

The Effects of the COVID-19 Crisis among Young People in the Labour Market. A Bibliometric Approach

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Abstract. *The Covid-19 pandemic had a significant impact not only on the health of individuals, but also on the global economy, including the labour market. Although a large number of studies have been conducted on the impact of the pandemic, youth issues have been less analyzed from this perspective, even if young people were among the hardest hit by this crisis. In this context, this study aims to investigate the research landscape regarding the implications of the pandemic crisis on the youth in the labour market. To achieve the objective, a bibliometric analysis was performed using the R packages Bibliometrix and Biblioshiny. The analysis included 229 scientific publications from the period 2020-2025, extracted from the Web of Science database, and focused on the growth trend of publications in the field, the most productive sources, the most cited papers, the most relevant authors, the most important affiliations, the most productive countries, the author-journal-keyword relationship, exploring also the conceptual and social structure using network and cluster analysis. The empirical results showed that most papers were published in the Plos One Journal, the most prolific author, Shin Y., published 3 papers on this topic in the analyzed period, while the most productive countries are USA, the United Kingdom and Australia.*

Keywords: Covid-19, young people, labour market, pandemic impact, bibliometric analysis.

Introduction

The Covid-19 pandemic had a significant impact not only on the health of individuals, but also on the global economy, including the labour market. Although most individuals were affected by the measures taken against the spread of the virus and the effects the pandemic had, one of the most affected groups was young people (aged 15-29 years). Many of them have struggled to find work, while those already in the workforce have experienced pay cuts, reduced hours or job losses. Furthermore, the crisis generated by the Covid-19 pandemic has also changed the way business is done in some industries, with many companies adopting remote working and reducing the need for in-office workers. This sudden shift to working from home had a particularly negative impact on young people, who had little work experience, nor the tools, technology and digital skills needed to work remotely.

On the other hand, in some industries, such as IT and healthcare, the emergence of the pandemic has created new opportunities, so young people with skills in these areas were more likely to find a job or advance in their careers. Therefore, we can say that the Covid-19 pandemic has significantly affected the labour market, especially young people who needed to adapt quickly to new changes and potential opportunities in order to be successful in their future careers.

Although a large number of studies have been conducted on the impact of the pandemic, youth issues have been less analyzed from this perspective. Thus, it is important to see what has been published from the beginning of the pandemic until today on the effects of the Covid-19 crisis among young people in the labour market. In this context, this paper aims to conduct a bibliometric analysis in order to map this field of interest. Therefore, the objective of the paper is to review the scientific papers published so far (February 2025), globally, focusing on the implications of the

Covid-19 crisis on the youth labour market, by summarizing in a comprehensive way the existing research landscape.

Literature review

In 2020, the economic crisis generated by the Covid-19 pandemic seriously affected labour markets around the world, with young people representing the most affected group, as global job losses in 2020 compared to 2019 were estimated at 8.7% among youth and only 3.7% among adults (ILO, 2021). Moreover, the Covid-19 pandemic has exacerbated the difficulties faced by young people in the workforce, namely: delays in entering the labour market, acceptance of low-quality jobs, prolonged or repeated periods of unemployment or inactivity, difficulties that can have negative effects on their careers and prospects, even in the long term (Bălan, 2022).

According to some studies, the negative effects of the pandemic crisis in the job market had a greater impact on young people compared to other age groups. This is because young people are more likely to work in sectors such as HoReCa, tourism, services, and sales, as well as in part-time, temporary or seasonal employment contracts, which were particularly affected after the outbreak of the pandemic by the imposition of social distancing, but also by the need to reduce the number of employees in certain areas of activity or even by the closure of certain companies during this period (Wilson & Papoutsaki, 2021; Bălan & Radu, 2022). According to the International Labour Organization, before the outbreak of the pandemic, 178 million young people, or more than 40% of the world's youth workforce, were working in these sectors, which have been particularly hard hit by the economic crisis caused by the pandemic. As a result, about one in six young people (17%) became unemployed, with those aged 18-24 being the most affected (23.1%), while the crisis also led to a reduction of about 25% in the number of hours worked by young people who remained employed, but also to a reduction in income for about 42% of them (Milotay, 2020; Puerto et al., 2020).

An ILO (2021) study which covered 58 countries found that young people, and particularly young women, bore the brunt of the Covid-19 pandemic crisis, as in the second quarter of 2020 compared to the same period in 2019, employment had fallen by an average of 11.2% for young men and 13.9% for young women in high-income countries, while in middle-income countries the fall was about twice as large, 23.7% for men and 29% for women. Also, another study stated that young people in low-income countries were the most at risk in terms of falling incomes and reduced working hours (Milotay, 2020).

In this context, a very important question is the following: Where have young people who have lost their jobs turned to? The International Labour Organization has studied this issue at the global level and concluded that, in the wake of the crisis caused by the Covid-19 pandemic, most of the young people who lost their jobs moved into inactivity rather than unemployment, leading to a significant increase in the inactivity rate and a rather small change in overall unemployment, showing us that unemployment provides only a partial insight into the consequences of the Covid-19 pandemic crisis on youth and that more monitoring of labour market outcomes is needed (ILO, 2021).

Another implication of the pandemic crisis on young people is the widening digital divide. This has happened as a result of the accelerated digitization caused by the outbreak of the pandemic, which has limited access to education for children and young people from socio-economically disadvantaged families who did not have access to the Internet or other devices necessary for online education, and also led to the need to improve the digital skills of those in the workforce, a process that requires a certain amount of time, during which this gap may increase (Noja & Pânzaru, 2021).

Therefore, the most affected were already marginalized young people, i.e. those with little or no access to digital technologies, who could no longer follow online courses, resulting in a lack of digital skills among them, making it even more difficult to enter the labour market during this period, leading to growing inequalities as well as permanent negative consequences for these young generations in the future (Lavizzari et al., 2020; Milotay, 2020).

In conclusion, the Covid-19 pandemic has had an unexpectedly strong impact on the labour market. It has affected the number of jobs through increased unemployment and underemployment, the quality of work, through lower wages and access to social protection, and specific groups (youth, women, etc.) that are highly vulnerable to unfavorable labour market conditions (Davidescu et al., 2021).

Methodology

Although the term “bibliometric analysis” was first introduced by Alan Pritchard (1969), the use of this technique has become much more popular among researchers in the 21st century as the volume of publications in many fields of interest is growing more and more each year. This type of analysis can summarize large amounts of bibliometric data in order to present the intellectual structure but also the emerging trends of a field or research topic, thus helping to decipher and map large volumes of unstructured data from a well-established field in a rigorous way (Donthu et al., 2021).

In order to achieve the objective, this paper aims to answer the following research questions:

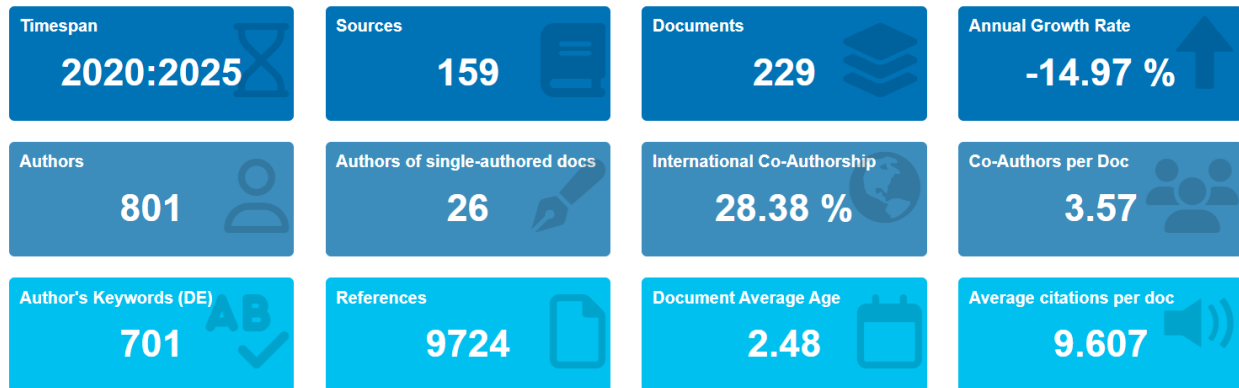
- Who are the most productive authors?
- Which are the most relevant journals?
- Which are the most cited papers?
- What is the conceptual and social structure of publications on the analyzed topic?

The research methodology was structured in three main stages, respectively: study design and data collection, data analysis and visualization, and data interpretation (Zupic and Čater, 2015). To explore the papers published on this topic, one of the most important databases, Web of Science (WoS), was queried and the following keywords were used in different combinations: 'covid', 'youth', 'labour market', 'pandemic', 'young' and 'employment'. Filters were subsequently applied in order to consider only the following type of documents: article, early access, proceeding paper, review article and book chapter, written in English, from 2020 to the present (February 2025) and belonging to the following categories: Economics, Education Educational Research, Social Sciences Interdisciplinary, Management, Multidisciplinary Sciences, Social Work, Industrial Relations Labor, Business, Social Issues, Business Finance, Education Special. After a manual check aimed at removing documents that did not correspond to the topic of interest, 229 documents were extracted and analyzed using the Bibliometrix and Biblioshiny packages in R. Biblioshiny is a web application that allows users to perform relevant and visual bibliometric analysis based on an interactive and user-friendly interface.

The methodology focused on a descriptive bibliometric analysis that explores the growth trend of publications in the field, the most productive sources, the most cited papers, the most relevant authors, the most important affiliations, the most productive countries, the author-journal-keyword relationships. The study also explored the conceptual and social structure of the analyzed research field using network and cluster analysis. The conceptual structure included network

analysis based on keyword co-occurrence, while the social structure explored the collaborative network between authors. Moreover, cluster analysis included word cloud for abstracts.

Results and discussions



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Figure 1. Main information on documents

Source: Authors' own research.

The bibliometric analysis was performed on 229 scientific papers which were focusing on the implications of the crisis caused by the Covid-19 pandemic on the youth workforce, published between 2020 and 2025. The number of publications on this topic increased until 2022, followed by a decrease in 2023 and a slight increase in 2024, with a very low number of papers in 2025, considering that we are still at the beginning of the year, which could explain the negative annual growth rate in Figure 1. These papers have been published in 159 sources by 801 authors, of which only 26 have a single author. The average number of co-authors per paper is 3.57, and 28.38% of the papers have international co-authorship, indicating an important collaboration between researchers at both national and international level to publish papers showing the implications of the Covid-19 crisis among young people in employment.

Also, considering the type of documents published, the majority were articles (218), followed by proceedings papers (8) and review papers (3).

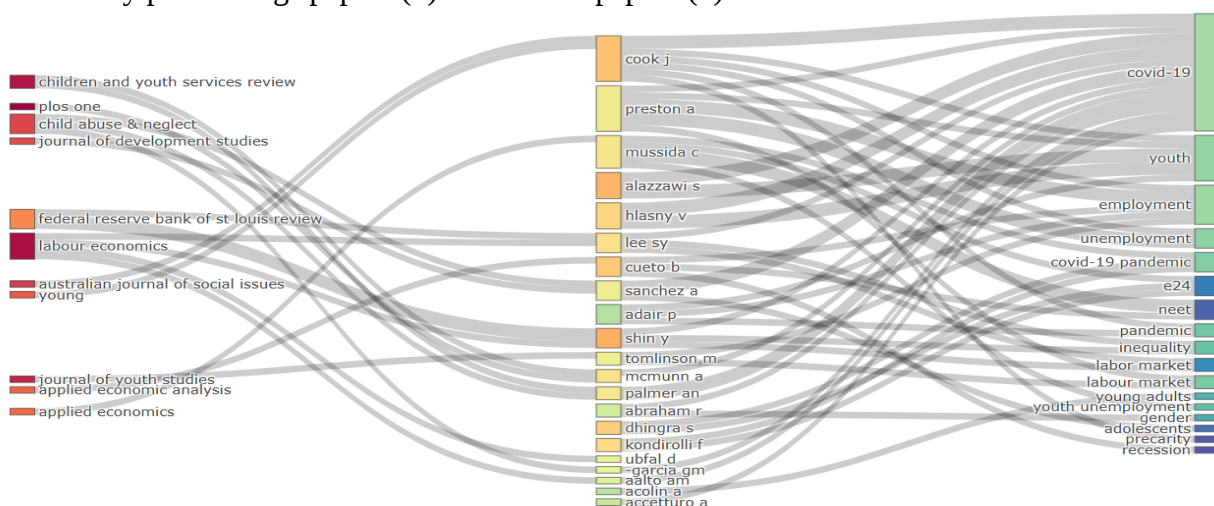


Figure 2. Three field plot (sources – authors – keywords)

Source: Authors' own research.

The three-field plot is usually used to visualize the link between sources, affiliations, authors, keywords, etc. In this case, the diagram from Figure 2 shows the relation between source (left), author (middle) and author keywords (right). In this way it is easier to identify the main journals in which the most important authors in the field have published and the research topics (authors' keywords) they explored in their papers. Therefore, it can be noted that authors such as Cook J., Mussida C., Shin Y., Lee SY., and Sanchez A. have published their research papers in the following journals: Young, Australian Journal of Social Issues, Applied Economics, Labour Economics, Journal of development studies. They used frequently in their work keywords such as: „Covid-19”, „pandemic”, „youth”, „employment” and „unemployment”.

Table 1. Most important sources

Source	H-index	G-index	M-index	TC	NP	PY_start
Plos One	6	9	1	96	12	2020
Journal of Youth Studies	4	4	1	51	4	2022
World Development	4	4	1	112	4	2022
Australian Journal of Social Issues	3	3	0.75	29	3	2022
Child Abuse & Neglect	3	3	0.75	29	3	2022
Education Sciences	3	4	0.60	44	4	2021
Journal of Education and Work	3	6	0.60	45	6	2021
Young	3	3	0.60	56	3	2021
Journal of Economic Analysis & Policy	2	2	0.66	4	3	2023
Cogent Economics & Finance	2	2	0.66	5	2	2023

Source: Authors' own research.

Table 1 shows the most important sources in descending order by H-index. It also shows the G-index and M-index, the number of papers published in each source, the number of citations and the year in which a paper on this topic was first published in that source. Plos One is the journal with the highest H-index (6) and the highest G-index (9), but also with the most published papers on the researched subject (12). Journal of Youth Studies and World Development are other two sources that are important for this topic, with an H-index and a G-index of 4. Moreover, other journals with an H-index of 3 are: Education Sciences which has a G-index of 4 and Journal of Education and Work which has a G-index of 6.

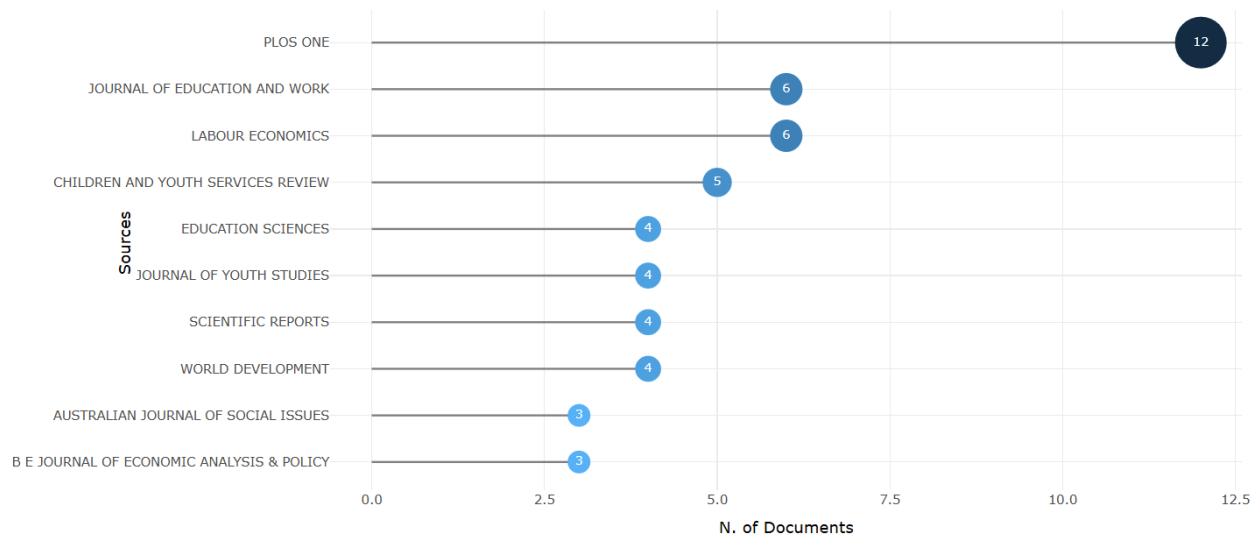


Figure 3. Most relevant sources in terms of documents

Source: Authors' own research.

Here we have the most relevant sources in terms of published scientific papers about the implications of the pandemic on young people in the labour market. Plos One is the source with the most published documents (12), followed by Journal of Education and Work and Labour Economics, with six documents each. In Children and Youth Services Review were published 5 documents on this topic, while the following four sources published four documents each: Education Sciences, Journal of Youth Studies, Scientific Reports and World Development. The last two sources published three documents each.

Table 2. Most important authors

Author	H-index	G-index	M-index	TC	NP	PY_start
Shin Y	2	3	0.40	116	3	2021
Cook J	2	2	0.40	28	2	2021
Hlasny V	2	2	0.50	9	2	2022
Lee SY	2	2	0.40	114	2	2021
Palmer AN	2	2	0.50	10	2	2022
Preston A	2	2	0.40	11	2	2021
Sanchez A	2	2	0.50	16	2	2022
Alazzawi S	2	2	0.50	9	2	2022
Garcia GM	1	1	0.25	6	1	2022
Aalto AM	1	1	0.33	1	1	2023

Source: Authors' own research.

Table 2 shows the top 10 most important authors among those who have published on the analyzed topic, ranked in descending order by H-index and G-index. H-index was created by J.E. Hirsch (2005) and its value is equal to a number h of papers that have at least h citations each, while the other papers have less than h citations each. On the other hand, G-index, developed by Leo Egghe, takes into account the most cited papers, so that the G-index is equal to the top g papers that together have at least g^2 citations (Egghe, 2006). From the table, we can see that the most relevant author is Shin Y with an H-index of 2 and a G-index of 3, but also with 3 papers on the analyzed topic and with the most citations among those listed in this table (116). Other authors

with an H-index and a G-index of 2 are: Cook J, Lee SY, Sanchez A, Palmer AN, who also have two papers published on the analyzed topic and more than 10 citations each.

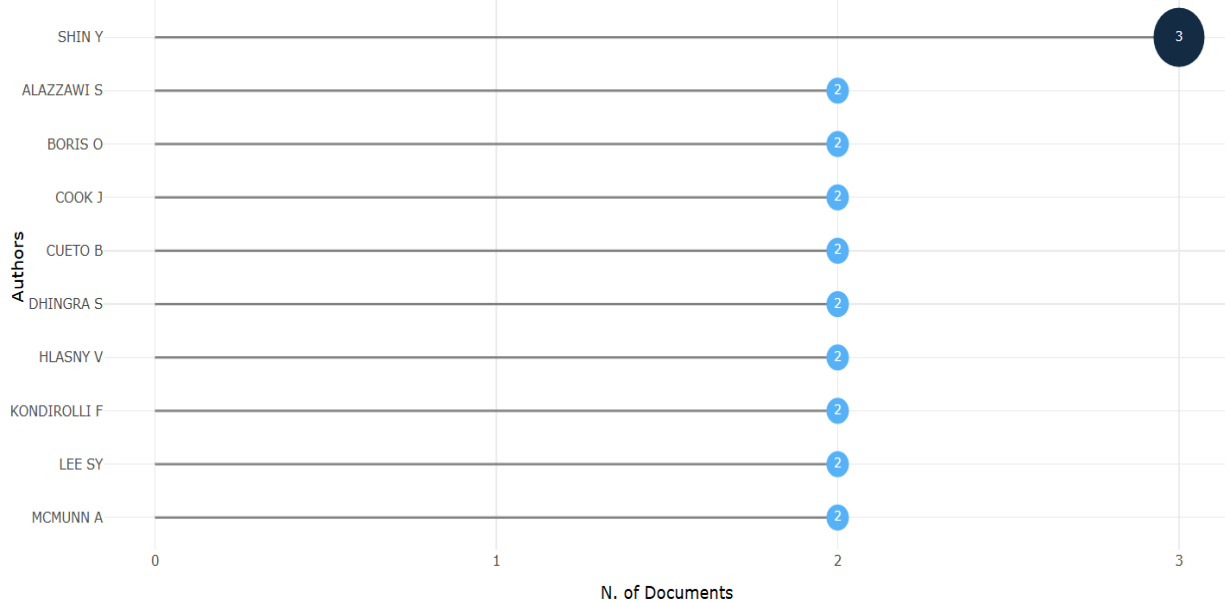


Figure 4. Most relevant authors in terms of documents

Source: Authors' own research.

From the above figure it can be seen that the most prolific author on the topic of the implications of the pandemic crisis among youth in the labour market is Shin Y, who published 3 papers in the analyzed period. Other authors, such as: Alazzawi S, Cook J, Boris O, Cueto B, Hlasny V published two papers each on this topic. They are among the most important authors who have published on the analyzed topic and have brought important information and deeper knowledge of the subject to the literature.

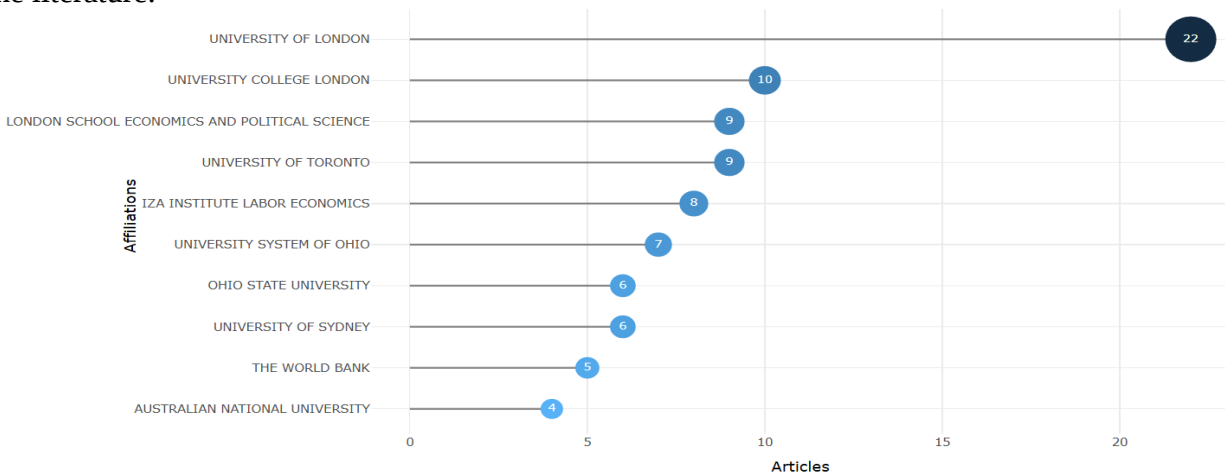


Figure 5. Most relevant affiliations

Source: Authors' own research.

Regarding the authors' affiliations, the most important institution is University of London, with a great number of documents, respectively 22 publications on the analyzed topic. This is followed by University College London with 10 publications and by London School Economics

and Political Science and University of Toronto with 9 publications each. Other important institutions are: Iza Institute Labor Economics with 8 publications, University System of Ohio with 7 publications, Ohio State University and University of Sydney with 6 publications each and The World Bank which published 5 documents on this topic so far. These data show that the topic analyzed in this paper has been researched more in certain countries, such as the United Kingdom, the United States, and Australia, than in other parts of the world.

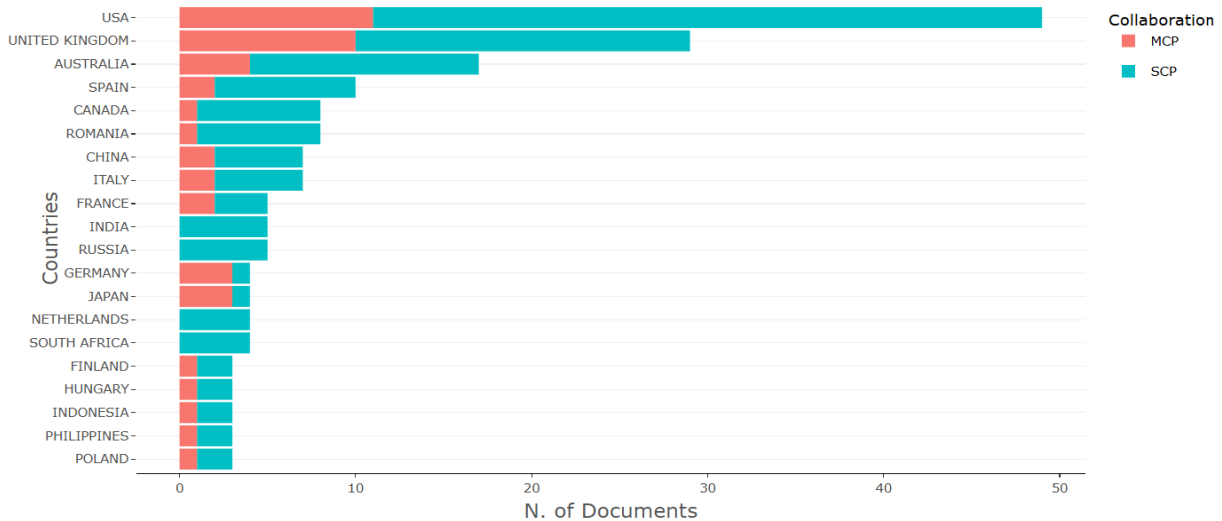


Figure 6. Most relevant countries

Source: Authors' own research.

As it resulted from the previous figure with the most important affiliations, the figure above also shows that the most relevant countries, from which the most scientific papers on the analyzed topic have come from, are: The SUA (49), The United Kingdom (29) and Australia (17). For each country the figure shows both the number of the single country publications and the number of the multiple country publications. The USA has the most collaborative work with other countries (11 papers), followed by the United Kingdom (10) and Australia (4). Other countries that have published papers on the analyzed topic in collaboration with other countries are: Spain, Canada, Romania, China, Italy, France, Germany, Japan, Finland, Indonesia, Philippines and Poland, while India, Russia, the Netherlands and South Africa have only single country publications. Authors from Romania published 8 scientific papers on this topic, one of which was a collaboration with authors from other countries.

Table 3. Most cited global documents

Rank	Year	Title	Journal	Authors	Citations
1	2020	„Initial impacts of the COVID-19 pandemic on the Canadian labour market”	Canadian Public Policy	Thomas Lemieux, Kevin Milligan, Tammy Schirle, Mikal Skuterud	171
2	2020	„The COVID-19 pandemic: Lessons on building more equal and sustainable societies”	The Economic and Labour Relations Review	Kristin van Barneveld, Michael Quinlan, Peter Kriesler, Anne Junor, Fran Baum, Anis Chowdhury, PN (Raja) Junankar, Stephen Clibborn, Frances Flanagan, Chris F Wright, Sharon	164

Rank	Year	Title	Journal	Authors	Citations
				Friel, Joseph Halevi, Al Rainnie	
3	2020	„Disparate Disruptions: Intersectional COVID-19 Employment Effects by Age, Gender, Education, and Race/Ethnicity”	Work, Aging and Retirement	Phyllis Moen, Joseph H. Pedtke, Sarah Flood	93
4	2020	„US and UK labour markets before and during the Covid-19 crash”	National Institute Economic Review	David N.F. Bell, David G. Blanchflower	80
5	2021	„Who suffers from the COVID-19 shocks? Labor market heterogeneity and welfare consequences in Japan”	Journal of the Japanese and International Economies	Shinnosuke Kikuchi, Sagiri Kitao, Minamo Mikoshiba	78
6	2022	„The short-term impacts of COVID-19 on households in developing countries: An overview based on a harmonized dataset of high-frequency surveys”	World development	Tom Bundervoet, Maria E. Dávalos, Natalia Garcia	76
7	2021	„COVID-19 doesn't need lockdowns to destroy jobs: The effect of local outbreaks in Korea”	Labour Economics	Sangmin Aum, Sang Yoon (Tim) Lee, Yongseok Shin	73
8	2022	„Inequality and the COVID-19 Crisis in the United Kingdom”	Annual Review of Economics	Richard Blundell, Monica Costa Dias, Jonathan Cribb, Robert Joyce, Tom Waters, Thomas Wernham, Xiaowei Xu	61
9	2021	„COVID- 19 and the immediate impact on young people and employment in Australia: A gendered analysis”	Gender, Work & Organization	Brendan Churchill	60
10	2020	„Initial economic damage from the COVID-19 pandemic in the United States is more widespread across ages and geographies than initial mortality impacts”	Proceedings of the National Academy of Sciences	Maria Polyakova, Geoffrey Kocks, Victoria Udalova, Amy Finkelstein	54

Source: Authors’ own research.

Highly cited papers are usually important papers that have a significant impact on a research topic and that greatly help to develop the literature and create new studies on the same topic. Table 3 shows the top 10 most cited global documents among those published on the topic of the implications of the Covid-19 crisis among youth in the workforce and provides information such as: the title, the journal, the authors, the year of publication and the number of citations for each paper. The most cited article, with 171 citations, is „Initial impacts of the COVID-19 pandemic on

Source: Authors' own research.

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The collaboration network in Figure 9 shows the connections and interactions between authors who have published scientific papers on the implications of the covid-19 crisis among young people in the labour market. The highest Betweenness and PageRank are held by Mussida C who collaborates with authors such as: Cueto B and Aina C. In addition to this cluster, there are six more clusters: two clusters of three authors and four clusters of two authors, the latter presenting the highest closeness between the authors.

Conclusion

Conducting a bibliometric analysis on a given topic is very important because it brings to light both what has been published and what topics have been addressed in the analyzed period, but also what is missing and which are the gaps in the literature on that topic. This paper aimed to offer a comprehensive analysis of the existing research landscape focusing on the implications of the Covid-19 pandemic crisis on the youth in the labour market. The analysis was carried out using the Web of Science database and included 229 documents.

The descriptive bibliometric analysis showed the growth trend of publications, 2022 being the year with the most publications on the analyzed topic. Also, most of the papers addressing the investigated topic are published in the following sources: Plos One, Journal of Education and Work, Labour Economics, and Children and Youth Services Review. The most important contributor, in terms of document count, is Shin Y, who published 3 articles on the analyzed topic. Among the most important affiliations are the following: University of London, University College London, London School Economics and Political Science, University of Toronto, IZA Institute Labor Economics, while the most productive countries are USA, The United Kingdom, Australia and Spain. The most cited papers include Lemieux et al. (2020), van Barneveld et al. (2020), and Moen et al. (2020), each making an important contribution in the field and being a significant benchmark for future studies on this topic.

The word cloud shows that the most common words found in the papers' abstract are "covid", "pandemic" and "employment", which reveal the research direction of most of the papers. Likewise, the conceptual structure, through the keywords co-occurrence network shows two major research directions that overlap and have as main themes: "covid-19", "youth" and "employment".

In conclusion, the implications of the Covid-19 pandemic crisis among young people in the labour market is an important topic that has been addressed globally in recent years, but there is still room for new research in this area, given that in some countries the number of publications on this topic is quite low. Young people are an important, but also a vulnerable group, which makes the research conducted on them, especially those related to major exogenous shocks, extremely necessary and important, mainly for policy makers who should take appropriate measures to help them on the labour market and beyond.

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References

- Bălan, M. (2022). Youth labour market vulnerabilities during the health crisis. In *Dezvoltarea economico-socială durabilă a euroregiunilor și a zonelor transfrontaliere*, Vol. 42, pp. 33-42.
- Bălan, M., & Radu, B. M. (2022). Youth Labor Market Evolution Under the Impact of the COVID-19 Pandemic. *Annals of Constantin Brancusi University of Targu-Jiu. Economy Series*, (4).
- Davidescu, A. A., Apostu, S. A., & Stoica, L. A. (2021). Socioeconomic Effects of COVID-19 Pandemic: Exploring Uncertainty in the Forecast of the Romanian Unemployment Rate for the Period 2020–2023. *Sustainability*, 13(13), 7078.
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133, 285-296.
- Egghe, L. (2006). Theory and practise of the g-index. *Scientometrics* 69, 131–152.
- Hirsch, J. E. (2005). An index to quantify an individual's scientific research output. *Proceedings of the National academy of Sciences*, 102(46), 16569-16572.
- International Labour Organization (ILO) (2021). An Update on the Youth Labour Market Impact of the COVID- 19 Crisis. Statistical Brief.
- Lavizzari, A., Escamilla, A., Roe, S., & Petkovic, S. (2020). Meta analysis of research on the impact of Covid-19 on the youth sector. *Joint (EU-CoE) Programme*.
- Lemieux, T., Milligan, K., Schirle, T., & Skuterud, M. (2020). Initial impacts of the COVID-19 pandemic on the Canadian labour market. *Canadian Public Policy*, 46(S1), S55-S65.
- Milotay, N. (2020). Next generation or lost generation? Children, young people and the pandemic. *European Parliamentary Research Service*.
- Moen, P., Pedtke, J. H., & Flood, S. (2020). Disparate disruptions: Intersectional COVID-19 employment effects by age, gender, education, and race/ethnicity. *Work, Aging and Retirement*, 6(4), 207-228.
- Noja, G., & Pânzaru, C. (2021). Five Possible impacts of Digitalisation in Romania. *European Review of Applied Sociology*, 14(22), 1-10.
- Pritchard, A (1969) Statistical bibliography or bibliometrics. *Journal of Documentation*, 25(4), 348–349.
- Puerto, S., Gardiner, D., & Bausch, J. (2020). Youth and COVID-19: impacts on jobs, education, rights and mental well-being: *Survey report 2020*.
- Van Barneveld, K., Quinlan, M., Kriesler, P., Junor, A., Baum, F., Chowdhury, A., ... & Rainnie, A. (2020). The COVID-19 pandemic: Lessons on building more equal and sustainable societies. *The economic and labour relations review*, 31(2), 133-157.
- Wilson, T. & Papoutsaki, D. (2021). An unequal crisis: The impact of the pandemic on the youth labour market. *Institute for Employment Studies Report. London: Youth Futures Foundation*.
- Zupic, I., & Čater, T. (2015). Bibliometric methods in management and organization. *Organizational research methods*, 18(3), 429-472.