

The Editorial Boards of Scientific Journals as a Subject of Scientometric Research: A Literature Review

N. A. Mazov* and V. N. Gureev**

*Trofimuk Institute of Petroleum Geology and Geophysics, Siberian Branch,
Russian Academy of Sciences, Novosibirsk, Russia*

**e-mail: MazovNA@ipgg.sbras.ru*

***e-mail: GureevVN@ipgg.sbras.ru*

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Abstract—This paper presents a review of publications that explore the role of editorial boards for scholarly journals. Such studies are rather limited as the role of editorial boards of scientific periodicals has not yet been fully gauged by information experts as a subject of scientometric research. However, the study of the publication activities, as well as the geographic, linguistic, and gender distribution of editorial-board members offers a new perspective on several issues of relevance to scientometrics. Such issues include the assessment of research performance at the country, organizational, or research-group level; research and publication ethics; journal quality; and internationalization of a scientific discipline.

Keywords: journal review, editorial board, bibliometric analysis, scientometric indicators, scientific journals

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INTRODUCTION

Editors-in-chief and members of editorial boards of scientific journals play a key role in the development of science and assure research integrity, as publications are the major results of research [1]. The editorial board is viewed as an authoritative decision-making body in research; academic editors are often the most authoritative scholars [2–4]. The intensifying linkages between various scientific disciplines affect the activities of editorial boards, which are undergoing significant changes and becoming more complex. New problems that are related to publication ethics, conflicts of interest, and copyrights, as well as the choice between different publishing funding models, are emerging. Cases of plagiarism, which is becoming more difficult to detect, are multiplying [5, 6].

Several international committees have been created to adapt editorial boards to the new realities of publishing and research. The best-known committees are the Committee on Publication Ethics, the International Committee of Medical Journal Editors, the Council of Science Editors, and the European Association of Science Editors, among others [7]. These organizations and publishing houses develop increasingly more detailed guidelines for editors-in-chief and editorial-board members [8, 9].

The activities of editorial-board members are becoming more diverse and vested with responsibility. The multi-level analysis of these activities is a relevant task. In some studies, research on the work of editorial boards is an end in itself and the obtained results are

used, for example, to develop new scientometric indicators. In other studies, the analysis of the work of editorial boards and their members is only one of the ways to achieve the objectives, for example, those that are related to exploring the degree of internationalization of a scientific discipline or a country.

The starting point of the study of editorial boards dates back to the early 1980s. The paper by Sandor Zsindely et al. [1] is one of the first research studies that focused on members of editorial boards of scientific journals. This paper established the main course of study of editorial boards and defined the scope of application of the obtained data. Subsequently, three major approaches to the study of the composition of editorial boards emerged: the bibliometric, geometric, and gender approaches. The results of the study of editorial boards are most often applied in research and for journal review, as well as to assess the research capacity of geographic areas and scientific disciplines. New scientometric indicators have been developed as a result of several scholarly studies. The table summarizes tentative objectives and approaches to the study of the composition of editorial boards.

ASSESSMENT OF THE QUALITY AND DEGREE OF INTERNATIONALIZATION OF A SCIENTIFIC JOURNAL

Analysis of the Geographic Distribution of Editorial-Board Members

The international status of a scientific journal is analyzed from the perspective of the geographic repre-

The existing approaches to and objectives of research on the composition of the editorial boards of scientific journals

Research objective	Subject of research		
	The geographic (national, or linguistic) distribution of editorial-board members	The gender distribution of editorial boards	Bibliometric analysis of publication activities of editorial-board members
Assessment of the quality and degree of internationalization of a scientific journal	+	+	+
Assessment of the quality and degree of internationalization of a scientific discipline	+		
Assessment of publication activities and the degree of internationalization of a geographic region	+		
Assessment of the publication activities of an organization	+		
Assessment of the publication activities of a researcher	+	+	+

sentation of editorial boards as part of demographic research in the field of their scientific activities. Ethnic, age, gender, and other differences in the composition of editorial boards and research teams affect the experience, methodological approach, and mindset of researchers. They enrich the participants of scientific communication and contribute to more effective research and knowledge generation [10–12]. Accordingly, the narrow composition of the editorial board, based on similar education, research background, and academic experience, leads to the limited thematic and fundamental diversity of materials that are published in a journal. This also results in the fact that in most cases members of editorial boards select the same type of manuscripts for publishing [10, 13]. Anne-Wil Harzing and Isabel Metz [10] point to a conflict of interest between the potential authors and editors as manuscripts submitted by the authors from countries other than those of the editors-in-chief are more likely to be rejected due to bias. Furthermore, the lack of balanced geographic representation of international journal editorial boards may directly affect other areas of human activities. As an example, the small number of scholars from China and India that serve as editorial-board members for international business journals contributes to the smaller share of papers published by the authors from these countries, as well as the peer review of these papers

from European economic perspective. This limits the generation of knowledge on the economic development of China and Southeast Asia, although such knowledge is important for the West, despite the fact that the economic power and integration of these countries and regions in the world economy is very high [10].

An opposing view on the diversity of editorial boards exist. Specifically, Damien Besancenot et al. suggested that the diversity of board members, which reflects varying academic experience, nationality, country of residence, language, and education, negatively affects the work of editorial boards [4]. According to the authors, homogeneity (of scientific experience, education, mindset, etc.) is a prerequisite for the effective work of editorial boards, as it ensures the highest standard of scholarly article peer review, which in turn improves the quality of a scientific journal. In contrast, the diversity of editorial-board members hinders the unanimity of the manuscript reviewers, which leads to the publication of low-quality academic journal papers.

Several studies point to the shift in the geographic composition of editorial boards to the English-speaking countries (which is equally true for scientometric databases [14–17]). For the majority of international journals, editorial-board members are primarily represented by citizens of the United States, Europe, and

the UK. The impact-factor analysis for top 20 journals that were published in 15 scientific disciplines showed that in the 2000s the shares of the American, European, and British citizens among the members of editorial boards were 53%, 32%, and approximately 10%, respectively [18].

Researchers are also interested in the relationship between the country of the editor-in-chief (or the majority of the editorial-board members) and the number of papers that are published in this journal by the researchers from the same country as the editor-in-chief. As an example, Ekaterina Dyachenko showed that 90% of journals in which the editor-in-chief is an American citizen are dominated by publications from the United States, whereas for journals whose editors come from other countries, this figure does not exceed 60% [19]. Thomas E. Nisonger analyzed the distribution of editorial boards members by country [20] and showed that the editorial boards of scholarly journals that are published in the United States have fewer members from other countries in comparison to the journals from outside the United States. Similar results are presented in [10, 21]. Robert D. Shelton et al. analyzed the relationship between the age of a journal and the scope of its geographic representation and hypothesized that the geographic diversity of authors is higher for new journals, particularly given the strong growth of publications that originate from China and Southeast Asia [15]. However, this hypothesis was not confirmed, as the shares of Western authors in the existing and new journals were approximately the same.

The dominance of the American researchers on the editorial boards of top journals is interpreted differently. As an example, Anne-Wil Harzing and Isabel Metz highlighted that the uneven distribution of editorial boards by country limits the manuscript selection and review models [10]. Tibor Braun et al. interpreted this fact as the reinforcement of the research positions of the United States [21, 22].

Several objective reasons underpin frequent rejection of manuscripts that are submitted by authors from some countries (primarily developing countries) and the rare invitation to the latter to join editorial boards of international journals: the smaller volume of research and the number of publications in these countries compared with European countries and the United States, weak methodological framework, simplified statistical analysis, and insufficient knowledge of English [23]. At the same time, some studies indicate that the share of researchers from developing countries among the members of editorial boards of international journals is much lower than the number of publications that originate from the same countries. As an example, only 4 of 530 members of the editorial boards for 11 psychiatric journals were from developing countries in 2003. According to the authors of the study [23], this fact questions the international status

of such journals and hampers the circulation of knowledge in low-income countries as it prevents the international community from learning about the developments in these countries. A similar study was conducted in 2014, when the flow of publications from developing countries (particularly from China) increased significantly [24]. However, the share of members of editorial boards from the developing countries still remains very low.

Analysis of the Geographic Distribution of Editorial-Board Members

Sandor Zsindely et al. first analyzed the composition of editorial boards in order to assess the quality of scientific journals [1]. They showed a strong correlation between the number of editorial-board members from a given country on the one hand and the number of journals and authors associated with this country, on the other hand. Thus, the degree of geographic representation among the members of editorial boards can be considered as a new index that can be applied to evaluate the quality of a scientific journal. Sandor Zsindely et al. showed a direct relationship between the analyzed indicators and noted a small deviation from the regression line for different countries. Specifically, Israel, Western Europe, the United States, and Canada were better represented on editorial boards of international journals than it could be expected based on the number of academic publications and scholarly journals. Values for the number of editorial-board members from Japan, India, and the Soviet Union were lower than expected. The authors [1] argued this was due to the language barrier, as well as to a lower level of involvement of scientists from these countries in global science. The authors of more recent large-scale studies [21, 22] made similar conclusions. In this context, it should be noted that Russian scientists still tend to publish their research results in domestic journals [25, 26].

Bibliometric Analysis of Publications Authored by Members of Editorial Boards

Bibliometric analysis of the number of publications and citations that are assigned to the members of editorial boards is increasingly often used to assess the quality of scientific journals. Bibliometric indicators are partially used in the selection of journals for the Web of Science and Scopus. In 2014 bibliometric indicators were used for the peer review of Russian journals as part of the competition that was organized under a state program to support the development and promotion of Russian journals in the international information systems [27].

In 2007 Tibor Braun et al. proposed another indicator called the Gatekeeper Index to assess the quality of scholarly journals based on the analysis of publications that are authored by members of editorial boards

[28]. This indicator is based on the formula which is applied to calculate the journal impact factor, which

was applied to the publications of editorial-board members only rather than to all publications:

$$\text{GI2005} = \frac{\text{the number of cited papers that were published by members of editorial boards in a given journal in 2005}}{\text{the number of publications authored by members of editorial boards in 2003 and 2004}}$$

The authors [27] tested and experimentally proved the hypothesis that in most cases the Gatekeeper Index is higher than the impact factor of a journal due to a higher credibility of authors who are members of the editorial board compared with the other authors. This indicator can serve as an additional measure of journal quality and credibility, as well as the scientific reputation of editorial-board members (expressed in the number of citations).

Analysis of the Gender Distribution of Editorial-Board Members

Interest in the gender composition of editorial boards emerged within the mainstream gender studies in the field of research as a result of recommendations that were issued by various bodies with regard to the development of the gender dimension of scientometric indicators [2]. In the EU, the underlying research on the representation of women in science is provided in the report of the working group of the European RTD Evaluation Network [29], as well as She Figures, that have been published by the European Commission every 3 years since 2003 [30–32]. In the United States, a similar analysis is included in periodic reports of the National Science Foundation [33] and it is also conducted at the level of individual countries [34, 35].

Interest in the gender composition of editorial boards originates from the studies on the national and linguistic imbalance of editorial boards given that the editorial boards of international journals are mostly dominated by scientists from the United States and English-speaking countries. In a similar manner to the analysis of the geographic distribution among members of editorial boards, the objective of such studies is to establish the optimum composition of an editorial board. It is believed that the share of men and women in the editorial board must correspond to their ratio in the scientific field that is covered by a journal [2, 36, 37]. This approach implies correspondence rather than equality, since male and female researchers are represented to varying degrees in different areas of research: female researchers are most active in the social sciences and humanities, but they are hardly represented in engineering sciences. The authors of several studies proposed to compare the gender ratio of editorial boards with the degree to which women are represented in narrow areas, such as scientific societies [38], the professorial staff at a university [39], and scientific administration [2], rather than with the overall ratio of all employees in a scientific field. This

approach is more appropriate given the fact that members of scientific societies or university professors are more likely to be selected to join an editorial board [2].

The insufficient critical mass of women on editorial boards can lead to biased evaluation of manuscripts, which in turn reduces the effectiveness, volume, and probably quality of research in a specific discipline. As in the case of editorial boards that are dominated by representatives of the same country, the prevalence of the editorial-board members of one sex can lead to biased selection of papers on specific topics or manuscripts that give preference to certain approaches or theories [40]. In contrast, higher involvement of female researchers as well as scientists of other nationalities and countries in the publication process can further enrich and diversify publications of a journal by offering new valuable insights [12]. It is also believed that a higher involvement of female researchers in the work of editorial boards can positively affect the attraction of women to respective scientific disciplines [2].

The first papers that analyzed the gender dimension of editorial boards already pointed that the higher a position is, the lower the representation of female researchers was. The largest number of female researchers was noted among the authors of publications, followed by the first authors, members of editorial boards, and finally editors-in-chief. Specifically, B. Kennedy et al. [35] analyzed the case of medical journals and showed that a significantly larger number of women were engaged in scientific and medical research and medical practice than the number of women that served on editorial boards as editors or editors-in-chief. In another early study D. Robinson et al. [3] analyzed the gender composition of editorial boards for psychology journals over 20 years and showed an increase in the number of female researchers among paper authors and editorial-board members. At the same time, no increase was observed in the number of female editors. Overall, the dependence of the number of women on the degree of power that is assigned to their research or journal positions persists to date [2].

Special attention was paid to the gender composition of editorial boards in a series of publications by Isabel Metz et al. [37, 40, 41], which exposed the evolving changes in the ratio of male and female researchers on editorial boards of top management and business journals over 20 years and showed nuanced differences at the level of scientific disciplines, geographic regions, editorial board positions,

and journal reputation. The large-scale monitoring exposed a significant gap between the number of female researchers in the field of management and business and their representation on editorial boards. At the same time, the number of women who are first authors of publications and researchers is increasing. There is a relationship between the representation of women on editorial boards and journal prestige: their number is steadily smaller in the most authoritative periodicals [37, 41].

Overall, various studies pointed to a slow decrease in the gender gap with regard to the activities of editorial boards, although this gap has not yet been overcome. Thus, the growing representation of women in scientific fields and on editorial boards occur simultaneously, but at a different speed; in the case of editorial boards, the imbalance is decreasing significantly more slowly [2, 37].

Factors that positively affect the gender balance on editorial boards constitute a separate area of research. In particular, the active involvement of women in the work of editorial boards can be observed in the following cases: a) the editor-in-chief is a woman b) the editor-in-chief is a young researcher, c) the editor-in-chief has an accomplished scientific career, d) the editorial board consists of many experts [2, 40]. The value of such studies consists in their contribution to the study of the formation of editorial boards and candidate selection criteria, etc. [42].

To conclude the analysis of the gender composition of editorial boards for scientific journals, we note the technical complexity of such studies that are associated with large-scale automatic data processing, which requires accurate and complete name spelling: if a journal (publication or the list of members of the editorial board) only refers to a family name and initials, it complicates the recognition of the sex of the member and diminishes the accuracy of the results [2]. In inflected languages, recognition accuracy is higher; however, indeclinable names cause the same problems [34]. Overall, this problem is related to identification of researchers and has its own discourse space [43, 44]).

ASSESSMENT OF THE DEGREE OF INTERNATIONALIZATION OF SCIENTIFIC DISCIPLINES

The study of the geographic distribution of editorial boards can be used to assess the degree of internationalization of scientific fields. It is recognized that the share of members of editorial boards from different countries varies across scientific disciplines. The share of participants from other countries is not necessarily high. The efforts of researchers are focused on finding the optimal composition of editorial boards in terms of the number of members that come from the country where a journal is published, as well as other countries, which eventually should support the most efficient

development of science and the highest growth of knowledge.

Ekaterina Dyachenko [19] investigated the degree of internationalization of social and natural sciences based on the analysis of scientific journals in the related fields. It was shown that in all studied cases the editor-in-chief and the authors of the largest number of publications in the respective journals originate from the same country. However, the number of publications that are authored by the researchers from other countries does not exceed a quarter for the social sciences, while it amounts to half of the publications in the journals that are published in the field of the natural sciences. This shows that natural sciences journals (and the related disciplines) have a higher degree of internationalization, whereas the social sciences are subject to knowledge fragmentation.

While analyzing the geographic distribution of editorial boards, Ekaterina Dyachenko only referred to two countries, viz., the country of origin of the editor-in-chief and the country of origin for the majority of members of the editorial board, which limits the scope of analysis. Furthermore, the model of co-editors, which implies that several members of the editorial board are vested with equal responsibility, has been gaining ground over the recent years. It is in principle impossible to use an indicator such as the chief editor's country for such co-edited journals, as it could limit the sample and lead to inaccuracy. It should be noted that in other disciplines that were not covered by the study by Ekaterina Dyachenko, the correlation of the chief editor's country and the country that yields the greatest number of publications in the respective journal may be different. As an example, the chief editor and 7 of 22 members of the editorial board of the Australian *Ore Geology Reviews* journal are Australian citizens. At the same time, the number of publications that are authored by Chinese researchers in this journal exceeded the number of Australian papers by 2.3 times in 2015.

Obviously the fact that the overlap of the chief editor's country and the country of the majority of the editorial-board members can be explained in most cases by either personal or professional contacts that are forged through the co-authorship by the editor-in-chief with the researchers from the same country, so the latter are more often invited to join the editorial board [10, 45]. A search for members of an editorial board in another country, as well as the scientist's aspiration to join the editorial board of an international journal that is published in a country other than the researcher's country of origin often implies that the editor-in-chief or the candidate for this role must come out of his/her comfort zone and make a significant effort [10].

Anne-Wil Harzing and Isabel Metz also established the relationship between the chief editor's country and the country of the largest part of editorial-

board members based on the study of the case of business and management journals [10]. Specifically, they showed that the representation of editorial-board members that come from the United States was declining, while their share of members from other countries tended to increase. The analysis of journals that were published in other countries exposed a steady trend towards internationalization of editorial boards of scientific periodicals, although the editorial boards still predominantly consisted of the members that came from the same country that issues the journal.

ASSESSMENT OF THE PUBLICATION ACTIVITY AND THE DEGREE OF INTERNATIONALIZATION OF A GEOGRAPHIC REGION

S. Zsindely et al. proposed in 1982 to study the composition of editorial boards as a measure to evaluate the research performance of a given region (country or a group of countries) and the quality of a journal [1]. According to the authors, the greater the number of members from a particular geographic region on the editorial board of a scientific journal is, the higher the publication activities of this region are. In addition to other indicators, the analysis of the composition of editorial boards by scientific areas allows one to identify the most developed scientific fields of a region. In addition, the analysis shows the relationship between the number of publications on specific topics that originate from a particular region and the number of members of editorial boards that come from the same region that can support science policy making (for example, to expand the representation of reputable scientists on the editorial boards of international journals) [18].

Based on their previous works [1, 46], Tibor Braun et al. provided a comprehensive justification for a new scientometric indicator that takes the geographic distribution of editorial boards into account (i.e., the relationship between the number of members of editorial boards and the country's population) in two publications in 2005 [21, 22]. The authors recognized the overall international nature of science and emphasized the strong competition at the level of individual scientists, research organizations, and countries. A common assessment of the scientific results based on the number of publications and citations characterizes only one aspect of the scientific progress of a particular geographic region, namely, the final scientific results. However, the representation analysis of editorial boards that perform the important task of filtering research outcomes can shed light on the self-organization of science and thus provide a deeper understanding of its nature and internal processes. According to these authors, the total number of members of editorial boards can be determined for individual journals, as well as journal clusters that form with regard to a specific discipline or a particular region. The impor-

tance of this indicator is underpinned by the crucial role of editorial boards in the selection and review of manuscripts, which make fundamental decisions on what, to make accessible to other scientists as well as where, and when. This function is more important than the basic publication of results, which is expressed by the number of publications and citations. For this reason, it is not correct to argue that the position of the United States in global science has been reduced because of the decrease in the number of publications from the United States, as a large number of American scientists that serve on the editorial boards of scientific journals points to the continued leadership of this country [21, 22].

The main advantages of the new index versus other scientometric indicators are as follows [21, 22, 47]:

- The limited bias towards the English language, which has been highlighted in many scientometric studies [14–17];
- The higher authority of the members of editorial boards compared with “common” authors of publications, taking the academic career pathways of the formed into account, which culminated in their work on the editorial board. This fact contributes to greater objectivity of indicators;
- There is need to account for fractional data, which is required in case of publications that are co-produced by authors from different countries or organizations.

E. Garcia-Carpintero compared the number of publications that were published by authors of a given country in the most prestigious journals in 15 disciplines and the number of editors that come from the same countries and serve on the boards of the same journals [18].

ASSESSMENT OF THE PUBLICATION ACTIVITY OF AN ORGANIZATION

In 2007, a group of researchers led by Tibor Braun presented a fundamentally new approach to assessing the scientific activities of universities that can be applied to research organizations [47]. The authors highlighted several shortcomings in the methodology of university rankings and introduced their own ranking method in their pilot study, which was based on a single indicator, namely, the number of university staff that serve on the editorial boards of scientific journals. The authors argued that this indicator reflects the level of professional teaching and research pursued by university staff.

The obtained ranking lists were compared with top-level tables, such as Times Higher Education, Ranking Web of Universities, and the Shanghai ranking of universities. The results of the comparison are only fairly correlated, due to methodological differences of the rankings [46]. The scientific community has not widely supported the use of a single parameter

to assess highly complex systems such as universities. Furthermore, the authors suggested that the proposed indicator could only be used in combination with other parameters that are applied by the existing rankings ratings.

ASSESSMENT OF A RESEARCHER'S PUBLICATION ACTIVITY

A Bibliometric Analysis of Publications Authored by Members of Editorial Boards

The participation in the work of an international journal is an important part of a researcher's scientific work, which can be rewarded with certain benefits, for example, the ability to publish more papers or editorials in this journal. Therefore, on the one hand, it seems relevant to assess the entire publication activities of a member of the editorial board, including all articles and the citations received by all types of publications that are authored by the researcher. On the other hand, active work as an author and regular publication of editorial content are part of the chief editor's professional duties. From this perspective, it is not entirely justified to compare the activities of the chief editor and the members of the editorial board. Several scientometric databases are provided with tools that have been developed to perform an in-depth analysis of the editor's publication activities, with and without consideration of editorial content. [48]

The scientific community is critical of the common types of publications that editors and members of editorial boards may publish in their journals, as these issues are related to publication ethics and conflict of interest [49–51]. The importance of this matter is due to the fact that the number of publications and the quality of scientific journals directly affect the careers of researchers [52, 53] who can benefit from combining their basic work and work as part of an editorial board. It is also noted that encouraging members of editorial boards to publish in the journal for which they work is perceived as a form of compensation for their unpaid work [54].

The solution to this problem is related to the governance of peer review, which has been explored in many studies. General guidelines that are issued by COPE and Council of Science Editors are limited to the full anonymity of peer review, or to full disclosure of information on any conflict of interest in those case where it is impossible to ensure anonymity (for example, with regard to narrow areas of research, where the identity of chief editors and members of the editorial board as the authors of manuscripts can be easily traced) [8, 55].

There is a good understanding of this problem. However, it is still far from being resolved as various journals have developed different rules for members of the editorial boards (on the rare occasions when this question is generally considered or regulatory docu-

ments are in the public domain). As an example, some journals recommend that the members of their editorial boards publish their works in the respective journals in the first place. In contrast, other journals fully prohibit the members of their editorial board to publish any work in these journals as long as they are part of the editorial board.

However, it has been noted that editors and members of editorial boards rarely abuse their positions. Thus, no significant correlation was detected between a researcher's work for the editorial board of a journal and the number of publications that this researcher published in this journal, as the case of library and information sciences shows [50]. Similar results were obtained in a study of the journals that are published in different fields of knowledge in Croatia [51]. However, a relationship was established for medical journals: the members of the editorial boards of the analyzed journals were three times more likely (7.7%) to publish in these journals compared to the members of the editorial boards of other competing medical journals (2.8%) [54]. The studies that explored the extent to which members of editorial boards publish their papers in the respective journals showed that greater transparency must be ensured with regard to the publication activities of the members of editorial boards in the respective journals and more regulatory documents are necessary, even if the abuse of their position of authority is insignificant [50, 51, 54].

Another type of challenge is posed by the citations that are obtained by a researcher due to his/her work for an editorial board. The question was raised in the scientific literature of the degree to which the publications that are authored by chief editors and members of the editorial board are cited. It is noted that a significant part of the citations may not directly relate to the topic of citing publications and represents so-called "ingratiating" citations that aim at improving the citation rate of the journal targeted by a manuscript, as well as the chance of getting the manuscript published by this journal [56]. In some cases, the editorial boards implicitly demand that certain works (associated with the members of the editorial board, reviewers, or a journal) be cited. This practice is condemned by experts on publication ethics [8] and database developers take such incidents into account while calculating scientometric indicators [48].

As was concluded in one dedicated study that explored the scope of "ingratiating" citations in journals in computer science and library science, the share of such citations is extremely small [56]. In addition, no clear tendency was found with regard to an increase or reduction in the share of citations of the members of an editorial board at different periods of time. The authors concluded that the practice of "ingratiating" citations is limited to a few single cases that do not apply to the scientific field in general [56].

Analysis of the Gender Distribution of Editorial Boards

The analysis of gender distribution of editorial boards, which is applied to define the degree of objectivity while evaluating the scientific performance of scientists, has been presented in a small number of publications. This question has thus far only been formulated and requires research for its resolution. Isabel Metz and Anne-Wil Harzing pay special attention to this issue, as it is highly important to ensure the compliance of the share of female researchers on editorial boards and those who are active in the respective scientific field [37]. Such data can be used to adjust the calculation of indicators of scientific performance accordingly. Furthermore, these researchers highlighted the contribution of the results of the gender analysis with regard to the composition of editorial boards to the achievement of a balance in a particular research area [37] as it confronts editors with this issue and encourages the revision of editorial policies with regard to the selection of members for editorial boards.

CONCLUSIONS

This paper presented the key areas of research on various aspects related to the composition and work of the editorial boards of scientific journals. Despite the limited number of publications, three major vectors of research on editorial boards can be identified: analysis of the geographic and gender distributions of editorial boards, as well as bibliometric assessment of their publication activities. A small part of the studies have a foundational nature, as they formulate the theoretical foundations for research on editorial boards as a new subject of study in scientometrics. Many studies have presented the results of the focused analysis of composition or publication activities of the members of the editorial boards of scientific journals. Most of these studies have been conducted by experts in librarianship and information science and were published in scientometric journals. Significant interest in the issue can be observed in the biomedical sciences and in the field of management.

It is possible to use the results of research on editorial boards to assess the quality of journals and publication activities at different levels of research varying from the individual scientist to a large geographic region. This provides a great opportunity to assess the degree of internationalization of a journal, discipline, organization, or country.

The value of editorial boards as a new subject of scientometric research is only beginning to be grasped. In several countries including Russia, where scholarly publishing is rather developed, similar studies have not yet been pursued. Data on the composition and publication activities of editorial boards of scientific journals can be used to support the entire range of scientometric tasks.

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