

# Motivation of Researchers to Publish in High-Quality Journals: A Theoretical Framework

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**Abstract** – This paper provides a theoretical framework on the topic of researchers' motivation to publish in journals indexed in Scopus and Web of Science. It is based on a literature review from 1985 to September 2019, using a structured approach, content analysis and descriptive statistics. The results show that the topic has not received enough attention yet. Of the 14 motivational drivers found, the most cited are collaboration, research funding, financial assets, and contributions to society. Also, this paper outlines the gaps in the literature and suggests ideas for future research.

**Keywords** – Higher education, motivation, journal publications, Scopus & WoS, research management.

## 1. Introduction

Knowledge is a key driver for the competitiveness of economies [1]. Undoubtedly, researchers' publishing activity is at the centre of global knowledge production [2]. In the current globalization, high-tech environment and expansion of research, the issue of research quality has emerged as extremely important for all actors in the society [3], [4].

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High-quality publications are at the root of researchers' prestige, recognition in science, career progression. Also, the quality of research is an important indicator for evaluating performance, quality and accreditation of universities [5].

It carries great weight in the most prestigious university rankings. Despite the contradictory views, rankings are a key tool for measuring university involvement in the world of science. In addition, high-quality research publications remain the primary tool for describing national and individual contributions to science and society.

I believe that the motivation of researchers to publish in high-quality journals is crucial to achieving the goals of all stakeholders – researchers, universities, society. This paper seeks to contribute at least a little to these ends.

A lack of consensus has been found in the literature on the term of research quality. The term adopted here is drawn from the essence of Scientology, understood as “the science of science”. Its basic tenet is that knowledge creation and control is amenable to measurement and evaluation. In current information technology, the application of this principle implies a definition of the term in the context of modern evaluation tools such as electronic scientific databases. Scopus and Web of Science (WoS) are considered to be very prestigious and of high quality in the scientific community. Therefore, the term “high-quality journals” is used below instead of “journals indexed in Scopus and Web of Science”.

## 2. Research Objectives

The main objective of this paper is to establish a theoretical framework on the topic of researchers' motivation to publish in journals indexed by Scopus and Web of Science (Scopus & WoS) databases. A literature review will be carried out to this end.

Other research objectives are to find gaps in the scientific literature on the topic and to suggest some ideas for future research on it.

### 3. Research Methods

This paper takes a structured approach to review research published in Scopus & WoS from 1985 to September 2019 on the topic of researchers' motivation to publish in high-quality journals.

The research process covered three stages: planning, conducting, and reporting the review.

#### 3.1. Planning the Review

At this stage, a review protocol was prepared in line with prescription in [6] (see Tab. 1.).

Table 1. Elements of the review protocol of this study

|   |  |
|---|--|
| <i>The need for this review</i>   |  |
| The great importance of motivating researchers to publish in high-quality journals for all stakeholders in research/ educational processes - researchers, universities and society. |  |
| <i>Research questions (RQ)</i>  |  |
| RQ1. What are the main drivers of researchers' motivation to publish in high-quality journals?  |  |
| RQ2. What are the main features of stakeholders' potential to influence researchers' motivation to publish in high-quality journals?  |  |
| <i>Sources searched</i>   |  |
| Scopus & WoS  |  |
| <i>Search phrases/terms</i>   |  |
| ✓   | “researchers’ motivation ...” phrase: (“researcher*” OR “academici*” OR “professor*”) AND “motivati*” AND (“publishi*” OR “scientific”) AND “producti*”  |
| ✓   | “stakeholders’ potential to influence researchers’ motivation...” phrase formed by two mixes of terms:   |
| –   | “motivation” AND (“researcher*” OR “academic*” OR “professor*” OR (“higher” OR “tertiary”) AND “education”) AND “stakeholder*” AND “potential” AND (“impact” OR “influence”) OR (“feature*” OR “peculiarit*” OR “specificit*”))                                |
| –   | (“researcher*” OR “academic*” OR “professor*”) AND (“higher” OR “tertiary”) AND “education”) AND “stakeholder*” AND (“potential” OR “power”) AND (“impact” OR “influence”) OR (“feature*” OR “peculiarit*” OR “specificit*”)) AND (“publish*” OR “scientific”) |
| <i>Search strategy</i>  |  |
| Fields: Title, Abstract and Keywords; Period: 1985-09.2019.   |  |
| <i>Inclusion criteria</i>   |  |
| Papers containing the search phrases and published in the period defined; Types of documents: all; Language: all.   |  |
| <i>Exclusion criteria</i>   |  |
| Papers that are: 1. (primary) outside the field of Education & Research and irrelevant to the research topic; 2 (secondary) irrelevant to the research objectives of the study.     |  |
| <i>Quality criteria</i>   |  |
| Only peer-reviewed and full-text available papers.  |  |

#### 3.2. Conducting the Review

Following the recommendations of [6], this stage was carried out in four procedures: literature search,

screening of results and data extraction, eligibility analysis of references, and data synthesis.

The search procedure was conducted in two parts concerning the research questions (see Tab. 1.). For RQ1, the search was conducted for a combination of keywords forming the phrase “researcher’s motivation ...” (see Fig. 1.). Two combinations of keywords were searched for RQ2 and results were combined under the phrase “stakeholders’ potential to influence researchers’ motivation...” (see Fig. 2.).

Content analysis was performed for all references to evaluate their relevance to the research topic/objectives in the screening procedure and the eligibility to be included in the literature review.

In the data synthesis procedure, the literature was classified according to the following criteria:

- Publication year (see Fig. 3.);
- Publishing source (see Fig. 4.);
- Research methods (see Tab. 2., Fig. 5.), incl.:
  - Reference theory (motivational, other social, economic, no theory);
  - Research approach (empirical/non-empirical qualitative/quantitative, mixed);
  - Research type (confirmatory, exploratory/interpretive, descriptive, formulative);
  - Data collection (survey, interview, case study, other);
  - Data analysis (descriptive statistics, inferential statistics, interpretation, mixed, other).

The first two classifications are intended to demonstrate the relevance of this study. The third classification is aimed at studying the research methods/models applied in the literature. The results synthesized in Tab. 3. and 4. are used to answer the research questions.

#### 3.3. Reporting the Review

At the reporting stage, descriptive statistics were adopted to present the results of this study.

### 4. Results

#### 4.1. Search Results

Following the search strategy defined in Tab. 1., the search for the phrase “researchers’ motivation ...” (see Fig. 1.) found 372 papers (Scopus – 243, WoS - 123). Due to duplicates, 73 papers were removed. Then, content analysis (reading and evaluating) by abstract was made for the remaining 299 papers. Of these, 150 papers were excluded (68 in non-education & research fields and 82 irrelevant to the research topic) according to the primary exclusion criteria (see Tab. 1.). A second screening of the remaining 149 papers was made. At this step,

112 papers were evaluated irrelevant to the research objectives (second exclusion criterion, see Tab.1.). At the next step, 37 papers were considered eligible for inclusion in the literature review. The full text of 14 papers was not found. As a result, 23 papers were included in this literature review regarding the search phrase “researchers’ motivation ...” (see Fig. 1.).

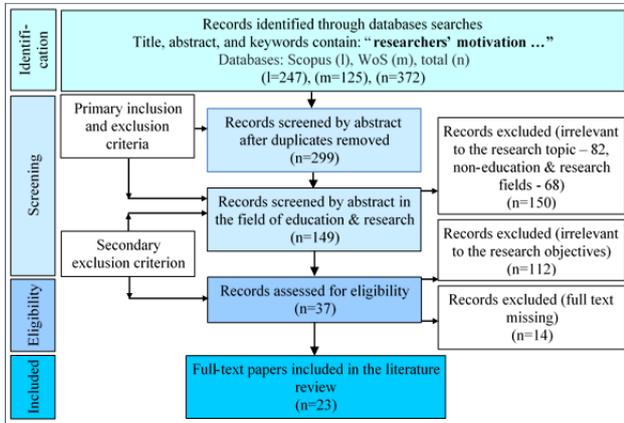


Figure 1. PRISMA diagram for the search phrase “researchers’ motivation ...”

Searches were made for both elements of the phrase “stakeholders’ potential to influence researchers’ motivation...” (see Tab. 1., Fig. 2.). These searches resulted in a total of 131 documents. The duplicate check identified 32 duplicate titles. They were removed. At the next step, the remaining papers (99) were content analysed by abstract. In line with the secondary exclusion criteria (see Tab. 1.), 89 papers were excluded because of their irrelevance to the research objectives. At the third step, the remaining papers (10) were analysed for eligibility. Subsequently, 4 papers were excluded due to the inability to find their full texts. As a result of searches for the phrase “stakeholders’ potential to influence researchers’ motivation...”, 6 papers were approved for inclusion in this literature review.

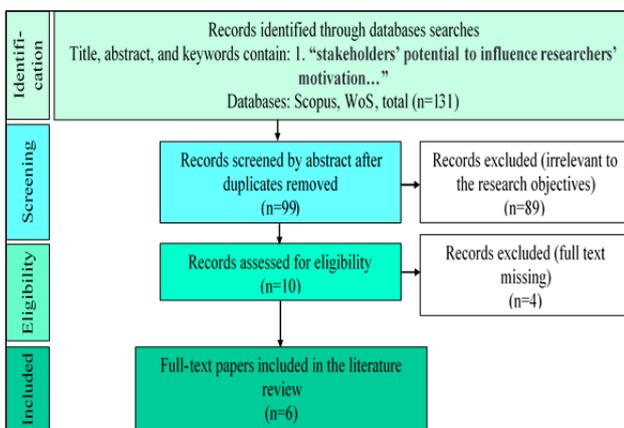


Figure 2. PRISMA diagram for the search phrase “stakeholders’ potential to influence researchers’ motivation...”

The screening procedure of the search results for the phrase “researchers’ motivation...” identified many descriptions and evidence of the barriers to this motivation. Most of them can also be defined as features of the stakeholders’ potential to influence the researchers’ motivation. For this reason, the papers included in the data synthesis for both search phrases were saved in a common list. Below, this list is considered as one database, called “sample” of this study, which is used to classify the literature. The database forms the “sample” of this study. It contains a total of 29 references ([7] to [35], see Fig. 3., 4., 5.). The specific application of the various papers to answer the research questions is clarified hereinafter (see Tab. 3., Tab. 4.).

#### 4.2. Publishing Period

A breakdown by years of the papers included in this sample is shown in Fig. 3. The results show discrete increases in papers in 2013 and 2016. Peaks were achieved in 2014 and 2018. Declines of papers were observed in 2017 and 2019.

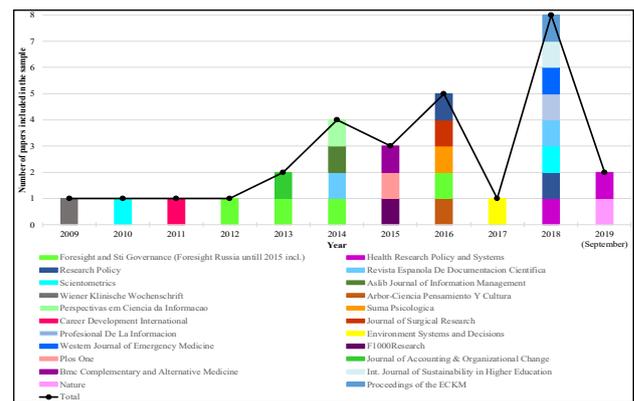


Figure 3. Chronological distribution of this sample

#### 4.3. Publishing Sources

A summary of the publishing sources related to the papers of this sample is shown in Fig. 4. As you can see, the papers are published in 21 scientific journals and a book of proceedings, including [34].

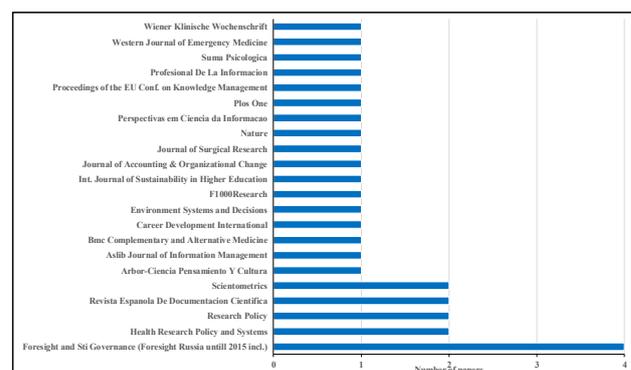


Figure 4. Publishing sources of this sample

The main publishing sources are 5 journals, including *Foresight and Sti Government (entitled Foresight Russia until 2015)*, *Health Research Policy and Systems*, *Research Policy*, *Revista Espanola de Documentacion Cientifica*, and *Scientometrics*. These journals (22.73% of all sources) published 12 papers, representing 41.38% of the sample. The other 17 sources (77.27% of sources) published the remaining papers (17), representing 58.62% of the sample. *Foresight and Sti Government* (4.55% of sources), published 4 papers (13.79% of the sample).

Four of the main sources are indexed by Scopus & WoS in the subject areas of computer science, management of technology, library and information sciences, and/ or general management.

#### 4.4. Research Methods

An overview of the research methods used in the sample of this study is shown in Tab. 2. and Fig. 5.

Table 2. Research methods used in this sample

| Research method |                             | Papers from the sample |            |
|-----------------|-----------------------------|------------------------|------------|
|                 |                             | Total                  | %          |
| <b>1</b>        | <b>Reference theory</b>     |                        | <b>100</b> |
| 1.1             | Motivational theory (cited) | 7                      | 24.14      |
| 1.2             | Other social theory         | 8                      | 27.59      |
| 1.3             | Economic theory             | 2                      | 6.89       |
| 1.4             | No theory                   | 12                     | 41.38      |
| <b>3</b>        | <b>Reference approach</b>   |                        | <b>100</b> |
| 2.1             | Empirical qualitative       | 19                     | 65.52      |
| 2.2             | Empirical quantitative      | 4                      | 13.79      |
| 2.3             | Non-empirical qualitative   | 4                      | 13.79      |
| 2.4             | Non-empirical quantitative  | 1                      | 3.45       |
| 2.5             | Non-empirical mixed         | 1                      | 3.45       |
| <b>3</b>        | <b>Reference type</b>       |                        | <b>100</b> |
| 3.1             | Confirmatory                | 6                      | 20.69      |
| 3.2             | Exploratory/interpretive    | 8                      | 27.59      |
| 3.3             | Descriptive                 | 5                      | 17.24      |
| 3.4             | Formulative                 | 10                     | 34.48      |
| <b>4</b>        | <b>Data collection</b>      |                        | <b>100</b> |
| 4.1             | Survey                      | 14                     | 48.28      |
| 4.2             | Interview                   | 2                      | 6.9        |
| 4.3             | Case study                  | 2                      | 6.9        |
| 4.4             | Other methods               | 11                     | 37.92      |
| <b>5</b>        | <b>Data analysis</b>        |                        | <b>100</b> |
| 5.1             | Descriptive statistics      | 8                      | 27.58      |
| 5.2             | Inferential statistics      | 12                     | 41.38      |
| 5.3             | Interpretation              | 7                      | 24.14      |
| 5.4             | Mixed methods               | 2                      | 6.9        |

Regarding the reference theory, only 7 papers apply motivational theories. Of these, 4 papers ([27], [30], [34], [35]) cite motivational theories but do not use them as a basis for research. The main motivational theories used in the other 3 papers ([8], [17], [28]) are the self-determination theory, theories of motivational forces and occupational commitment,

the expectancy theory by Vroom, and the behavioural reinforcement theory by Tien and Blackburn. Other social theories are used in 8 papers and economic theories in 2 papers. Most papers (12) are non-theory based. They represent 41.38% of the sample.

Regarding the reference approach, papers based on empirical research prevail (23 papers). Of these, 19 papers use an empirical qualitative approach, representing 65.52% of the sample. Papers based on a non-empirical quantitative or mixed approach are the least - one paper of each type.

Regarding the reference type, the sample is dominated by the formulative and explanatory/interpretive papers with the following numbers (%) 10 (34.48%) and 8 (27.59%) respectively. The confirmatory papers (6, 20.69%) and the descriptive ones (5, 17.24%) are almost balanced.

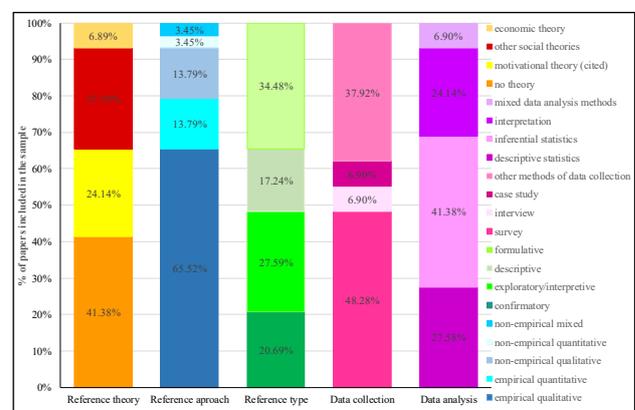


Figure 5. Structure of the research methods for the sample

Regarding the data collection methods, the survey is the most frequently applied (14 times, 48.28%), followed by other methods (11 times, 37.92%). Very few case studies and interviews are used - 2 times (6.9%) each. Scientific databases are used as other methods of data collection in most cases (8). The others (3) are focus groups and meetings.

Regarding data analysis methods, the collected data are mainly analysed by methods of inferential statistics (12 times, 41.38%). Methods of descriptive statistics (8 times, 27.58%) and interpretation (7 times, 24.14%) are almost balanced. Mixed methods are the least used (2 times, 6.9%). Regression and factor analysis are the most often used methods of inferential statistics. Only 1 paper [28] uses meta-analysis as a statistical tool for data analysis.

#### 4.5. Answers to the Research Questions

The results for RQ1 and RQ2 are shown in Tab. 3. and Tab. 4., respectively, to allow easy graphical comparison of rankings. The tables also present the references of the papers from which the corresponding results were extracted.

To RQ1, the main drivers of researchers'

motivation to publish in high-quality journals are identified. They were extracted by content analysis of the full-text papers from [7] to [29], found through the search phrase “researchers’ motivation ...” (Fig. 1.). The results of this analysis are as follows.

First, only two models for the researchers’ motivation to publish (see [17], [28]) were found. The other 21 papers identify motivational drivers in the context of a specific empirical study or as a side-issue related to another research topic. The first model is part of the research vitality model of Gilstrap et al. (see [17]). This motivational model combines the concepts of motivational forces by Maertz & Griffeth (see [36]) and occupational commitment by Meyer et al. (see [37]). Four groups of motivational sources are defined in the model: 1) Affective; 2) Alternative, calculative and behavioural; 3) Normative, contractual, and moral/ethical; 4) Constituent. The second model, by the one of Wills et al. (see [28]), is based on a meta-analysis on the topic of accounting researchers’ productivity. It classifies motivational drivers in 3 clusters: Government level (research productivity strategy), Institutional level (institutional characteristics, conflicting commitment, extrinsic motivation); Individual level (skills/knowledge & other individual characteristics, politics of research, intrinsic motivation).

Second, using content analysis, 14 motivational drivers were identified and classified into two groups (see Tab. 3.): extrinsic and intrinsic. The extrinsic driver group covers 9 indicators, including academic pressure reducing, collaboration/networking and co-authorship, competition, funding of research/projects, researcher’s reputation/recognition, university reputation/recognition, financial assets (salary, fair bonuses, rewards, etc.), promotion/tenure and career abroad, working conditions (job security, independence, etc.). The motivational drivers (5)

included the intrinsic driver group are contribution to society/dissemination of knowledge, contribution to science/technology, personal development, enjoyment of science, challenging/creative work. All motivational drivers were ranked in a single ranking by their frequency of occurrence in the papers.

Third, six motivational drivers dominate by rank according to the results. The highest first rank is for the collaboration featured in 11 papers. Four drivers, featured in 8 papers, are ranked second: funding, financial assets, promotion, and contribution to society. The researcher’s reputation (7 papers) is ranked third. The lowest-ranked are the competition (3 papers) and the university’s reputation (2 papers), at sixth and seventh place respectively.

To RQ2, the main features of stakeholders’ potential (see Tab. 4.) to influence researchers’ motivation to publish in high-quality journals are identified by content analysis of the full-text papers:

- [30] to [35], found through the search phrase “stakeholders’ potential to influence researchers’ motivation...” (Fig. 1.);
- [7] to [29] on the barriers to the researchers’ motivation to publish.

The results of this analysis are as follows. First, no model for the stakeholders’ potential to influence researchers’ motivation to publish was found in this sample.

Second, 12 features of stakeholders’ potential (see Tab. 4.) to influence were identified in this study: affinity to research/scientific work, collaboration/networking potential, use of foreign languages, funding of research, immaterial support, intellectual abilities of researcher, material support/ incentives, methodological training, other types of publications, promotion/tenure, time, university potential, incl. size and resources. They were ranked by their frequency of occurrence in the papers.

Table 3. Ranking the motivational drivers of researchers to publish in high-quality journals

|          | Motivational driver                                    | Reference   | Rank |
|----------|--|---|------|
| <b>1</b> | <b>Extrinsic</b>                                       |   |      |
| 1.1      | Academic pressure reducing                             | [8], [12], [17], [20]   | 5    |
| 1.2      | Collaboration/networking, co-authorship                | [7], [10], [14], [15], [16], [18], [19], [21], [26], [27], [28] | 1    |
| 1.3      | Competition  | [14], [25], [26]  | 6    |
| 1.4      | Funding of research/projects                           | [15], [16], [18], [23], [24], [25], [26], [28]                  | 2    |
| 1.5      | Researcher’s reputation/recognition                    | [8], [9], [11], [12], [15], [17], [20]                          | 3    |
| 1.6      | University reputation/recognition                      | [8], [21]   | 7    |
| 1.7      | Financial assets (salary, fair bonuses, rewards, etc.) | [9], [10], [11], [14], [16], [17], [22], [24]                   | 2    |
| 1.8      | Promotion, tenure, career abroad                       | [11], [12], [13], [17], [21], [22], [24], [25]                  | 2    |
| 1.9      | Working conditions (security, independence, etc.)      | [9], [14], [22], [24]   | 5    |
| <b>2</b> | <b>Intrinsic</b>                                       |   |      |
| 2.1      | Contribution to society/dissemination of knowledge     | [8], [12], [17], [18], [21], [25], [26], [29]                   | 2    |
| 2.2      | Contribution to science/technology                     | [8], [11], [12], [22], [29]                                     | 4    |
| 2.3      | Personal development                                   | [11], [12], [14], [18], [26]                                    | 4    |
| 2.4      | Enjoyment of science                                   | [9], [10], [11], [18], [26]                                     | 4    |
| 2.5      | Challenging/creative work                              | [9], [11], [14], [17], [18]                                     | 4    |

Table 4. Ranking the features of stakeholders' potential to influence researchers' motivation to publish in high-quality journals

| Potential feature                              | Reference   | Rank |
|--|---|------|
| 1 Affinity to research/scientific work         | [12], [17], [34]  | 6    |
| 2 Collaboration/networking potential           | [7], [10], [14], [15], [16], [18], [19], [21], [26], [27], [28], [31], [35] | 1    |
| 3 Use of foreign languages                     | [14], [16], [23], [28]  | 5    |
| 4 Funding of research/projects                 | [15], [16], [18], [23], [24], [25], [26], [28], [31]                        | 3    |
| 5 Immaterial support                           | [11], [16], [21], [25], [31]  | 4    |
| 6 Intellectual abilities                       | [10], [28], [34]  | 6    |
| 7 Material support/incentives                  | [11], [13], [15], [16], [21], [25], [28], [30], [32], [33]                  | 2    |
| 8 Methodological training                      | [13], [16], [25], [28], [31]  | 4    |
| 9 Other types of publications                  | [8]   | 7    |
| 10 Promotion, tenure                           | [11], [12], [13], [17], [21], [22], [24], [25], [31]                        | 3    |
| 11 Time  | [8], [10], [13], [15], [16], [18], [22], [25], [28]                         | 3    |
| 12 University potential, incl. size, resources | [13], [21], [23], [28], [31]  | 4    |

Third, five features of stakeholders' potential dominate by rank (see Tab. 4.). Their ranks are as follows. The highest first rank is for the collaboration potential featured in 13 papers. Material support, featured in 10 papers, is ranked second. Funding, promotion and time, featured in 9 papers, are ranked third. It should be noted that the affinity to research and researchers' intellectual abilities are featured in 3 papers and ranked very low, sixth. The lowest seventh rank is for other types of publications featured in 1 paper.

## 5. Discussion

In this study, the following conclusions can be drawn on the topic of researchers' motivation to publish in high-quality journals:

- For the publishing period (see Fig. 3.):
  - Researchers are interested in this topic in recent years, especially since 2009.
  - The first peak in scholarly work, in 2014, indicates that this topic is emerging in the scientific literature. The second peak, in 2018, is evidence that the topic is still relevant.
  - The reasons for the first decline, in 2017, remain unclear. Probably, the second decline, in 2019, is since this study does not cover all of 2019.
  - The chronological analysis of the publication activity shows that this topic is currently underdeveloped. So, there is great scope for research.
- For the publishing sources (see Fig. 4.):
  - There is a significant dispersion of publishing sources over the period covered by this study.
  - The topic of researchers' motivation to publish was most interesting for *Foresight and Sti Government*. Perhaps the main

reason for its interest is the high relevance of this topic in Eastern European countries at present [14].

- Research journals mainly in the field of computer science, library and information sciences, and management (e.g. *Revista Espanola de Documentacion Cientifica*, *Research Policy*, *Scientometrics*, etc.) were interested in the topic of this study.
- For the reference theory (see Tab. 2., Fig. 5.):
  - Papers that not only cite but also draw on motivational theories are few (3). Their proportion is barely 10.34%.
  - Most papers in the sample are not based on any reference theory. If used, these are mostly social theories other than motivational ones. This indicates that the topic is still underdeveloped.
- For the reference approach (see Tab. 2., Fig. 5.):
  - The high proportion of applying the empirical qualitative approach can be explained by the qualitative nature of the main categories studied, 'motivation' and 'influence on motivation'.
  - On the other hand, the small amount of papers relying on purely quantitative approaches again proves the emerging nature of this topic.
- For the reference type (see Tab. 2., Fig. 5.): The large number of formulative and exploratory/interpretive papers indicate that research on this topic is still in its infancy.
- For the data collection methods (see Tab. 2., Fig. 5.): Survey and electronic databases were mostly used as data collection methods.
- For the data analysis methods (see Tab. 2., Fig. 5.):
  - The widespread use of inferential statistics methods for analysis ensures the reliability of conclusions.

- The proportion of interpretation is relatively high. On this basis, it is possible to introduce tools that can process qualitative information.
- For RQ1 (see Tab. 3., Fig. 6.):



Figure 6. A cloud of motivational drivers for this sample

- According to this sample, the most important motivational driver is collaboration, networking and co-authorship. It is an extrinsic driver for researchers. There are supposed to be two main groups of reasons for this great importance. The first group of reasons covers the high publishing requirements of journals indexed by Scopus & WoS, the high rejection rate of these journals, and the difficulties, including financial ones, that authors face even if their papers are accepted for publication. Second, collaboration increases publishing opportunities in high-quality journals by adding comparative advantages to both papers and their authors. These are high-quality scientific product, experience, expertise, prestige, financial resources, time-saving, etc.
- In this sample, extrinsic drivers related to material resources/support (funding of research/ projects; financial assets - salary, fair bonuses, rewards, etc.; promotion, tenure, career abroad) are highly ranked, second. Perhaps this result is due to the complexity and difficulty of publishing activity in high-quality journals, which requires much resources and time.
- Contribution to society/dissemination of knowledge is the only highly ranked intrinsic motivational driver. It is equally ranked to material drivers, second.
- In general, extrinsic motivational drivers are predominant in number. They were also featured in more papers and therefore ranked higher.
- The model of Gilstrap et al. [17] is interesting but clarifies the reasons, not the nature of motivational drivers. Thus, only the drivers explicitly cited in [17] were included in Tab. 3.

- The model of Wills et al. [28] is generic. It covers groups of motivational drivers at all levels, from the individual to the state one. But, alas, this model is not presented in detail in [28]. In evaluating researchers' motivation at a given level, it is not clear whether motivational drivers at other levels are taken into account. And if so, what mechanism is being used for this purpose? Therefore, the model is difficult to apply at a university as it requires the involvement of stakeholders at all levels.

- For RQ2 (see Tab. 4., Fig. 7.):



Figure 7. A cloud of features of the stakeholders' potential for this sample

- To a large extent, the results of this sample for RQ2 confirm the main results obtained for RQ1. Collaboration is again ranked first with an even higher score, but as a feature of stakeholders' potential. Also, material support, funding and promotion are highly ranked, second and third.
- New indicators appear in the RQ2 responses as stakeholders' features. Perhaps this is because many other actors are considered as stakeholders besides researchers. The new indicators are time, use of foreign languages, affinity to research, intellectual abilities, methodological training, immaterial support, university potential, etc. Some (e.g. time) are highly ranked, others (affinity to research, intellectual abilities) low.
- In this sample, the features of stakeholders' potential were grouped neither by their nature (e. g. related to abilities, power, etc., see [38]) nor by the type of stakeholders.
- The classification of internal stakeholders in higher education institutions, presented in [32], seems very useful.

The major gaps in the scientific literature, published in Scopus & WoS from 1985 to September 2019, identified on the topic of this study are:

- Most papers are not theoretically substantiated. They do not explore this topic in the context of any theory, especially motivational one.
- Most authors do not propose concepts and models on the topic studied. Only two models for

researchers' motivation to publish were found, and none for the potential of stakeholders to influence this motivation.

- The models of researchers' motivation to publish, found by this study, are very difficult to apply in the practice of university management.
- The motivational drivers are classified by some indications in very few papers and are for researchers only. No motivational drivers were found for other stakeholders.
- In this sample, no classification was found on the features of stakeholders' potential to influence researchers' motivation to publish.
- The relatively high proportion of interpretation as a qualitative method of data analysis can be defined as a methodological gap.
- Another methodological gap is the lack of data analysis methods that can process qualitative information and transform it into quantitative.

## 6. Limitations and Future Research

The results of this study are only representative of the sample of papers used in it. The sample is based on the following main limitations (see Tab. 1.):

- Full-text papers found in Scopus & WoS;
- Period was from 1985 to September 2019;
- Specific terms and phrases for searching.

In addition, the sample of this study is formed by a content analysis of the papers found by the searching procedures. Due to the subjective nature of this type of analysis, there is a risk that the sample may not cover all the papers on the topic studied.

Limitations of this study suggest some opportunities for future research. First, search phrases may be further expanded with some alternative terms. Second, the information base of the study can be extended to other scientific databases (e.g. Google Scholar) and sources (e.g. books).

Given the major gaps identified by this study, some other ideas for future research may be suggested as follows:

- creating conceptual frameworks for evaluating and increasing researchers' motivation to publish;
- proposing modern tools to achieve this;

- developing effective models for increasing researchers' motivation to publish in high-quality journals. These models should not only be easily applicable at the university level and but also should take into account stakeholders' influence.

## 7. Conclusion

This paper provides a theoretical framework on the topic of researchers' motivation to publish in journals indexed by Scopus and Web of Science databases. The framework is based on a review of the literature published in these databases from 1985 to September 2019. It uses a structured approach, content analysis and descriptive statistics.

The main findings are as follows.

First, the topic of researchers' motivation to publish in journals has not received enough attention yet and needs to be explored.

Second, the models of researchers' motivation to publish found by this study are very difficult to put into management practice of universities. No model was found for the potential of stakeholders to influence this motivation.

Third, based on the sample of papers found in Scopus and Web of Science during the above-mentioned period, the motivational drivers of researchers to publish in high-quality journals and the features of the stakeholders' potential to influence researchers' motivation are classified and ranked in this paper. According to the results, collaboration/networking is most often identified as a motivational driver and as a feature of stakeholders' potential. Also, funding of research, financial assets, promotion/tenure, and contribution to society are all too often cited as motivational drivers in the scientific literature. Material support, time, funding of research and promotion/tenure are often understood by the authors of the sampled papers as features of stakeholders' potential to influence researchers' motivation to publish.

In my view, there are three major contributions of this paper. It is the first review on the topic of researchers' motivation to publish in journals indexed by Scopus and Web of Science. It embodies the theoretical framework for this topic. Second, this paper outlines the gaps in the scientific literature on the topic. Third, this study suggests some ideas for bridging these gaps by future research on the topic of researchers' motivation to publish in high-quality journals. I believe that future research on this topic will increase the competitiveness of higher education institutions and contribute to science and society.

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