Working Poor: A Global Analysis

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Abstract
This bibliometric review describes the scientific production in the research field "Working poor at the global level" during the period from 2012 to 2022. A thorough search was performed in the meta-search engines Wos and Scopus, once the respective databases were downloaded in BibTeX format, they were merged, and repeated records were eliminated, resulting in a file in CSV format with 125 records, this procedure was performed using the R statistical software. In the results obtained, it could be observed that in the annual scientific production 2019 was the most productive year, the country that most addresses the subject worldwide are the United States with 55 documents, and the journal with the highest impact factor was Social Indicators Research, the most relevant institution is the University of Toronto with 6 contributions and finally, the author with the highest H-index, was Boada-Grau.

Keywords: working poor, analysis bibliometric, literature review.

Introduction
From the perspective of the sustainable development goals, it is possible to observe how decent work is one of the 17 fundamental elements for the achievement of sustainability within modern society, where the unemployment rate is considered as a key factor as a measure of the correct fulfillment of the aforementioned objective (López-Mera, 2021; Peláez, 2021). Certainly the countries of the world focus their efforts on the generation of new jobs for the closure of inequality breaches and planning under financial indicators to generate wealth and economic development (Durán, Guilliany & Bilbao, 2021; Parales & Ramírez, 2021). However, it is important to highlight the high threshold of people or families who are active in the workplace, but whose income is
insufficient to cover their basic needs and those of the family group to which they belong. (Skilling & Tregidga, 2019).

This group mentioned above is known as working poor, term that directly alludes to the inability to provide a decent quality of life to people due to the fact that they can be considered as active or salaried workers (Pérez, 2018; Fibæk, 2021). This variable directly studies those people who have a legally formalized contract, but their living condition are considered within the poverty line, which is often related to marginality or the inability to develop or have a formal job. (Martínez-Martín, García-Moreno & Lozano-Martín, 2018; Whillans & West, 2022).

This variable has been studied considerably in countries such as the United States, which, due to their economic policy and labor widespread show high levels of employability, but that do not demonstrate a positive impact on the decrease in the rate of poverty or extreme poverty within that country. It is noteworthy that in other parts of the world such as Europe, Latin America or Africa it is still considered a very recent field of science, therefore, it is considered important to launch studies that show the trends and research dynamics of the State of the Art of the study on working poor. In this sense, the generation of new knowledge around the subject is fundamental for the vindication of the rights of those people who work today, but are not able to afford the minimum requirements for a dignified life. This is how the present study is directed towards identifying scientific trends related to the working poor at a global level.

Methodology

Biometric analysis provides indicators to identify quantitative trends related to the development of a field of study (Samper et al., 2022). Through the application of statistical methods, academic activity can be identified among authors, institutions and countries. (Ceballos-Parra, Sarache, & Gómez, 2018). Taking into account the above, this work carries out an exploration of the literature on the research topic "Labor performance in the working poor", which was carried out with the Wos and Scopus databases, using as keywords the terms "Working poor" and "Job performance" which using the Boolean operator AND did not yield the expected results, since in Wos a single document appeared without much relevance to the field of research and in Scopus a relevant document and a non-relevant one appeared, so it was decided to carry out the analysis with the terms mentioned above independently.

The search equation "TITLE ("Working poor") AND PUBYEAR > 2011 AND (LIMIT-TO (LANGUAGE, "English") OR LIMIT-TO (LANGUAGE, "Spanish"))", executed in Scopus using as a time space the last 10 years and filtering by the English and Spanish languages resulted in 97 documents very relevant to the research topic.

The same search criteria used in Scopus, were applied in the Web of Science database, the search equation was as follows TI=("Working poor") and English or Spanish (Languages) and filtered from the date 2012/01/01 to 2022/06/06, from which a total of 98 documents resulted, these files, were later downloaded from the two databases in Bibtex format, then using the statistical software R, were unified to create a single file, from which 70 duplicate documents were purged and processed with the help of R's Bibliometrix package. In this way, a file transformed to csv format
was used in the study, with 125 works of great relevance to the research topic.

Results and discussion
Research overview. The time span used was from 2012 to 2022, resulting in 125 documents, of which 75 were articles, 5 books, 24 book chapters and 21 others.

Figure 1: Word cloud

Figure 1 shows a word cloud from the summary of the 125 documents retrieved in the Wos and Scopus metasearch engines where it can be seen that the terms: poor, poverty, social, workers and employment, are the most used in the subject analyzed.

Figure 2: Annual scientific production

Figure 2 shows that between 2012 and 2018 there is a slight growth, highlighting the last year as the one with the best academic production, with 19 contributions, it can also be evidenced that from 2019 to date it has shown a decrease in the number of investigations in the field of study.

Figure 3: Production by country
Figure 3 shows that the countries that contribute the most to the research area are the United States with 55 documents, Spain with 12, Colombia with 7 and Canada with 7, among these contributions, the most relevant work of the country that contributes the most to the field of study, addresses: “the problem of the persistence of poor working families in the United States, families living on the poverty line despite at least one family member working full-time and examines the relationships between the persistence of poor working families and these changes in the labor market. Finally, with a review of human resource development research (HRD) on poverty and the working poor, and a discussion on the implications of the persistence of poor working families for HRD research and practice” (Torraco, 2016).

Table 1: Impact source

<table>
<thead>
<tr>
<th>Source</th>
<th>H index</th>
<th>G index</th>
<th>NP</th>
<th>PY start</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Indicators Research</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2016</td>
</tr>
<tr>
<td>Athenea Digital</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2020</td>
</tr>
<tr>
<td>Journal of International Development</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2012</td>
</tr>
<tr>
<td>Papeles De Población</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2018</td>
</tr>
<tr>
<td>Accounting, Auditing and Accountability Journal</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2019</td>
</tr>
<tr>
<td>American Journal of Industrial Medicine</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2018</td>
</tr>
<tr>
<td>Annals of Epidemiology</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2014</td>
</tr>
<tr>
<td>Asian Journal of Women’s Studies</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2020</td>
</tr>
<tr>
<td>Bmj Open</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2016</td>
</tr>
<tr>
<td>Brazil: Media from the Country of the Future</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2017</td>
</tr>
</tbody>
</table>

Table 1 shows the top 10 journals with the highest impact factor, of which they stand out, Social Indicators Research, Athenea Digital, Journal of International Development and Papeles De Población, of the most outstanding journal an article of great relevance for research deals with the fact that low work intensity and high job instability are crucial microdeterminants of poverty at work. Importantly, they could also affect subjective poverty in households that are above the poverty line. According to Filandri, Pasqua, & Struffolino (2020): “We contribute to the literature by studying the relationship between subjective and objective poverty at work and how this
relationship is affected by the work characteristics of household members. We used data from the 2014 wave from the Italian module of the EU-SILC survey. Italy is an interesting case since, similar to other southern European countries, the proportion of people and households reporting subjective difficulties is surprisingly high compared to levels reported in other areas of the EU. IT was not found no statistically significant differences in the association between subjective poverty and different degrees of objective poverty by different levels of labor intensity”.

Figure 4: Most important affiliations

Figure 4 shows that the universities that contribute the most academic production to the field of research are: The University of Toronto with 6 documents, The University of Hong Kong with 5 and the University of Haifa with 5. The most relevant article of the first institution, examines that poverty implies more than a scarcity of material resources, also implies a scarcity of time. To examine the causal benefits of reducing time poverty, a longitudinal field experiment was conducted for six consecutive weeks in an urban slum in Kenya with a sample of working mothers, a population that is especially likely to experience severe time poverty. Participants received vouchers for services designed to reduce their unpaid workload. The effect of these coupons with unconditional cash transfers (UTCs) of equivalent value and a neutral control condition were compared. In contrast to the previously recorded hypotheses, a previously registered Bayesian ANCOVA indicated that “time-saving conditions, UCT and control led to similar increases in subjective well-being, reductions in perceived stress, and decreases in relationship conflict (Cohen's ranged from 0.25 to 0.85 during treatment weeks and from 0.21 to 0.36 at the end). Exploratory analyses revealed that time-saving vouchers and UTCs produced these benefits through different psychological pathways” (Whillans & West, 2022).

Table 2: Author impact

<table>
<thead>
<tr>
<th>Author</th>
<th>H index</th>
<th>G index</th>
<th>M index</th>
<th>TC</th>
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<th>PY start</th>
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</thead>
</table>

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http://www.webology.org
Table 2 shows the classification of the authors according to the H index; Fonseca (2022) establishes the following: “indicator H continues to be one of the most used indicators to measure the success of a researcher's professional career with only a part of the total volume of publications and citations, since it simultaneously measures the quality and quantity of scientific production”. In this item it could be highlighted with a H index of 2, to the authors: Boada-Grau, Buchbinder E., Cheung K., Chou K., Eisikovits Z., Leana C., Poy S., Quionez C., Sigad L., Strier R.

Among the most representative authors, the research of Boada-Grau, Llosa, & Agulló (2020), in which it is highlighted that: “the working poor are those who, even working, fail to get out of the risk of poverty thresholds set by international organizations. It represents a growing situation in Europe, especially relevant in the Mediterranean countries, although with little scientific literature still in the European context, and particularly in Spanish”.

In this sense, for Lotka, “the number of authors making n contributions is about 1/n2 of those who make one, and the proportion of all those making a single contribution is 60%” (Lotka, 1926). This can be explained because among all authors in a discipline, 60% of authors will have only one publication each. 15% will have two publications (1/22*60) each, 7% of the authors will have three publications each (1/32*60) and in a similarly, just 6% of the authors have up to ten publications each.

Lotka's law is very often referred to as "inverse square law" as it indicates an inverse relationship between the number of publications and the number of authors publishing these publications. (Nwagwu, 2006). Citado por (Sahu & Jena, 2022):

<table>
<thead>
<tr>
<th>N. of Articles</th>
<th>N. of Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>189</td>
</tr>
<tr>
<td>2</td>
<td>28</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
</tr>
</tbody>
</table>

From 3, it is possible to notice that the total number of authors found was 218 distributed as follows: 86.7% of the contributions made by the authors are from a single contribution to the study.
area and 12.84% make two contributions and the rest made contributions of four contributions. According to the above it can be said that Lotka's law is fulfilled.

Table 4: Most cited documents worldwide

<table>
<thead>
<tr>
<th>Paper</th>
<th>Doi</th>
<th>Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desmond M, 2016, soc probl</td>
<td>10.1093/socpro/spv025</td>
<td>93</td>
</tr>
<tr>
<td>Leana C., 2012, organ sci</td>
<td>10.1287/orsc.1110.0672</td>
<td>61</td>
</tr>
<tr>
<td>Thiede B., 2015, work occup</td>
<td>10.1177/0730888415573635</td>
<td>22</td>
</tr>
<tr>
<td>Pradella L., 2015, comp euro polit</td>
<td>10.1057/cep.2015.17</td>
<td>21</td>
</tr>
<tr>
<td>Newman K., 2018, transitions through adol</td>
<td>10.4324/9781315789286-12</td>
<td>19</td>
</tr>
<tr>
<td>Fung C., 2016, bmj open</td>
<td>10.1136/bmjopen-2015-010015</td>
<td>17</td>
</tr>
<tr>
<td>Skilling P., 2019, account audit account j</td>
<td>10.1108/aaaj-04-2016-2532</td>
<td>12</td>
</tr>
<tr>
<td>Kannan K., 2013, the long road to soc secur</td>
<td>10.1093/acprof:oso/9780198090311.001.000</td>
<td>12</td>
</tr>
<tr>
<td>Strier R., 2014, j soc policy</td>
<td>10.1017/s0047279413000949</td>
<td>11</td>
</tr>
</tbody>
</table>


Of the top 10 presented in Table 4, the work of Leana, Mittal, & Stiehl (2012) stands out, in which the working poor who are located in a very powerful context: the link between poverty and low-paid work, were studied. The central premise is that this context represents a "strong situation" that powerfully affects work-related outcomes, but organizational science has largely overlooked it, even when the working poor comprise a sizable segment of the workforce.

Co-citation analysis

“Kessler’s (1963) proposal is based on the principle that two documents are strongly related to the extent that they have a greater number of bibliographic references in common. Therefore, from the automatic processing of a set of articles, the bibliography becomes a correlation criterion that allows to obtain groups of articles with a high degree of similarity, forming a research front (Persson, 1994; Zhao and Strotmann, 2015)” cited by (Arencibia-Jorge, Vega-Almeida, & Humberto Carrillo-Calve, 2021).

Figure 5. Co-cited authors
In Figure 5, the co-citation map between authors shows 3 clusters, one of red color made up of 11 researchers, of which the most representatives are: Lohmann, Brady and Marx; a second blue cluster composed of 17 authors, with high correlation between Cohen, Kalleberg and Newman; finally, the green cluster with 12 researchers, of which Lee, Freeman and Smith stand out.

Figure 6: Co-cited documents

Figure 6 shows that there are four research fronts, one red with 12 correlated documents, one blue with 12, another green with 4 and finally a purple front with 4 jobs. Taking a look, for example, at the first document of the red cluster, it is possible to analyze that its theme "refers to the incidence of poverty at work and how it is reduced by paying social transfers in 20 European countries" (Lohmann, 2009).

Figure 7: Sources co-cited through the payment of social transfers in 20 European countries
In the network of co-cited sources there are 6 groups that are cohesive according to their research front and are discriminated as follows: group 1 (red).

**Group 1**: Nolan, Lohmann, Marx and Welfare states. Group 2 (Blue), grouped 3 sources, which were: Jr., Edin and Thomas. Group 3 (green), included 4 sources, which were: Geneva: Ilo, Mullainathan, Smith and Brown. Group 4 (purple), grouped 2 sources, which were: Li and Collins. Group 5 (yellow), included 3 sources, which where: Liu, Ravallion, Whelan, The three worlds of welfare capitalism, Fortin, Latta and Lawton. Group 6 (brown), grouped 3 sources, which where: Good Jobs, Duncan and When work disappears: the world of the new urban poor.

**Conclusions**

From the search carried out in the best metasearch engines at present "Wos" and "Scopus" using the keywords "Working poor" there were a total of 125 documents after the filters applied. When processing the resulting csv file after the debugging process carried out with the bibliometrix package of the R software, it was found in a general way that 60% of the recovered documents were journal articles, 19.2% book chapters, 4% books and 16.8% other formats.

The sum of the production of the research field during the last 10 years was 124 documents, which indicates that it is an area of research little explored, mainly in the last 4 years. Among other relevant results, it is evident that the country that contributed the most to the research topic was the United States with 55 documents, this being very coherent because the term "working poor" is a purely North American concept created by the Bureau of Labor Statistics of that same country.

In this sense, an important growth is observed with respect to the study of the working poor as an extremely relevant socioeconomic variable, however, it is evident as mentioned above that the
nation with the greatest scientific deepening with respect to the subject is the United States, which is why it is concluded that other countries in the world still demonstrate a significant ignorance of the reality of this variable within their territories, thus generating a detraction to the visibility of an extremely high need within societies, directly impacting inequalities.

It is certainly important to recognize that a legally constituted job alone is not enough for citizens to live a full life, but that there must be a clear balance between household income, the costs of living and the opportunities provided by the state for the guarantee of fundamental rights such as food, health or education; which often take a back seat to the need of the working poor.

References


Filandri, M., Pasqua, S., & Struffolino, E. (2020). Being working poor or feeling working poor? The role of work intensity and job stability for subjective poverty. Social Indicators Research,
Jha, P. (2016). KP Kannan and Jan Breman (eds): The long road to social security: assessing the implementation of national social security initiatives for the working poor in India.
Papeles de población, 24(98), 185-218.