



Human resource management and performance in Ibero-America: Bibliometric analysis of scientific production

Administración de recursos humanos y desempeño en Iberoamérica: análisis bibliométrico de la producción científica

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ABSTRACT

For years, human resources management has been considered a relevant factor to improve the levels of performance and competitiveness of organizations. Therefore, it has increasingly captured the attention of researchers at a global level. This paper aims to analyze such context in Ibero-America from a bibliometric perspective – the construction of knowledge in the field of human resources management and organizational performance. With that purpose, articles published in the main collection of Web of Science between the years 2010-2020 are analyzed with the help of Bibliometrix and VOSviewer. The results show that Spanish, Brazilian, and Portuguese researchers are the most productive of the group, and that Brazilians are equally the most influential. Likewise, there is a low participation of Latin American authors in prestigious international journals, and little cooperation with the most prestigious universities worldwide. The paper concludes that, in general, when compared to global production, Ibero-American production is still marginal, pointing to a challenge for these authors, especially for Latin Americans. This is a pioneering study, the first attempting to characterize Ibero-American scientific production in the field of human resources management and organizational performance.

Keywords: Human Resources Management, Performance, Human Capital, Ibero-America, Bibliometric Analysis.

RESUMEN

Desde hace varios años la administración de recursos humanos ha sido considerada como un factor relevante para mejorar los niveles de desempeño y competitividad de las organizaciones, y, por tanto, ha capturado cada vez más la atención de investigadores a nivel global. En este contexto, el presente artículo se plantea como objetivo analizar desde una perspectiva bibliométrica, la construcción de conocimiento en el campo de la administración de recursos humanos y el desempeño organizacional en Iberoamérica. Para este fin se analizan los artículos publicados en la colección principal de Web of Science entre los años 2010-2020. El análisis de datos se realiza con la ayuda de Bibliometrix y VOSviewer. Los resultados muestran que los investigadores españoles, brasileños y portugueses son los más productivos del grupo, y que los brasileños son igualmente los más influyentes. Asimismo, se evidencia una baja participación de autores latinoamericanos en revistas internacionales de prestigio y una escasa cooperación con las universidades más prestigiosas a nivel global. Se concluye que, a niveles generales, la representatividad de la producción iberoamericana en relación con la producción global es aún marginal, y, por tanto, la temática estudiada resulta ser un tema desafiante en la literatura organizacional y de gestión para estos autores, sobre todo, para los latinoamericanos, quienes tienen un desafío mayor. Este estudio es el primero que intenta caracterizar la producción científica iberoamericana en la relación entre la administración de recursos humanos con el desempeño organizacional, por tanto, se considera pionero en el campo.

Palabras clave: Administración de Recursos Humanos, Desempeño, Capital Humano, Iberoamérica, Análisis Bibliométrico.

1. INTRODUCTION

Since the first studies about workers in early 20th century (Fernandez-Alles & Ramos-Rodríguez, 2009), human resources administration and management became a discipline, increasingly capturing the attention of researchers all over the world, who advanced from looking at the worker as someone who is only required to fulfill assigned tasks to seeing him or her as a strategic asset, and a source of sustainable competitive advantages.

Moreover, the establishment of a historic relationship between the human capital of organizations and the attainment of desirable results (Arthur, 1994; Delery & Doty, 1996; Huselid, 1995; MacDuffie, 1995; Youndt *et al.*, 1996) allowed to position the administration of such resource as one of the main research topics at the present time (Afum *et al.*, 2021; Lopez-Cabrales & Valle-Cabrera, 2020; Nascimento *et al.*, 2019; Pradana *et al.*, 2020).

Among the aspects approached in the scientific production are: measurement of human capital (knowledge, skills, abilities etc.), social and relational capital among workers (Soltis *et al.*, 2018), and different initiatives that may lead companies to manage human talent through processes of continuous education (Danvila-del-Valle *et al.*, 2019), all topics considered strategic to improve performance, both in organizational and financial terms.

By understanding the importance of the field, global academia has made it visible, and encouraged knowledge development in the field through different initiatives, notably the creation of national and international associations, the organization of conferences focused on administration and management of human resources (Fernandez-Alles & Ramos-Rodríguez, 2009), and the inception of specialized journals, such as The International Journal of Human Resource Management, Human Resource Management Journal, and Human Resource Management Review, among others. These journals publish papers on building, debating, and proving theories and models, and also disseminate results of empiric studies done in industrial sectors or specific countries.

In Ibero-America, the situation is no different. Topics related to administration and management of human resources are being consolidated as a field of high interest both for researchers (from a perspective of scientific contribution) and for professionals connected to administration (from the responsibility for improving practices in organizations for- and non-profit). The creation of scientific societies, the incentive to research networks, and the organization of conferences (e.g. Foro Iberoamericano de Desarrollo Organizacional, Foro de Capital Humano, Congreso Iberoamericano de Psicología del Trabajo y Recursos Humanos etc.) are some echoes of the growing interest in deepening the study of the field in the region.

Although the administration and management of human resources has a special place within management literature, capturing growing attention not only from researchers but from society at large, no evidence was found of an analysis of the academic production of Ibero-American authors. Thus, besides reducing such knowledge gap, this paper aims to analyse from a bibliometric perspective the Ibero-American construction of knowledge on human resources management and organizational performance between the years of 2010 and 2020, a period that featured notable growth of the scientific production in the field.

This paper's contribution is relevant. Although the literature includes bibliometric studies on human capital (e.g. Danvila-del-Valle *et al.*, 2019; Fernandez-Alles & Ramos-Rodríguez, 2009; García-Lillo *et al.*, 2017; Garengo *et al.*, 2021), this is the first one to attempt to explore the field's scientific production exclusively in Ibero-American countries. It is especially important not only because there are few bibliometric studies on management topics focused on the region, but also because bibliometrics has the potential to strengthen the field of study by showing trends and possible gaps in the existing knowledge.

To build its contribution, this paper is structured as follows. First, it describes the applied methodology. Then, the papers of the sample are analyzed from a bibliometric perspective, which includes a brief commentary on the contents. Finally, main conclusions, limitations and suggestions are presented for future investigation.

2. METHODOLOGY

Bibliometric studies analyze the bibliographic material quantitatively through verifiable values and indicators of scientific production (Cancino *et al.*, 2020). Currently, these studies are recognized as important, as they allow the compilation of existing knowledge and the exam of the state of art of a given research field (Linnenluecke *et al.*, 2019).

Moreover, by helping to identify the general publication structure of a discipline (Zupic & Cater 2015), the evolution of topics and knowledge in a given area, and the gaps in the research corpus (Oshodi *et al.*, 2020), bibliometrics is relevant to settle the bases that allow advancement and consolidation in a field of studies. It may even deliver new ideas to researchers (Donthu, 2021).

Although bibliometrics methods have been used for many years (Heck & Bremser, 1986; Kessler, 1963; Reeves & Borgman, 1983), the proliferation of online databases and the development of different software programs for bibliometric treatment attracted many more scientists to the issue (Zupic & Cater, 2015). Consequently, the use of these techniques in different fields has been growing for years (Danvila-del-Valle *et al.*, 2019).

This paper used the main collection of Web of Science (WoS) for its bibliographic search, as it offers an adequate and efficient coverage for bibliometric studies (Granillo-Macías & González-Hernández, 2021). This database was selected not only for its international prestige, but also because it covers a wide range of research fields, gathering more than 15,000 journals and 50 million papers (Merigó & Yang, 2017).

“Human resources management” and “performance” were the keywords adopted. Additionally, the search was restricted to papers written between to the years 2010-2020 in Ibero-American countries, i.e., Latin American countries plus Spain and Portugal. The time period is pertinent, as the relevant scientific production in that territory occurred mainly in the last decade, the previous period having a marginal contribution.

As for data processing, the study used Bibliometrix (Aria & Cuccurullo, 2017) and VOSviewer (van Eck & Waltman, 2010).

While there are various ways to undertake a bibliometric study (Cancino *et al.*, 2020; Zupic & Cater, 2015), this paper focused in the analysis of authors, journals, countries, institutions, papers,

references and most relevant keywords. It also did an additional analysis of co-authorship, co-citation, and co-occurrence. The former refers to the analysis of the degree of collaboration between authors, institutions and/or countries, and allows the identification of research communities (Jalal, 2019). In this case, the study focuses on the degree of cooperation between countries associated to each paper of the sample. Moreover, the analysis of co-citations describes the frequency of citation of two documents together (Small, 1973), allowing the identification of the intellectual structure of a research field as well as its subjacent topics (Donthu, 2021). Finally, the analysis of co-occurrence based on keywords used by the authors allows to identify how often certain concepts are used together, as well as which could be the recurring topics of research in the sample (Hernández-Torrano *et al.*, 2020).

3. RESULTS

This section presents the main results of the study.

3.1. Bibliometric and descriptive results

Throughout the time frame analyzed, 432 papers on human resources management and performance were published, 93 of them (21.53%) associated to Ibero-American authors. On one hand, Figure 1 shows a rising trend in the global number of papers, but the production of Ibero-American authors does not reflect the same grow: the highest number was reached in 2015, and it has not been reached or surpassed in the following years. On the other hand, the share of Ibero-American papers varied from a low of 5.9% in 2011 to a high of 44.7% in 2015.

Regarding the language of the articles, sixty of them were in English (64.52%), twenty-one in Spanish (22.58%), and twelve in Portuguese (12.90%). Thus, English is widely dominant in the analyzed sample: two thirds of the publications are in English.

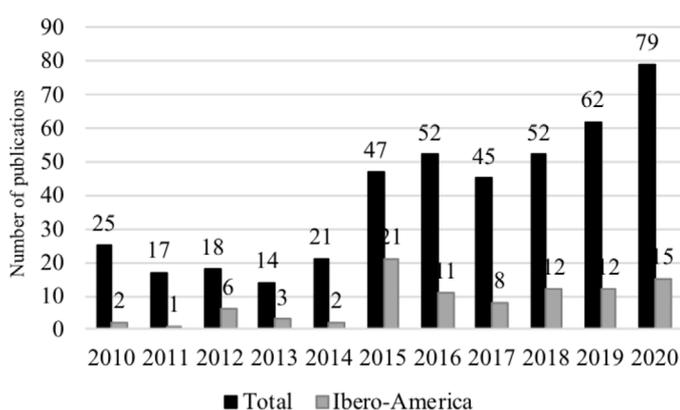


Figure 1

Global and Ibero-American production of papers in the period

Source: Own elaboration.

Table 1 shows the main journals elected by Ibero-American authors to publish the results of their research. Among 80 journals publishing on the topic, it is possible to name the more productive ones: together, International Journal of Human

Resource Management, International Journal of Manpower, Journal of Business Research, Revista Universidad y Sociedad, Contemporary Hospitality Management, International Review of Administrative Sciences, Management Research, and Total Quality Management & Business Excellence have published twenty-one articles (22.58%). According to Scimago Journal Ranking (SJR), the impact factor of those publications ranks between 0.318 and 2.079 (excluding Revista Universidad y Sociedad, to which the index is not applicable). The remaining 72 journals published only one paper each (77.42% of the total).

As for the number of citations in the WoS database, the International Journal of Human Resource Management is not only the most productive, but also the most cited journal, with an average of 36.5 citations per paper. It is not surprising, as this is one of the oldest journals specializing in human resources management (Danvila-del-Valle *et al.*, 2019).

When analyzing the countries of origin of the 80 journals that published Ibero-American authors, one finds that 63.75% of them are in Europe, another 28.75% in Latin America, and only 7.50% are in the United States. One may infer that, in general, there is a clear preference of Ibero-Americans for European journals, of which twenty-seven are from the United Kingdom, ten are from Spain, five from the Netherlands, four from Switzerland, three from Portugal, one from Croatia and one from Germany. Curiously, though, if one considers only the journals where Latin American authors published, the trend changes: Latin American journals are preferred (62.16%) over European ones (32.43%).

Regarding the classification of papers by research area, one notes that, besides “Business-Economics” (62.37% of the total), thirteen publications (13.98%) were labeled “Social Sciences and other topics”. This implies that developed topics allow the combination of a central group of journals that focus mainly in aspects such as business, administration, economics, and human resources, side by side with another group that approaches the subject from a different perspective (Danvila-del-Valle *et al.*, 2019).

Regarding authorship, the study found 273 researchers associated to the 93 publications on human resources management and performance. The number of authors in the same paper varies between one and eleven. There are six articles written by one researcher, 22 by two, 38 by three, 16 by four, eight by five, and three by six or more authors. There is, thus, a preference for publishing papers signed by two or three researchers, which represents 64.52% of the publications total.

The most productive authors, with three papers each, are Ricardo Chiva, Jacob Guinot and Fermín Mallén (all from the Universitat Jaume I, Spain), and Helena Roque (Instituto Politécnico de Setúbal, Portugal). They are followed by those with two papers each: José Alcaraz (Murdoch University, Australia); Antonio Caetano, Madalena Ramos and Maria Silva (all from the Instituto Universitário de Lisboa, Portugal); Petra de Saá-Pérez and Carmen Domínguez-Falcón (both from the Universidad de las Palmas de Gran Canaria, Spain); Natalia García-Carbonell, Fernando Martín-Alcázar and Gonzalo Sánchez-Gardeck (Universidad de Cádiz, Spain); Juan Marín-García (Universitat Politècnica de València, Spain) and Ramón Valle-Cabrera (Universidad Pablo de Olavide, Spain). The remaining authors (83.87%) only have authorship or co-authorship in one publication.

Table 1
Most relevant journals having published Ibero-American authors on the field of human resources management and performance

Rank	Journal	Country/ Region	Total Papers	Total Citations	Citations/ Papers	Impact Factor
1	<i>International Journal of Human Resource Management</i>	United Kingdom	4	146	36.50	1.378
2	<i>International Journal of Manpower</i>	United Kingdom	3	28	9.33	0.435
3	<i>Journal of Business Research</i>	United States	3	22	7.33	2.049
4	<i>Revista Universidad y Sociedad</i>	Cuba	3	0	0.00	—
5	<i>International Journal of Contemporary Hospitality Management</i>	United Kingdom	2	25	12.50	2.079
6	<i>International Review of Administrative Sciences</i>	United Kingdom	2	1	0.50	0.863
7	<i>Management Research-The Journal of the Iberoamerican Academy of Management</i>	United Kingdom	2	10	5.00	0.318
8	<i>Total Quality Management & Business Excellence</i>	United Kingdom	2	10	5.00	0.729
9-80	Other	—	72	408	5.67	—

Source: Own elaboration.

The indicator introduced by Hirsch (the index-h) is used to measure the impact factor. It is a metric that allows the comparison of different scientists through the ratio between number of publications and number of citations obtained by the publications (Hirsch & Buéla-Casal, 2014). Thus, the index-h of a researcher is defined as the number h of papers with at least h citations each (Hirsch, 2005).

R. Chiva, J. Guinot, and F. Mallén are the authors with the highest h-index (three), thus with the highest impact factor (their three papers got 48 citations in total). These authors study the relationships between organizational learning, trust, leadership, altruism, and performance (Guinot *et al.*, 2013; Guinot *et al.*, 2016; Mallén *et al.*, 2015).

According to data collected from WoS (see Table 2), papers associated with Spain are 46.24% of the total of analyzed

publications, followed by Brazil (22.58%), Portugal (17.20%), Cuba (6.45%), Ecuador (6.45%), Colombia (5.38%), Mexico (4.30%), Dominican Republic (3.23%) and Argentina (2.15%). Another four Ibero-American countries that contributed to the sample are associated to just one paper each (1.08%). It goes to demonstrate that the authorship of the Ibero-American production on the topic is mostly European, and that the Latin Americans have little presence if compared to the total number of papers in the sample (with the exception of Brazilians, who come as the second most productive).

It is also important to point out that Brazilian researchers are the most influent, with an average of 10.29 citations per paper. Costa Rica follows with nine citations so far, in spite of having only one author and one publication (Alcaraz *et al.*, 2019). In third place are Spanish authors, with an average of 8.65 citations per paper.

Table 2
Scientific production by Ibero-American countries*

Rank	Country	Total Papers	%	Total Citations	Citations/ Papers
1	Spain	43	46.24	372	8.65
2	Brazil	21	22.58	216	10.29
3	Portugal	16	17.20	74	4.63
4	Cuba	6	6.45	1	0.17
5	Ecuador	6	6.45	1	0.17
6	Colombia	5	5.38	14	2.80
7	Mexico	4	4.30	10	2.50
8	Dominican Republic	3	3.23	15	5.00
9	Argentina	2	2.15	11	5.50
10	Costa Rica	1	1.08	9	9.00
11	Chile	1	1.08	7	7.00
12	Peru	1	1.08	0	0.00
13	Venezuela	1	1.08	0	0.00

* Countries present in the sample, but not Ibero-Americans, are excluded

Source: Own elaboration.

The countries co-authorship network is presented in Figure 2. The size of nodes in the map reflects the number of publications associated to each country. The closeness of nations, as well as the lines, indicates the strength of the cooperation. Thus, among 24 countries, Spain is at the center of the scientific production

on the topic of human resources management and performance, and that it maintains a close relationship with countries such as Indonesia. It is also notable the cooperation between Brazil and countries such as the United States and Austria.

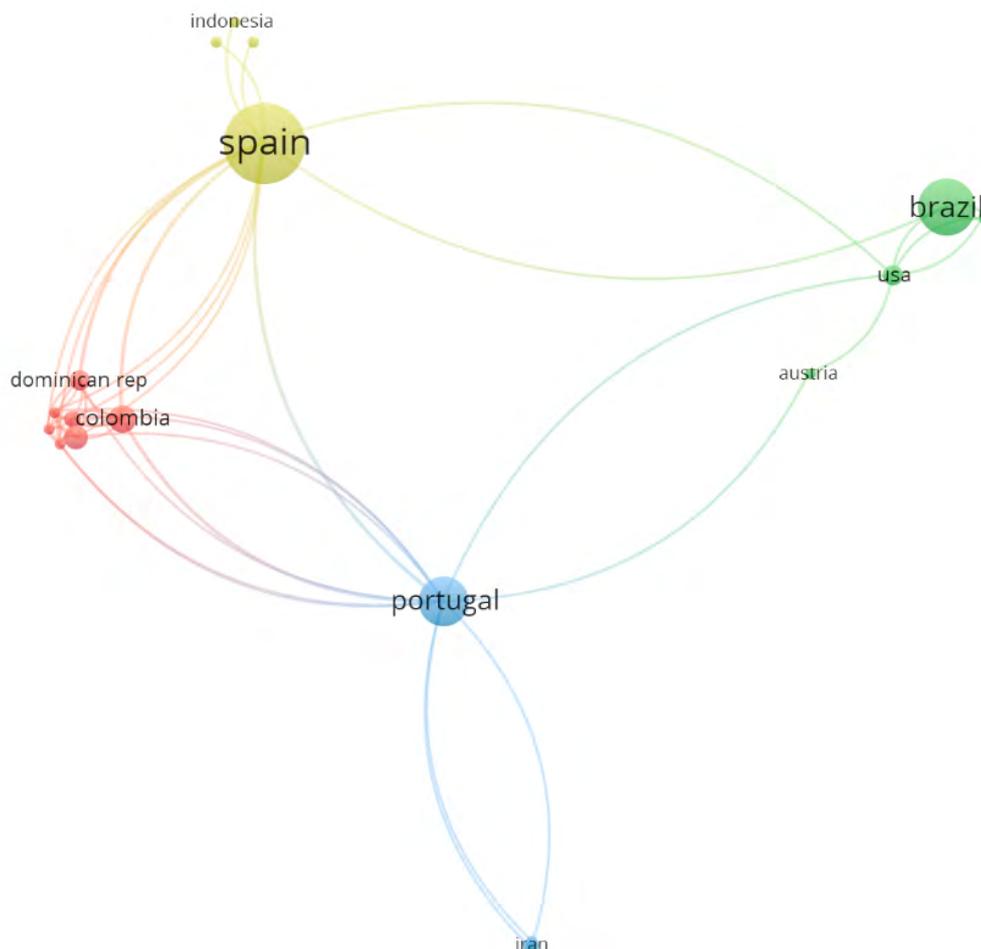


Figure 2

Main countries co-authorship network

Source: Own elaboration with VOSviewer.

Table 3 shows the universities that publish most about human resources management and performance. Spanish universities are the one most present in the ranking. Moreover, from 26 most productive universities, 15 are Spanish, five are Portuguese, three Brazilian, two Cuban e one Ecuadorian.

The most productive are the Universidade de São Paulo, Brazil, with seven papers, and the Universitat Politècnica de València, Spain, is the most influential, according to the ratio of citations per paper (36.50). The other universities, not ranked, obtained 1.08% of representation within the total of publications (one paper).

To complement the previous analysis, Table A.1 shows the institutions not Ibero-American that participated in the analyzed production. From 93 papers, eight (8.60% of the total) have the participation of twelve of those institutions. Although none of the twelve stand out in terms of number of publications (all of them have only one paper), the Università Politecnico di Milano, Italy, is the most influential of the group, with 36 citations.

Table 3
Leading universities of Ibero-American authors on human resources management and performance research

Rank	University	Country	Total Papers	%	Total Citations	Citations/Papers
1	Universidade de São Paulo	Brazil	7	7.53	136	19.43
2	Instituto Universitário de Lisboa	Portugal	4	4.30	8	2.00
3	Universidad de Cádiz	Spain	4	4.30	18	4.50
4	Universidad de las Palmas de Gran Canaria	Spain	4	4.30	35	8.75
5	Universidad Pablo de Olavide	Spain	4	4.30	25	6.25
6	Universidade de Lisboa	Portugal	4	4.30	19	4.75
7	Universitat Jaume I	Spain	4	4.30	59	14.75
8	Universidad de Sevilla	Spain	4	4.30	78	19.50
9	Instituto Politécnico do Porto	Portugal	3	3.23	3	1.00
10	Universidad Pública de Navarra	Spain	3	3.23	10	3.33
11	Universitat Autònoma Barcelona	Spain	2	2.15	7	3.50
12	Universidad Tecnológica de La Habana José Antonio Echeverría- CUJAE	Cuba	2	2.15	0	0.00
13	Universitat Ramon Llull	Spain	2	2.15	36	18.00
14	Instituto Politécnico de Setúbal	Portugal	2	2.15	0	0.00
15	Universidad Metropolitana del Ecuador	Ecuador	2	2.15	0	0.00
16	Universidad de Castilla-La Mancha	Spain	2	2.15	5	2.50
17	Universidad de Jaén	Spain	2	2.15	23	11.50
18	Universidad de la Habana	Cuba	2	2.15	1	0.50
19	Universidad Politécnica de Cartagena	Spain	2	2.15	7	3.50
20	Universidade de Coimbra	Portugal	2	2.15	17	8.50
21	Universidade Federal de Mato Grosso do Sul	Brazil	2	2.15	6	3.00
22	Universidade Federal do Rio Grande do Sul	Brazil	2	2.15	24	12.00
23	Universitat Politècnica de València	Spain	2	2.15	73	36.50
24	Universidad de Navarra	Spain	2	2.15	15	7.50
25	Universidad de Salamanca	Spain	2	2.15	7	3.50
26	Universitat de València	Spain	2	2.15	19	9.50

Source: Own elaboration.

However, Table 4 shows the papers in the sample that were most cited in different works available at WoS. Together, such papers got 421 citations, corresponding to 64.77% of total citations.

As may be observed on Table 4, [Chiappetta et al. \(2010\)](#) has the highest impact in the research on human resources management and performance, as they were cited ten times per year on average. Their paper analyzes the contribution of human resources management to environmental management in Brazilian manufacturing companies. Based on a study combining qualitative and quantitative techniques, the authors identify that contributions from human resources management vary as corporate environmental management advances, and each of its dimensions (selection, recruiting, incentive etc.) can be essential for analyzed companies to lead a constant improvement in their environmental performance. The study of [Alfalla-Luque et al. \(2015\)](#), which examined the relationship between the commitment of employees, the dimensions of the integration to the supply chain, and various performance measures, such as flexibility, delivery, quality, inventory and customer satisfaction, was also very well received by the scientific community. The paper proposes the important of achieving not only a commitment

from employees, but also the internal integration of companies, as both constitute relevant factors to reach a better performance.

Among other most-cited papers is the work of [Longoni and Cagliano \(2015\)](#), which seeks to understand how multifunctional executive participation and the participation of workers support the strategic alignment of Lean Manufacturing, and sustainability. The paper of [Andrews \(2016\)](#) proposes an integrative framework of the focus of motivation in public service and the theory of self-determination. The one from [Valsania et al. \(2012\)](#) analyzes the effect of authentic leadership in the behaviors of the organizational citizenship of employees. [Tortorella et al. \(2015\)](#) evaluate the maturity of organizational learning dimensions, and the importance of human resource management practices in medium-sized businesses that are starting to implement Lean Manufacturing.

The work of [Martínez-Jurado et al. \(2013\)](#) seeks to identify success factors related to human resource management during the adoption process of Lean Production (LP). [Dominguez and Massaroli \(2018\)](#) analyze the relationship between contextual factors (such as human resource management) and the process of exploration and exploitation of knowledge. The paper of [Mallén](#)

et al. (2015) investigates the relationship between the behavior of altruist leaders, and the ability for organizational learning and performance. The work of *Guinot et al.* (2013) deepened the relationships between confidence and organizational performance, using organizational learning capacity as an explanatory variable.

Finally, the authors *Cugueró-Escofet et al.* (2019), *Lopez-Cabrales and Valle-Cabrera* (2020) and *Domínguez-Falcón et al.* (2016) close the list. *Cugueró-Escofet et al.* (2019) test a comprehensive model of sustainable human resource management, including organizational justice, perceived organizational support, workers satisfaction, and an affective organizational commitment, and analyze how such variables interact to generate behaviors of knowledge interexchange. *Lopez-Cabrales and Valle-Cabrera* (2020) propose a conceptual framework to analyze the contributions of the strategic management of human resources to the sustainability and competitiveness of companies, while *Domínguez-Falcón et al.* (2016) did an empirical study to analyze the effects on organizational

performance of commitment and satisfaction among managers and supervisors.

Some common topics stem from this analysis of the most-cited papers in the sample, e.g., the relationship between human resources management and sustainability as a relevant issue. Such relationship is approached from a conceptual framework (*Lopez-Cabrales & Valle-Cabrera, 2020*) and a comprehensive model (*Cugueró-Escofet et al., 2019*) to determine how it can help in a strategic alignment (*Longoni & Cagliano, 2015; Tortorella et al., 2015*), the improvement of environmental performance (*Chiappetta et al., 2010*) and, as a result, to increase the company's competitiveness.

Another relevant issue is the success of other desirable results for organizations, as organizational performance, attainment of quality etc. The issue is approached from the perspective of the influence of workers (*Alfalla-Luque et al., 2015*), of leaders (*Edú Valsania et al., 2012; Guinot et al., 2013; Mallén et al., 2015*), and supervisors (*Domínguez-Falcón et al., 2016*) to reach looked-for results.

Table 4
Most-cited papers in the sample

Author/s (year)	Journal	Total Citations	%	Total Citations/year
<i>Chiappetta et al.</i> (2010)	<i>International Journal of Human Resource Management</i>	120	18.46	10.00
<i>Alfalla-Luque et al.</i> (2015)	<i>International Journal of Production Economics</i>	69	10.62	9.86
<i>Longoni and Cagliano</i> (2015)	<i>International Journal of Operations & Production Management</i>	36	5.54	5.14
<i>Andrews</i> (2016)	<i>International Journal of Public Sector Management</i>	27	4.15	4.50
<i>Edú Valsania et al.</i> (2012)	<i>Psicothema</i>	27	4.15	2.70
<i>Tortorella et al.</i> (2015)	<i>International Journal of Production Research</i>	24	3.69	3.43
<i>Martínez-Jurado et al.</i> (2013)	<i>Management Decision</i>	22	3.38	2.44
<i>Dominguez and Massaroli</i> (2018)	<i>Journal of Business Research</i>	18	2.77	4.50
<i>Mallén et al.</i> (2015)	<i>International Journal of Manpower</i>	18	2.17	2.57
<i>Guinot et al.</i> (2013)	<i>Journal of Management & Organization</i>	17	2.62	1.89
<i>Cugueró-Escofet et al.</i> (2019)	<i>Sustainability</i>	15	2.31	5.00
<i>Lopez-Cabrales and Valle-Cabrera</i> (2020)	<i>Human Resource Management Review</i>	14	2.15	7.00
<i>Domínguez-Falcón et al.</i> (2016)	<i>International Journal of Contemporary Hospitality Management</i>	14	2.15	2.33

Source: Own elaboration.

Regarding references used by authors in their works, Table 5 exhibits the citations most used by them among 5,093 found in 93 analyzed papers.

As can be observed, the most-cited work is that of authors *Fornell and Larcker* (1981), which examines the statistical proof used for the analysis of structural equations with non-observable variants and measurement error. This paper is followed by the work of *Huselid* (1995), *Barney* (1991), *Podsakoff et al.* (2003), and *Delery and Doty* (1996), respectively. *Huselid* (1995) evaluates the connections between the systems of high-performance labor practices and the companies' performance, finding that such practices impact both on the average results of the employees and the short- and long-term measurements of the financial performance. *Barney* (1991) examines the link between companies' resources and a sustainable competitive advantage, and suggests that value, rarity, imitability, and substitutability have the potential to generate a sustainable competitive advantage. *Podsakoff et al.* (2003) examine various aspects of the method's bias, while *Delery and Doty* (1996) identified

seven key practices in strategic human resources that can explain considerable levels of variation in the financial performance.

At the bottom of the ranking can be found the work of *Wright and McMahan* (1992), which discusses six theoretical models useful to understand both strategic and non-strategic determinants in human resources practices, and the paper of *Jiang et al.* (2012), that uses meta-analysis to examine three-dimensional effects of proximal and distal human resources systems in the organizational results.

From the most-cited papers in the sample, only three are references published after 2000, and only two of those were published after 2010. It appears, thus, to be a preference for citing seminal works instead of more recent papers. Despite this, the works of *Jiang et al.* (2012) and *Ehnert et al.* (2016) are notable for their relevant contribution in the last decade. The latter analyzes different reports on corporate sustainability, and evaluate how they reflect dominant models of corporate government in the country where the company has its headquarters.

Table 5
Most frequent citations used by Ibero-American authors

Author/s (year)	Journal/Publisher	Total Citations	%
Fornell and Larcker (1981)	<i>Journal of Marketing Research</i>	13	13.98
Huselid (1995)	<i>Academy of Management Journal</i>	12	12.90
Barney (1991)	<i>Journal of Management</i>	10	10.75
Podsakoff <i>et al.</i> (2003)	<i>Journal of Applied Psychology</i>	9	9.68
Delery and Doty (1996)	<i>Academy of Management Journal</i>	9	9.68
Wright and McMahan (1992)	<i>Journal of Management</i>	7	7.53
Jiang <i>et al.</i> (2012)	<i>Academy of Management Journal</i>	7	7.53
Nunnally (1978)	McGraw-Hill	6	6.45
Podsakoff and Organ (1986)	<i>Journal of Management</i>	6	6.45
Macduffie (1995)	<i>Industrial and Labor Relations Review</i>	6	6.45
Ehnert <i>et al.</i> (2016)	<i>The International Journal of Human Resource Management</i>	6	6.45
Delaney and Huselid (1996)	<i>Academy of Management Journal</i>	6	6.45
Huselid <i>et al.</i> (1997)	<i>Academy of Management Journal</i>	6	6.45
Arthur (1994)	<i>Academy of Management Journal</i>	6	6.45

Source: Own elaboration.

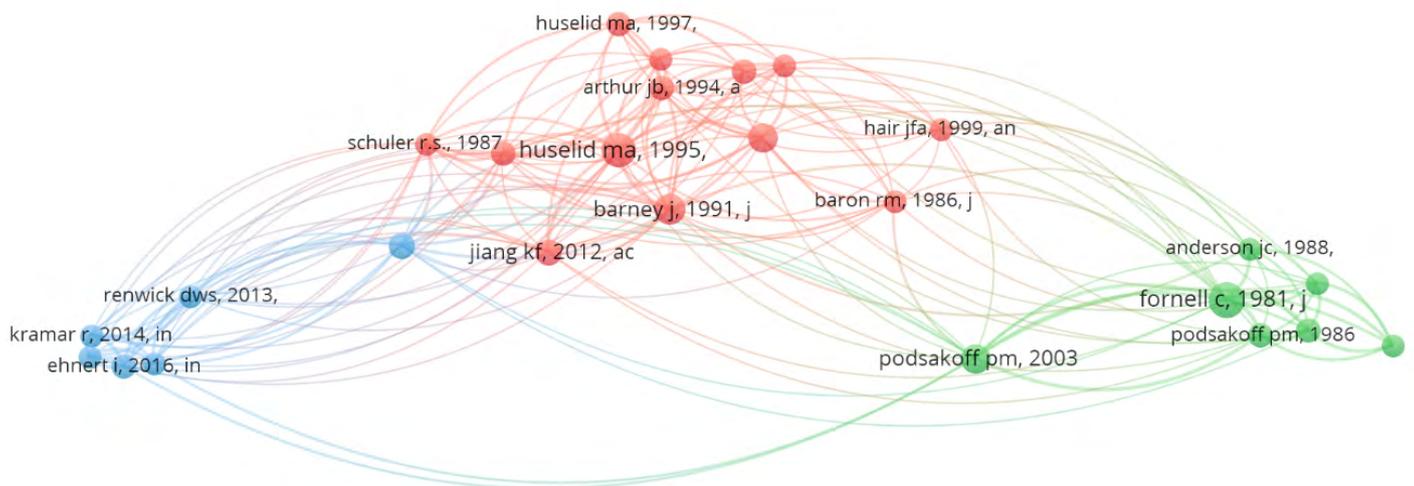


Figure 3
Co-citation. Map of cited references
Source: Own elaboration with VOSviewer.

To understand the intellectual structure that supports the research, an analysis of the co-citation of references used in at least five works of the sample was performed. Figure 3 shows that the 26 most-cited references can be separated in three main groups.

The first one, in blue, collects the works that relate the strategic management of human resources (SHRM) and sustainability. There is, thus, a theoretical discussion on the main features of SHRM (Kramar, 2014), and the relevant models (Wright & McMahan, 1992), as well as on the role of green human resources management in the practices of people management (Renwick *et al.*, 2013). There is also an effort to build a bridge between theory and practice (De Prins *et al.*, 2014; Ehnert 2009) to finally be able to analyze corporate sustainability policies in the companies (Ehnert *et al.*, 2016).

The red group gathers works that relate human resources and performance from the perspective of generating sustainable competitive advantages (Schuler & Jackson, 1987). Based on this, it is suggested that organizations can draw strategies allowing to reach desirable results through the use of human resources management practices (Delaney & Huselid, 1996; Delery & Doty, 1996; Huselid, 1995; MacDuffie, 1995; Whitener, 2001), and their combination with organizational policies (Arthur, 1994). However, this group approaches capacities and implications of the blue group (Becker & Huselid, 2006; Huselid *et al.*, 1997).

Last but not least, the third group (green) put together works that approach mainly research methods and techniques. For instance, the mention of modeling structural equations (Anderson & Gerbing, 1988; Fornell & Larcker, 1981), the behavioral research

(Nunnally, 1978; Podsakoff *et al.*, 2003), and the use of self-reports in organizational and management research (Podsakoff & Organ, 1986) are all found in this group.

Moreover, the authors of analyzed papers used a total of 321 different keywords to label their studies. Figure 4 exhibits keywords present in at least three publications. The size of nodes in the map reflects the frequency of use of each word. The closeness of terms and lines indicate the strength of their relationship (Danvila-del-Valle *et al.*, 2019).

Thus, VOSviewer identified a total of four interrelated conglomerates of keywords (defined by the colors red, blue, green,

and yellow). Innovation and organizational learning capability, understood as the capacity of organizations to adapt their processes or knowledge in order to improve their performance (Guinot *et al.*, 2013), constitute the red group. The blue conglomerate associates concepts related to sustainability, environmental administration and Lean Manufacturing, a method that seeks to speed up production while reducing waste (Longoni & Cagliano, 2015). The green one focus on desirable results for commitment, labor satisfaction and performance, while the yellow group includes concepts related to public administration.

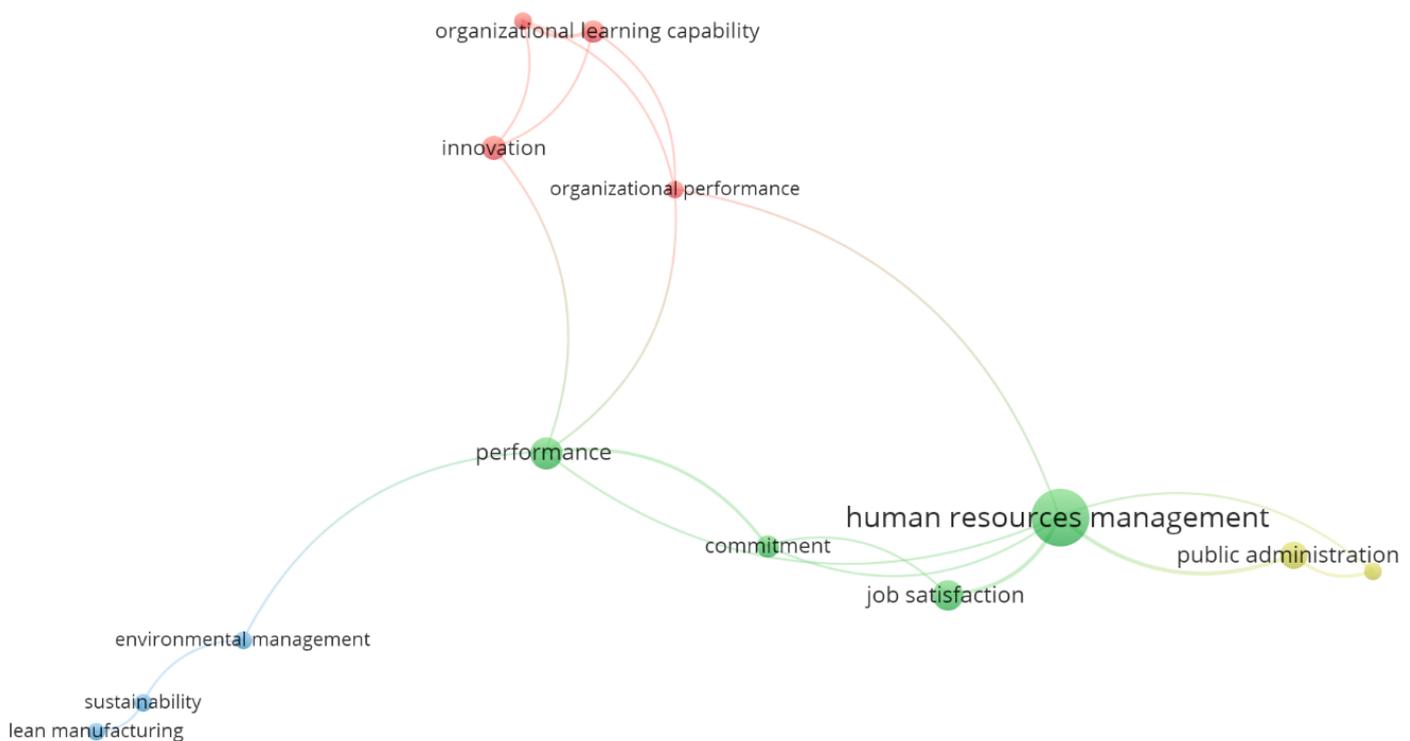


Figure 4

Most used keywords

Source: Own elaboration with VOSviewer.

3.2. Content analysis results

Regarding content analysis, as Table 6 shows, we found that quantitative research methods are largely used in studies on the topic (51.61%), followed by qualitative methods (24.73%). The remaining papers approach the topic from the perspective of theoretical discussions and literature review (12.90%) or mixed techniques (10.75%).

It is important to note that the main purpose of quantitative studies the measurement of variables that will allow testing hypotheses in order to determine how general is a given phenomenon in a larger population (Apuke, 2017). In contrast, qualitative methods seek to better understand a little studied

phenomenon through the formulation of new important distinctions (Aspers & Corte, 2019).

Regarding the thematic approached, we detected a variety of subtopics related to human resources management and performance: human resources management practices themselves (e.g., recruiting, selection, formation, incentives, performance evaluation etc.), desirable organizational results (such as quality, sustainability, financial performance, innovation etc.), organizational factors that would influence the attainment of desirable results (e.g., organizational learning, knowledge management, culture, leadership etc.), desirable employees commitment and behavior (e.g., labor satisfaction, commitment, motivation, collaboration etc.), and support technologies such as information systems.

Table 6
Research Methodologies Adopted

Method	Techniques	Total Papers	%
Quantitative	Descriptive and inferential statistics, econometric focus, variance analysis etc.	48	51.61
Qualitative	Interviews, discourse analysis, document analysis, case study etc.	23	24.73
Literature review	Theoretical/conceptual discussion, systematic review	12	12.90
Mixed	Qualitative and quantitative techniques combined	10	10.75

Source: Own elaboration.

Table 7
Subjects approached by Ibero-American countries

Country	Topics	Reference*
Spain	Sustainability, leadership, altruism, organizational learning, commitment, labor satisfaction, motivation, innovation, career management, training, information systems, quality, among others.	Vidal-Salazar <i>et al.</i> (2012), Mallén <i>et al.</i> (2015), Mariño-Mesías <i>et al.</i> (2015), Domínguez-Falcón <i>et al.</i> (2016), López-Gamero <i>et al.</i> (2020), Pradana <i>et al.</i> (2020)
Brazil	Sustainability, labor satisfaction, motivation, leadership, organizational learning, knowledge management, Lean Production, competencies management, training, performance management, among others.	Chiappetta <i>et al.</i> (2010), Capuano (2015), Cesar (2015), Gallon and Bitencourt (2015), Tortorella <i>et al.</i> (2015), de Souza Freitas <i>et al.</i> (2020)
Portugal	Lean Production, sustainability, culture, labor satisfaction, collaboration, organizational learning, motivation, corporate social responsibility, communication, corporate image and brand, training, staff turnover, among others.	Cesário and Magalhães (2017), Almeida and Coelho (2019), Gregorka <i>et al.</i> (2020), Jerónimo <i>et al.</i> (2020), Roque and Ramos (2020), Muñoz-Pascual <i>et al.</i> (2021)
Cuba	Gender perspective, relationship between human resources management and performance, employee preparation for human resources management, performance and commitment evaluation	Pérez <i>et al.</i> (2015), Santos (2015), Valencia <i>et al.</i> (2015), Camargo <i>et al.</i> (2016), González <i>et al.</i> (2016), Souto-Anido <i>et al.</i> (2020)
Ecuador	Gender perspective, relationship between human resources management and performance, talent management, performance evaluation and preparation of employees on human resources management.	Pérez <i>et al.</i> (2015), Valencia <i>et al.</i> (2015), Camargo <i>et al.</i> (2016), Armijos <i>et al.</i> (2019), Briones and González (2019), Souto-Anido <i>et al.</i> (2020)
Colombia	Corporate social responsibility, environmental sustainability, performance evaluation, human capital theory, Lean Production tools and innovation.	Rubio <i>et al.</i> (2015), Anzola (2018), Alcaraz <i>et al.</i> (2019), Rodrigues <i>et al.</i> (2020), Oquendo and Bermudez (2021)
Mexico	Corporate social responsibility, environmental sustainability, performance evaluation system and impact of hiring policies, capacitation, wages, benefits and incentives, and systems of sanctions over performance.	Fajardo <i>et al.</i> (2011), Rueda <i>et al.</i> (2015), Loera and Salazar (2017), Alcaraz <i>et al.</i> (2019)
Dominican Republic	Corporate social responsibility, environmental sustainability, staff turnover and human resources information software.	Alcaraz <i>et al.</i> (2012), Pérez-Campdesuñer <i>et al.</i> (2018), Alcaraz <i>et al.</i> (2019)
Argentina	Corporate social responsibility, environmental sustainability and centralization of political power in human resources management policies.	Iacoviello and Llano (2017), Alcaraz <i>et al.</i> (2019)
Chile	Satisfaction of members in interprofessional teams.	Espinoza <i>et al.</i> (2018)
Costa Rica	Corporate social responsibility and environmental sustainability.	Alcaraz <i>et al.</i> (2019)
Peru	Staff turnover.	Campos <i>et al.</i> (2019)
Venezuela	Gender perspective in the process of human resources management.	Camargo <i>et al.</i> (2016)

* As Spain, Brazil, and Portugal have more than ten papers each, only some of their papers were mentioned in the references.

Source: Own elaboration.

Table 7 shows main subjects approached in papers, according to the Ibero-American country they are associated to. The study of Alcaraz *et al.* (2019) is highlighted, as it gathered 11 researchers of different nationalities, thus applying to most countries in the

sample. This study explores the perceptions of human resources managers in three Ibero-American countries (Spain, Dominican Republic, and Costa Rica) about corporate social responsibility and environmental sustainability.

4. CONCLUSIONS

This paper aims to present a bibliometric analysis of the Ibero-American scientific production in the field of human resources management and performance throughout 2010-2020. The findings brought to light various elements of especial relevance.

First, results have shown that, differently from a global trend, the Ibero-American production on the matter reached some sort of stagnation, as it was not able to overcome its peak of published papers in 2015. Add to this the fact that Spanish, Brazilian, and Portuguese authors produced 86.02% of the analyzed sample of papers, thus leaving room for Ibero-American authors and coauthors of other nationalities to contribute their perspective, even proving theories in less developed countries.

In this context, the Ibero-American production is still marginal (21.53%) in comparison to the global production of research on human resources management and performance. In the business and management literature, the subject is a challenging one particularly for Latin Americans (with the exception of Brazilians), who are underrepresented in the analyzed production.

Secondly, the study demonstrated that Brazilians are the most influential authors, although the Spanish ones are the most productive. Moreover, differently from Spanish and Portuguese authors, who publish in the best and most prestigious European journals, Latin American authors usually publish in Latin American journals, thus with a smaller impact factor. This pattern has been observed also in the bibliometric study by *Cancino et al.* (2020), which analyzed the Ibero-American scientific production on innovation and entrepreneurship. That study points out, "smaller geographic and psychological distance between European researches allow them to develop a more powerful research network, where a continuous relationship can be fostered to promote research" (p. 26). There are, thus, great challenges and opportunities awaiting Ibero-American authors, who must expand their networks in order to be further recognized, and to deepen their impact on the global academy.

Thirdly, there is scarce collaboration with institutions not Ibero-American, particularly with outstanding universities, in the research on human resources management and performance. Again, Ibero-American authors have the great challenge of expanding their cooperation networks in order to increase their influence on a global level.

Fourthly, regarding the analysis of the content, it is clear that around one of each two papers used a quantitative methodology. The remaining papers adopted qualitative techniques, literature review and mixed methods. Considering the subject of human resources management has attracted the attention of researchers for years, who produced various theories on the matter, it is understandable that Ibero-American authors chose to focus mostly on comprehend relationships that could be projected to a larger population through quantitative methods, instead of exploring and formulating new theories and models through some other qualitative technique. However, the low proportion of papers using mixed methods of research may be explained by the fact that such technique is usually more complex, time-consuming, and requiring a larger knowledge of information collection and interpretation.

Fifthly, in spite of the variety of subtopics approached in the sample, there is one in particular that stands out: sustainability and its relationship to human resources management. It appears to be an emerging field in the business literature, with a growing impact in the academia. Business sustainability seeks a transformation in traditional corporate practices towards more ethical ones that contribute to social equity, health and employee's welfare, besides the economic stability of the organization and an environmental balance (*Amrutha & Geetha, 2020*). Considering the increasing pressure on companies to improve their practices and strategies (through international treaties, regulatory frameworks, and social demands), we believe the introduction of sustainability among different human resources management functions will become a most relevant subject of investigation in the future.

According to the classification of *Markoulli et al.* (2017), subjects connected to labor relations (conflict resolution, unionization, managerial control etc.) and the administration of international human capital (international policies, expatriation and repatriation of employees, intercultural adaptation, among others) are little discussed topics in the analyzed scientific production.

Finally, it is important to stress that the results of this study have limitations, mainly in terms of reach, as the search focused exclusively on one database (WoS) and one kind of publication (papers), not considering other information sources that could prompt different analyses and allow a better description of the research corpus.

However, we believe that future research could attempt to identify changes and evolution in the intellectual structure of the field at global levels, thus determining which are the general trends and the main gaps in the knowledge production of local authors. Also, we believe it would be interesting to obtain more information on practices and policies of human resources management used in different kinds of organizations, in order to analyze whether there are differences between organizations non-profit and for-profit, public and private, multinational and local, among others.

5. ACKNOWLEDGEMENT

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APPENDIX

Table A.1
Collaboration with non-Ibero-American institutions

Rank	University	Country	Total Papers	%	Total Citations
1	Politecnico di Milano	Italy	1	1.08	36
2	University of Hormozgan	Iran	1	1.08	9
3	Högskolan i Skövde	Sweden	1	1.08	9
4	Universiti Tunku Abdul Rahman	Malaysia	1	1.08	9
5	Murdoch University	Australia	1	1.08	9
6	Munich Business School	Germany	1	1.08	9
7	Universität Salzburg	Austria	1	1.08	8
8	University of Notre Dame	United States	1	1.08	8
9	University College Cork	Ireland	1	1.08	7
10	Boston College	United States	1	1.08	7
11	HSE University (National Research University)	Russia	1	1.08	3
12	Telkom University	Indonesia	1	1.08	2

Source: Own elaboration.

