseminating their scientific productivity in JCR journals outside the region. In North America, the USA and Canada are the countries with the highest participation in scientific productivity of the Latin American science system. They are followed by Spain, the UK, France, Italy and Portugal in Western Europe, and Australia in the Asia–Pacific Region.

The creation of scientific collaboration networks with the most developed countries has allowed Latin American and Caribbean countries to reach the knowledge thresholds necessary to participate in scientific dialog in cutting-edge research in the main areas of research beyond the borders of the LAC region (Belli & Balta, 2019). Also, it is a path towards overcoming cultural and language barriers in the rigorous peer assessment process of the international JCR journals with highest international visibility. This claim is supported on the fact that collaboration with countries outside the region in scientific productivity in JCR journals within the region is low. The creation of technologies and knowledge related to the internal problems and needs of LAC countries attract little attention from researchers from more developed countries (Lujano, 2021).

Results of the allometric model analysis

Figure 1 shows the result of the allometric analysis of the growth rate of the impact of Latin American and Caribbean publications in JCR journals within the region and the impact of publications in journals outside the region. The exponent greater than one, of 1.95, suggests that the growth rate of the impact of articles of the LAC science system in

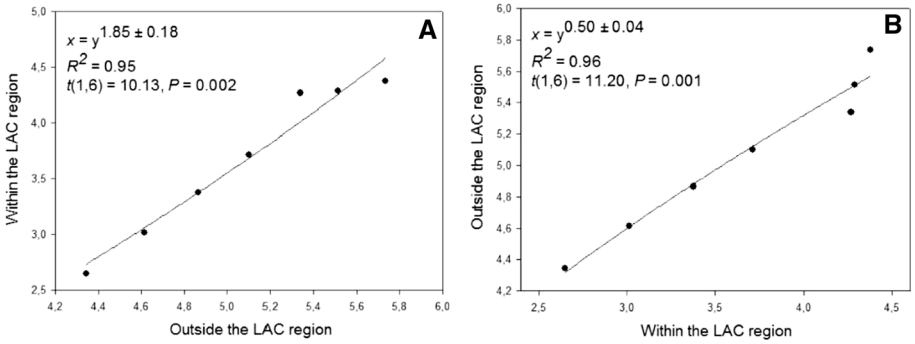

Fig. 1 Growth rate of the impact of articles of the LAC science system in JCR journals within the region (**B**) and in JCR journals outside the region (**A**). Source: Results of the power-law regression

journals outside the region is higher than the impact of articles that appear in JCR journals within the region.

The impact of LAC articles in journals outside the region grows $2^{1.85}$ or 3.60 times when scientific production in journals outside the region is doubled. To verify the result, an analysis was performed, designating the impact in regional journals as variable *X*. The result of the growth rate of the impact of articles published in journals within the region grows $2^{0.50}$ or 1.41 times when scientific production in journals within LAC is doubled. This result indicates that there is an accumulated disadvantage or Inverse Matthew Effect of the impact of articles published in journals within the LAC region in relation to those that published in journals outside the region (Katz & Cothey, 2006). In practical terms, the results insinuate that the growth rate of the impact in journals within the region grows at a significantly lower rate than the growth rate of the impact of articles published in JCR journals outside the region. The result shows that publishing articles in JCR journals outside the region provides higher recognition than if the results are published in JCR journals within the region.

Scaling correlation between impact and language

English is considered to be the *lingua franca* of science (Dewey, 2007). 90% of papers in WoS are published in English (Archambault et al., 2013). In the area of the impact of the Latin American science system, Dos Santos et al. (2021) report that papers in the Scielo regional database on Public and Collective Health for the period 2011–2018 that were published in the native languages of the Latin American countries, received more citations than the articles published in English. A similar result was reported by Ronda-Pupo and Diaz-Contreras (2014) on the impact of Latin American articles on business administration. Journals that publish in English have a broader and more diverse target audience. In order to explore the cumulative disadvantage of the rhythm of growth of the impact of articles published in JCR journals within the LAC region against articles published in journals outside it, the rhythm of growth of the impact of the articles published in English in both cases was studied.

Figure 2 shows the rhythm of growth of the impact of LAC articles published in English in foreign journals and in journals within the region. The result indicates that the number of citations of articles published in English in journals outside the region grew 2.51

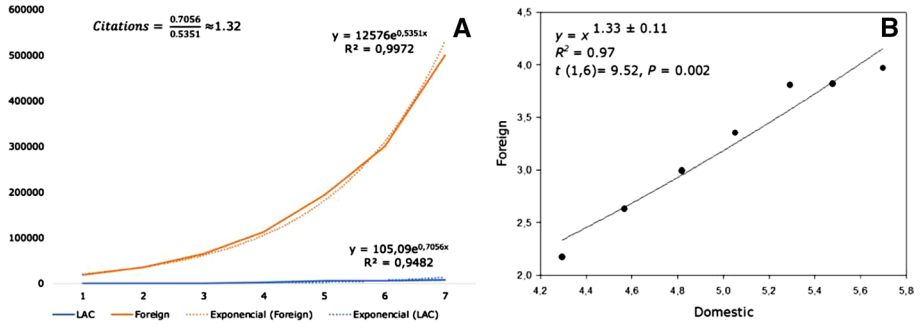

Fig. 2 Scaling correlation, at a given point in time, between language and the impact of LAC scientific production in JCR journals within and outside the region. **A** Using Katz (2005) to calculate the scaling exponent using the exponential growth curves of citations. **B** Using the power law correlation with the ordinary least squares method

times ($2^{1.33}$) when the number of articles in these journals doubled. Meanwhile, the number of citations of articles published in English in journals within the region grew 1.66 times ($2^{0.73}$) when the number of articles in this type of journal doubled. The results confirm the existence of a cumulative disadvantage of the impact of articles published in JCR journals within the region in relation to journals outside the region.

Discussion and conclusions

The number of Latin American and Caribbean region journals in the JCR has increased exponentially in the past few years. This behavior shows an increase in the quality of scientific journals within the region (Table 1). Also, it is a testimony to the effectiveness of the editorial management of the journals indexed in the JCR.

The results show a significant increase in the scientific productivity of Latin American and Caribbean countries in JCR journals, in journals within the region as well as outside the region. However, 89% of articles appear in journals outside the region. The causes of this trend could be: authors seeking to publish their best findings in journals with greater international visibility, which are generally located outside the LAC region. This result supports Maier's (2006) conclusion on the misleading assumption that authors enhance their reputation by publishing in journals with excellent reputations in the scientific community. Furthermore, scientific managers and financiers in the region require publications in the journals with the highest impact. This result supports the conclusions reached by Félix de Moya Anegón from the Scimago group, who indicates that authors seek to include their articles in JCR and Scopus journals located in the first quartile (De-Moya-Anegón, 2020). Only 2% of Latin American journals are in JCR quartiles 1 or 2. This policy again leads to publications in journals outside the Latin America and Caribbean region.

The results of the allometric analysis show that Latin American and Caribbean articles published in journals outside the region have a much greater impact than those published in journals within the region. The impact on the articles of the Latin American and Caribbean science system in foreign journals grows 3.60 times when the number of articles in foreign journals is doubled, evidencing an accumulative advantage of the impact in publications in journals outside the region. Meanwhile, articles in JCR

journals within the region show an accumulative disadvantage, since they do not grow at the same rate as scientific production. When the number of articles in journals within the region is doubled, the impact only grows 1.41 times (Fig. 1). This result supplements the findings of (Strehl et al., 2016) on the scientific production of Brazil. A comparison of the growth of the impact of articles published in English in JCR journals outside the region shows that it grew 2.51 times ($2^{1.33}$) when the number of articles in regions outside the region doubled, while the impact of papers published in English in JCR journals within the region grew 1.66 times ($2^{0.73}$), confirming the cumulative advantage of the citation impact of papers published in JCR journals outside the PAC region.

From the practical point of view, the result shows a Janus effect. On one hand, the science and technological innovation system of Latin American and Caribbean countries promotes policies to increase the number of journals indexed in JCR Clarivate Analytics Web of Science. When the regional journals are included, they enter into competition with the most prominent journals in the world in their areas. Disadvantages arising from the economic, geographical, linguistic and local nature of the findings published become limitations to the Latin American journals positioning themselves in the first JCR quartiles. 98% of Latin American journals in the JCR are in quartiles 3 and 4. And for authors who do mainstream research within Latin America as well as outside it, this situation reduces the attraction of submitting their results to LAC journals.

On the other hand, scientific managers and financiers require researchers to disseminate their results in the journals with most visibility and international impact, which are generally located outside the region. This paradox can significantly affect the medium and long-term sustainability of the LAC journals indexed in the JCR, since they compete at a disadvantage with the journals with most international impact located in countries with developed economies, dominated by the United States of America and the United Kingdom. These journals attract over 90% of the most important scientific results. As De-Moya-Anegón (2020) claims: "In the current scientific publication system, there is a global trend towards converting the most popular journals into products managed by large publishing groups, regardless of their origin or foundational objectives. This trend is observed whether the publications are promoted by academic institutions or by scientific societies.

The result is a warning to editorial committees and science planning communities, for the evaluation of science and the financing of scientific research in relation to policies and strategies related to the dissemination of scientific knowledge within the Latin American and Caribbean region. It is important to take into consideration that mainstream JCR journals are not focused on disseminating the internal problems of countries in the LAC region (Lujano, 2021). In order to contribute with a formulation that is in line with the cultural development and the geographic and economic context of the LAC region, the LATMétricas (CLACSO, 2021) congress will be held in 2021, which will discuss the latest progress in the measurement of Latin American scientific productivity in order to contribute to institutional, local, national and regional decision-making for the efficient investment of available resources in order to promote development and strengthen scientific and technological knowledge in the region, which is of vital importance for improving all areas of quality of life for its inhabitants.

Likewise, the LAC research assessment organizations should aim to enhance a mix of quantitative and qualitative indicators for more insightful evidence-based research quality evaluation, and avoid the overuse of journals' impact factors on the research assessment processes, as the San Francisco Declaration on Research Assessment suggests (DORA) (ASCB, 2015; Hicks et al., 2015). It is therefore recommendable that LAC countries utilize

classification systems for regional journals using metrics focused on the impact of the article, not of the journal.

Appendix: Latin American and Caribbean Countries

No.	Country
1	Anguilla
2	Antigua and Barbuda
3	Argentina
4	Aruba
5	Bahamas
6	Barbados
7	Belize
8	Bermuda
9	Bolivia
10	Brazil
11	Cayman Islands
12	Chile
13	Colombia
14	Costa Rica
15	Cuba
16	Dominica
17	Dominican Republic
18	Ecuador
19	El Salvador
20	Falkland Islands (Malvinas)
21	French Guiana
22	Grenada
23	Guadeloupe
24	Guatemala
25	Guyana
26	Haiti
27	Honduras
28	Jamaica
29	Martinique
30	Mexico
31	Montserrat
32	Netherlands Antilles
33	Nicaragua
34	Panama
35	Paraguay
36	Peru
37	Puerto Rico
38	Saint Kitts and Nevis
39	Saint Lucia

No.	Country
40	Saint Vincent and the Grenadines
41	South Georgia and the South Sandwich Islands
42	Suriname
43	Trinidad and Tobago
44	Turks and Caicos Islands
45	Uruguay
46	Venezuela

Source: Scimago Journal & Country Rank. Available at: https://www.scimagojr.com

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