

# Implications of Publication Requirements for the Research Output of Arab Academics of Library and Information Science in Scopus in 2011–2022 (Bibliometric Study)

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## Abstract

The Arab can be considered as a new emergent region in the world by using advanced bibliometric methods, the development of science and technology in Unsure is explored. Purpose: This article explores the implications of publication requirements for the research output of Arab academics of library and information science in Scopus, and reviews (12) years of Library and information science research in the Arab World affiliated with the (22) countries of the Arab League: a bibliometric study 2011–2022. As such it contributes to the existing body of knowledge on quantitative and qualitative effects of research evaluation policies. Design/methodology/approach: Three metrics were chosen to analyses the implications of publication requirements for the quality of research output: publications in predatory journals, publications in local journals and publications per SNIP quartile from the disciplinary perspective. Findings: Study results highlight, that: Firstly: publications of Arab academics of library and information science in predatory journals rose to (12.162 % in 2011-2013) – (39.190 in 2020-2022). Secondly: the share of publications in local journals reached the Peak of fourth period 44.595% in 2020-2022. Thirdly: though the total number of publications has risen dramatically since 2011, but the share of Q3+Q4 has exceeded the share of Q1+Q2. Summaries: the study findings highlight, that research evaluation policies are required to contain not only quantitative but also qualitative criteria. Research limitation: The study does not explore in detail the effects of a particular type of publication requirements. Practical implications: The findings of the study have practical implications for policymakers and university managers aimed to develop research evaluation policies. Originality/value: This paper gains insights into the effects of publication requirements on the research output of Arab academics of library and information science in Scopus & local journals.

## Keywords

Publication Requirements, Local Journals, Predatory Journals, Scopus, Arab Academics of Library and Information Science.

## 1. Introduction

This article aims to explore the implications of publication requirements for the research output of Arab academics of library and information science in Scopus in 2011–2022. As such, the Study contributes to the knowledge about the qualitative and quantitative aspects of research evaluation policies (Richards; Hemphill; Wright, 2004). Initially, Scopus included journals from western states, most of which have been top-ranked journals. Thus



librarians from these states have a long tradition of publishing in Scopus-indexed journals (Khare; Bhandari, 2019). Consequently, publications in Scopus-indexed journals have been considered the proxy of research quality, and non-western states have adopted policies requiring librarians to publish in these journals (Csomós, 2020). However, the earlier studies highlighted that the quantitative criteria in research evaluation policies can be achieved through publications in journals of low impact (Vanecek; Pecha, 2020). Thus the national research policies should prevent this unintended consequence. This issue is crucial for the countries that do not have a long-lasting tradition of publishing extensively internationally because their publication requirements were nationally-oriented for a long time (Hladchenko; Moed, 2021).

Arabs one of these countries. Though, in the last years, Arab claimed to have aligned its higher education system. Arab has preserved the two-level systems of doctoral degrees and scientific titles. In some EU countries, habilitation (Majed, 2015), can be viewed as the second doctoral degree. However, the second doctoral degree is about writing a second doctoral thesis, in the EU countries, it is about summarizing research done after PhD research that indicates the scholarly level of academic required for promotion to professor. Moreover, Germany has developed a career path alternative to habilitation. There are also countries that abolished the second-level doctoral degree e.g. Latvia, Estonia, Georgia and Croatia. Arab academic, having been awarded a doctoral degree and a scientific title. After 2018 publication requirements for doctoral degrees and scientific titles included publications only in Arab journals but in 2022 articles in foreign journals or Arab journals indexed in international databases were introduced into doctoral publication requirements (Gimenez; Paterson; Specht, 2024). In 2019 publications in the Scopus-and WoS-indexed journals became compulsory for the scientific titles of associate professor and professor (Cabinet of Ministers of Saudi Arabia, 2021). In the following years publications in Scopus-indexed journals were introduced into the criteria for the attestation of higher education institutions (Cabinet of Ministers of Emirate, 2022) and the allocation of the state funding for research (Ministry of Education and Science of Qatar, 2019).

This study explores the implications of publication requirements for the research output of Arab academics of library and information science in Scopus in 2011–2022. Three metrics were elaborated to analyses the quality of research output: publications in predatory and local journals and publications per SNIP quartile from the disciplinary perspective.

## 2. Literature Review

### 2.1. Bibliometric Indicators in Research Evaluation Policies

The quality of publications which refers to publishing in the highest-ranking journals, has been an indicator of academic performance for decades in Western countries (Opstrup, 2017). In the late 1980s, this tendency was reinforced due to a widespread introduction of market mechanisms aimed to enhance the accountability and effectiveness of public research as well as due to the increased role of public research in the development of knowledge societies (Shuwabakeh, 2011). Journals indexed in Scopus is assumed to support a quality level. Since the 2010s, research evaluation policies based on bibliometric indicators related to publications in Scopus-indexed journals have diffused from the Western states to Central and Eastern Europe (Alian, 2017).

Central and Eastern European countries differ in terms of research evaluation policies. In the Czech Republic, journals with a high impact factor have been favored in the research funding system since 2010 (Good *et al.*, 2015).

Lithuanian universities set their own publishing policies. In 2012–2013 many of them required librarians to have publications in WoS-indexed journals, preferably outside Lithuania. Some universities considered Lithuanian WoS-indexed journals to be of lower quality than foreign WoS-indexed journals. Universities differ in their recognition of either WoS or Scopus or both. In Estonia, universities set their own requirements for promotion to professor. Contrary to the situation in other countries, in Latvia, publishing a paper in international research journals was already in the 1990s a requirement for obtaining a professorship. However, universities on their behalf enforced stricter rules requiring articles in WoS- and Scopus-indexed journals. In Hungary, in 2015 Scopus was taken as the main source for updating the list of journals eligible for promotion to full professor. However, there is also a separate list of Hungarian journals that qualify librarians for a promotion (Khader, 2022).

Former Soviet states that do not have EU membership also introduced research evaluation policies based on bibliometric indicators related to publications in WoS- and Scopus-indexed journals 2010s (Nazarovets, 2020).

Publication requirements are related to financial incentives. However, it is known that librarians are motivated not only by financial rewards but also strive to discover knowledge and receive recognition from the scientific community (Hamshari, 2008). Revealed that the employees' acceptance of the criteria of the performance-related schemes, rather than the size of the financial package, is crucial for the effectiveness of the financial incentives. In their study on Danish universities, pay supplements range from 1 to 10% of the basic pay. Also revealed that the practices of academics from five major UK research universities were determined not only by financial rewards but reputational and intrinsic

reasons. Meanwhile, the degree of recognition achieved leads to financial rewards such as better-paying positions and research funds (Suleiman, 2005).

## 2.2. Negative Effects of Incorrect Research Evaluation Policies

Research evaluation policies requiring publications in WoS- and Scopus-indexed journals being formulated inappropriately can have multiple negative effects. Firstly, the findings on Western countries (Kolieb, 2010) as well as on the Czech Republic and Poland (Korytkowski; Kulczycki, 2019), South Korea (Kim; Bak, 2016), Indonesia (Rochmyaningsih, 2019) indicate that to avoid the deterioration in the quality of publications, the publication indicator model should give extra weight to publications in the most prestigious journals. This approach prevents the distortion in publishing patterns of librarians as an inappropriate bibliometric indicator can lead to an increase in publications in journals of lower impact (Awad; Jaloudi; Qrariah, 2018). Moreover, there is a great number of so-called predatory journals which use an open access model to obtain financial gains without providing the expected publishing services and quality. Journals indexed in Scopus are considered reputable scientific journals. However, indexing alone “sometimes means no more than the journal has a publicly available description of the peer review process, English language abstracts and titles and full content available online, state that bibliometric indicators in publishing requirements for librarians from Poland, the Czech Republic, Slovakia and Latvia stimulated them to increase the number of publications by publishing in predatory journals. It happened because publishing requirements did not aim at internationally recognized journals. Macháček and Srholec (2022) having explored publications from 172 countries in 2015–2017, argue that the social sciences have the largest number of publications in predatory journals. It is the case in the former socialist countries.

Secondly, librarians being required to publish in Scopus-indexed journals can result in librarians publishing extensively in local indexed journals. Since 2010 the number of journals indexed in Scopus and WoS from the Central and Eastern European countries has significantly increased. Earlier studies highlight that these journals are mainly the outlets for publishing the papers of local authors (Nazarovets, 2020) indicate that many of the WoS-indexed journals from Central and Eastern European countries “have low impact factors, giving them an impression of venues where it might be relatively easy to publish” which leads to more local submissions, Pajić (2015) also highlights that the shared language and lack of local WoS-indexed journals encourage authors to publish in periodicals from nearby and culturally close countries with a larger number of WoS indexed journals.

A review of the literature reveals that many bibliometric studies related to the LIS literature have been conducted in different parts of the world. However, in Arab world, No bibliometric studies related to LIS research have been conducted.

## 3. Research Setting

Publishing practices of Arab academics of library and information science: In Arab which mentions PhD as the third cycle, the one-level system of scientific degree (PhD) was preserved. In addition to a one-level system of doctoral degree, a two-level system of scientific titles—docent: associate professor and professor inherited from the Arab model also was preserved. A PhD degree allows promotion to associate professor (docent), while the second-level doctoral degree allows promotion to professor. Doctoral degrees and scientific titles provide extra payment to the salary.

Table 1: Publication Requirements Involving Articles in Scopus-indexed Journals.

Period from- to	Issue	Requirements
2011-2013	doctoral degrees	Arab journals indexed in international databases
2014-216	scientific titles (docent and professor)	article(s) in journals indexed in Scopus
2017-2019	state attestation of higher education institutions	article(s) in journals indexed in Scopus
2020-2022	state funding for research allocated by the National Fund of Research	profiles of applicants in Scopus

In November 2011, the education ministry introduced the articles in “journals of foreign countries or Arab indexed in international databases” into the requirements for doctoral degrees. However, already in December 2019, these publications were changed for publications in international journals which can be substituted with publications in Arab journals indexed in international databases. Publication requirements came into force in September 2020 (Table 1). One article in an international journal and four articles in Arab professional journals became obligatory for the PhD degree, and four international articles and sixteen articles in Arab professional journals for the second-level doctoral degree (Ministry of Education Saudi Arabia, 2022). In 2019 the Candidate of Sciences degree was renamed PhD. A PhD awarded by a Western university equals to Arab PhD and is viewed as a first-level doctoral degree. Till 2020 among the requirements for the promotion to associate professor and professor were textbooks approved by the education ministry and articles in Arab professional journals. In 2021 the new requirements were approved. They came into force in 2020. According to these requirements for the scientific title of docent (associate professor), librarians with a PhD are obliged to have a five-year work

experience, and articles in a journal indexed in Scopus, an international certificate that proves level B2 in English and study visit participation in a conferences and symposium (**Alistiqial University**, 2022). In 2019 articles in journals indexed in Scopus and WoS became one of the requirements of the state's attestation of Arab higher education institutions, Publications in the journals indexed in Scopus is among the criteria for the assessment of research projects applying for states funding, (The association of Arab Universities, **AARU**, 2020).

#### 4. Methodology

This article aims to provide a scientometric analysis of the effect of Publication Requirements for the Research Output of Arab academics of library and information science in Scopus in Period from 2011–2022 (Bibliometric study). The study analyses articles, reviews, proceeding papers and surveys. It explores the research output of Arab academics of library and information science affiliated with higher education institutions in Arab world. Three metrics were chosen to investigate the quality of the research output of Arab academics of library and information science in Scopus: publications in predatory journals, publications in local journals and publications per SNIP quartile from the disciplinary perspective. Article records for 2011-2022 were downloaded in March 2022. The differences between download years should only influence the citation data, unless Scopus has substantially changed its 2011-2022 coverage after 2022, which seems unlikely. There may be minor changes due to new de-duplication algorithms or other improvements, however. The data was checked for consistency by generating time series for the number of articles per year. Some gaps were identified due to software errors, and these were filled by re-downloading the missing data and year within three months of the original download.

Firstly: This study was divided into four periods:

First period, (2011–2013), when there were few publications per year in predatory journals.

Second period, 2014–2016, which marked the commencement of publications interest to Scopus.

Third period, 2017–2019, clearly showing the substantial impact of the Scopus on LIS research.

Fourth period, 2020–2022, because the share of publications in local journals reached the Peak.

Secondly: journals with publications of Arab academics of library and information science were checked against Beal's list. This revealed 20 predatory journals among journals in which Arab academics of library and information science published in 2011–2022.

Thirdly: among the whole list of journals in which Arab academics of library and information science published in Period from 2011–2022 journals were found 35 local journals. Journals were categorized as Arab ones because Arab are stated as a publishing country or Arab organization is stated as a publishing organization or the journals are English translations of Arab journals.

Fourthly: a field- normalized metric of SNIP which allows a comparison between subject fields was used to measure the citation impact of the sources. SNIP indicates the relative standing of a serial title within subject fields. All subject fields are divided into 100 equal-sized percentiles based on the number of serial titles, and a serial title is assigned to a percentile based on its SNIP. Quartiles are bands of serial titles that have been grouped because they occupy a similar position within their subject categories. The quartiles are quartile 1 (Q1): serial titles in 99-75th percentiles, quartile 2 (Q2): serial titles in 74-50th percentiles, quartile 3 (Q3): serial trials in 49-25th percentiles, quartile 4 (Q4): serial titles in 24-0th percentiles. The dynamic of publications of Arab academics of library and information science in Scopus sources within the SNIP quartiles was explored from the disciplinary perspective social sciences & humanities. During the analysis it was found that due to an inappropriate presentation of the author affiliation, there are Arab journals that contain publications with undefined author affiliation and territory, these publications were checked manually and allocated to the corresponding category.

Fifthly: justify - why choice

1- Scopus: Being the largest curated abstract and citation database of research literature in the world today, and often selected by customers for the breadth and depth of its content, Scopus indexes three main types of scientific content: research journals, conference proceedings, and scholarly books, and all journals covered in the Scopus database are reviewed for sufficiently high quality (**Kulkarni et al.**, 2009).

2- Period (2011-2022): Because this Period presents the dynamics and the state of the LIS research in the Arab region published. The results of the study have highlighted an upward trend in the growth of the publications, especially in the last three years, and the largest number of studies were published in the Fourth period.

Sixthly Database

- Selection of database: The selection of a database is the primary and vital task in any bibliometric study. The researcher selected the Scopus database to retrieve the bibliographic records of the publications in the field of LIS from the Arab World. The Scopus database is one of the largest abstract and indexing scholarly literature databases with extensive coverage.

- Performing searches - Source of information

Several academic databases can be used to obtain bibliometric information. In the current study, Scopus was used to retrieve the relevant documents and achieve the objectives. Scopus has effective search engine and operating functions that facilitate analysis such as journal name, year of publication, type of the document, open access, authors and country affiliation, Scopus has a document search service that allows for building complex search strings using different Boolean operators such as 'AND', 'OR', and 'NOT' with specific keywords to generate a comprehensive query for obtaining relevant data. That is why Scopus was used in many published. As for performing searches in the Scopus database using "AFFILCOUNTRY" (Palestine OR Jordan, OR Yemen OR Iraq OR Tunisia OR Algeria OR Djibouti OR "Saudi Arabia" OR Sudan OR Syria OR Somalia OR Bahrain OR Oman OR Qatar OR Comoros OR Kuwait OR Lebanon OR Libya OR Egypt OR morocco OR Mauritania OR United Arab Emirates, AND AFFIL, billionth OR learning resource cent OR information resource cent OR information common OR learning common OR research common OR library OR documentation cent).

<https://www-scopus-m.eresourcesptsl.ukm.remotexs.co/results/results.uri?sort=plf-f&src=s&st1=library&st2=libraries&sid=dada48c38129622fba899417e1020655>

- Data retrieval: A comprehensive data retrieval strategy was adopted, exclusion and inclusion criteria were applied for the maximum recall and precision of the data, and duplicate records were removed during the data retrieval process.

### 5. Discussion

This study was divided into four periods: 2011–2013, 2014–2016, 2017–2019 and 2020–2022. The first period, 2011–2013, showed a total of 27 publications in 3 years. Second period, 2014–2016, which marked the commencement of publications interest to Scopus, produced 51 publications in 3 years, indicating significant progress in the LIS literature. In the third period, 2017–2019, 57 publications were contributed to the LIS literature of Arab world, clearly showing the substantial impact of the Scopus on LIS research. And In the four period, 2020–2022, showed a total of 87 publications in just 3 years analyses research published in Scopus and found trend of a rise in the number of publications after the beginning in the four period, 2020–2022. The current study also confirms the findings of Opstrup (2017) who reported a growth LIS literature over the years, and current study also confirms the finding of **Good et al.** (2015), The researcher found an increase in LIS publications and the reviewed 12-year period suggested a positive upward trend in LIS publications and predicted the continuity of this trend.

### 6. Results

Research output of Arab academics of library and information science in Scopus in Period from 2011–2022.

Table2: Research output of Arab academics of library and information science in predatory journals Table 2 highlights that before period 2011-2013 Arab academics of library and information 97 publications per year in predatory journals. In Period 2014-2016, 182, period 2017-2019, 202 and 309 in period 2020-2022. In Period 2020-2022, the share of publications of Arab academics of library and information science in predatory journals achieved 0.97% of the total publications. As such we can assume that publication requirements adopted in recent years resulted in the increase in the number of publications of Arab academics of library and information science in predatory journals.

Table 2: Number of Publications of Arab Academics of Library and Information Science in Predatory Journals.

Period from- to	Publications
2011-2013	97
2014-2016	182
2017-2019	202
2020-2022	309
<b>Total</b>	<b>790</b>

Table3: Table 3 shows Publications and citation trends of library and information science research in the Arab world from 2011–2022 Publications and citations trends Leading countries and institutions. Table 3 provides details of the countries of the region that are prolifically producing LIS publications. Saudi Arabia (186), and United Arab Emirates (157), leads the region publishing the highest number of publications, then Kuwait (87), Egypt (78), and Jordan (77), Followed Qatar (59), and Oman (42), then Morocco (26), and Iraq (24), While the fourth group was for countries: Lebanon (18), and Tunisia (14), then Sudan (8), and Palestinian (7), The penultimate group included: Yemen (3), Libya (3), and Syria (1), Comoros, Mauritania, Somalia, Algeria, Bahrain, Djibouti was the least productive countries among the countries of the Arab region producing LIS publications.

Table 3: Shows Publications and Citation Trends of library and Information Science Research in the Arab World from 2011–2022.























Countries of the Arab world	Publications
 Saudi Arabia	186
 United Arab Emirates	157
 Kuwait	87
 Egypt	78
 Jordan	77
 Qatar	59
 Oman	42
 Morocco	26
 Iraq	24
 Lebanon	18
 Tunisia	14
 Sudan	8
 Palestinian	7
 Yemen	3
 Libya	3
 Syria	1
 Mauritania	0
 Somalia	0
 Algeria	0
 Bahrain	0
 Comoros	0
 Djibouti	0
<b>Total</b>	<b>790</b>

Table 4: the share of publications in local journals reached the Peak of 44.595% in Period 2020-2022. In Period 2017-2019 it fell to 20.271%, though the total number of publications has risen dramatically since 2011-2013, but the share of Q3+Q4 has exceeded the share of Q1+Q2.

Table 4: Percentage of Publications of Arab Academics of Library and Information Science in Local: Scopus &amp; Local Journals-indexed Journals.

Period from- to	Scopus	local journals
2011-2013	12.162 %	17.583
2014-2016	22.972 %	17.551
2017-2019	25.676 %	20.271
2020-2022	39.190 %	44.595
<b>Total</b>	<b>100%</b>	<b>100%</b>

Table5: Publications of Arab academics of library and information science per SNIP quartile: Disciplinary perspective Table 4 highlights that from 2011 to 2022 the total number of publications of Arab academics of library and information science raised but since 2011-2013 there has been a steady increase. In 2011–2022, during the whole period, the number of Q3 & Q4 exceeded Q1 & Q2. Since 2011-2013 the gap between the number of Q3+Q4 and Q1+Q2 has widened.

Table 5: Number of Publications of Arab Academics of Library and Information Science in Scopus-indexed Journals.

Period from- to	Missing	publications
2011-2013	Q1	3.322 %
	Q2	15.275 %
	Q3	28.276 %
	Q4	53.127 %
	Q1-Q4 Total	100 %
2014-2016	Q1	5.324 %
	Q2	18.278 %
	Q3	32.277 %
	Q4	44.121 %
	Q1-Q4 Total	100 %
2017-2019	Q1	6.326 %
	Q2	20.279 %
	Q3	35.270 %
	Q4	38.125 %
	Q1-Q4 Total	100 %
2020-2022	Q1	7.237 %
	Q2	22.368 %
	Q3	34.171 %
	Q4	36.224 %
	Q1-Q4 Total	100 %

Table 5 highlights that from periods 2014-2016, 2017-2019, 2020-2022 the total number of publications of Arab academics of library and information science rise, increased from period 2011–2013, during the whole period, the number of Q3 & Q4 exceeded Q1 & Q2. Since period 2011-2013 the gap between the number of Q3+Q4 and Q1+Q2 has widened. And indicates that a peak of Q1+Q2 publications was in period 2020-2022. It can be attributed to the rise in the share of publications in local journals since period 2020-2022. A widening of a gap between Q3+Q4 and Q1+Q2 occurred since period 2011-2022.

Arguably:

Firstly: Scopus publication requirements triggered the rise in the number of local Scopus-indexed journals.

Secondly: they pushed Arab academics of library and information science to publish in recently indexed open access journals with lax Peer-review process, to indicate that research evaluation policies should define qualitative criteria for journals to prevent quantitative criteria.

Thirdly: that publication requirements adopted in recent years resulted in the increase in the number of publications of Arab academics of library and information science in predatory journals.

## 6. Conclusions

This article explored the effects of publication requirements on the research output of Arab academics of library and information science in Scopus in period 2011–2022. Three metrics were elaborated to investigate the implications of publication requirements for the quality of publications: publications in predatory journals, publications in local journals and publications per SNIP quartile from the disciplinary perspective. Data were extracted from Scopus for the period from 2011 to 2022.

Firstly: an analysis of publications of Arab academics of library and information science in predatory journals revealed that the number of publications of Arab academics of library and information science in predatory journals started to rise after First period (2011-2013) and reached 0.97%. Who revealed that research evaluation policies without defined qualitative requirements for the journals resulted in librarians Arab stimulated to increase, the number of publications in predatory journals. Compared globally, Arab has a low percentage of publications in predatory journals in general, As such, the study findings resonate with (**Nazarovets**, 2020), who revealed that research evaluation policies without defined qualitative requirements for the journals resulted in academics from Central and Eastern European countries stimulated to increase.

Secondly: the exploration of publications of Arab academics of library and information science in local journals indicated an increase in the number and percentage of these publications after second period (2014-2016), which can be attributed to the changes in publication, which can be attributed to the changes in publication (requirements for doctoral degrees and scientific titles). As such, the study findings support (**Awad et al.**, 2018), who revealed that publication requirements based on quantitative criteria do not “encourage scientists to seek the optimal channel for the presentation of their research output.

Thirdly: the total number of publications has risen since third period 2017-2019. The Analysis of publications per SNIP quartile highlighted an increase in the number of both Q1+Q2 and Q3+Q4 from 2011 to 2022. Exceeded the share of Q1+Q2. In 2011-2022 there was a rise in the share of publications in journals with missing SNIP. These journals are either local journals or foreign open access journals. High-quality journals are crucial for the development of the science. They require publication requirements to be focused not only on quantity but also on quality, as it is stated in earlier studies (**Macháček; Srholec**, 2022).

Fourthly: the increase in the number of Q1+Q2 occurred due to the rise in publications in local journals and open access journals, the peer-review Standards of which are under question. As librarians publish more and more in these journals they are supposed to cite more and more publications from these journals and as a consequence, the journals shift to higher SNIP percentiles. So not always the high SNIP percentile can be seen as evidence of quality. Publication requirements led to the creation of income for particular journals indexed in Scopus which for a publication fee can publish an article without maintaining the required standards of peer review. However, in third period (2020-2022) the number and the percentage of Q1+Q2 publications exceeded Q3+Q4 and publications in journals, the increase in the number of Q1+Q2 occurred due to the rise in publications in local journals and open access journals, the peer-review standards of which are under question. academics are related not only to financial incentives but also to reputational and intrinsic reasons as well as the publication culture of discipline, as it is stated in earlier studies (**Ministry of Education Saudi Arabia**, 2022), (**Alistiqlal University**, 2022), and The association of Arab universities (**AAru**, 2020).

A summary: The Arab World, a regional block of 22 countries, has been the epicenter of knowledge and innovation for many centuries. After the gap and neglect of centuries, the region is undergoing reforms that would increase scientific activities. This study used bibliometric indicators of research impact and productivity to present the dynamics of the Arab World's research published between 2011 and 2022. The findings disclose that the fourth period witnessed a

significant increase in research productivity in the region consistent with the Arab World's recent initiatives to promote scientific research. Saudi publications attracted the highest number of citations. The study recommends adopting the open access model of publishing for increased visibility and impact based on the findings. The study findings highlight that the introduction of Scopus publication requirements resulted in the increase in the research output authors in Scopus. However, the study findings also indicate that research evaluation policies should define qualitative criteria for journals to prevent quantitative criteria to be achieved through publications in journals of lower impact. Three metrics were elaborated to investigate the implications of publication requirements for the quality of publications: publications in predatory journals, publications in local journals and publications per SNIP quartile from the disciplinary perspective. This resonates with the earlier studies on quantitative and qualitative aspects of research evaluation policies. Qualitative criteria in publication requirements prevent the waste of time and money of librarians and orient them to high standards in research. Data were extracted from Scopus for the period from 2011 to 2020.

Note: Long term and longitudinal research can be affected if the composition of a database varies over time, and text processing research can be affected if the percentage of articles with abstracts changes

## 7. Competing Interests

The author declares no competing interests.

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## Appendix

The list of journals where Arab researchers publish, ordered from the journal where they publish the most.

Source Title
Library Philosophy and Practice
Emerald Emerging Markets Case Studies
IFLA Journal
Electronic Library
Library Hi Tech
Library Review
Journal of Information Literacy
Global Knowledge, Memory and Communication
Dirasat: Human and Social Sciences
Libri
Journal of Academic Librarianship
DESIDOC Journal of Library and Information Technology
IEEE Global Engineering Education Conference, EDUCON
Journal of Librarianship and Information Science
Digital Library Perspectives
Library Management
Malaysian Journal of Library and Information Science
Journal of Information and Knowledge Management
International Information and Library Review
Publishing Research Quarterly
College and Research Libraries News
New Review of Academic Librarianship
Arabica
Performance Measurement and Metrics
New Library World
Reference Services Review
Science and Technology Libraries
Sustainability (Switzerland)
Scientometrics
Journal of the Association for Information Science and Technology
Information Development
Collection Building
Cogent Education
Public Library Quarterly
Collection and Curation
Journal of Information Science
European Journal of Social Sciences
Information Research
Bulletin des Bibliothèques de France
SAGE Open
Cataloging and Classification Quarterly
Journal of Documentation
Pakistan Journal of Library and Information Science
Information Retrieval Methods for Multidisciplinary Applications
Science and Technology Libraries
International Information and Library Review
Artificial Intelligence Review
Zeitschrift für Assyriologie und Vorderasiatische Archäologie