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Tracing Trends: A Bibliometric Study of Education Economics

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ABSTRACT :

This study is concerned with the bibliometric mapping of relationship between education and economics. Tracing the trends of education and economics is an important one for now a day, for that a data set has been taken from the dimension data base from the year 2000 to 2024 march to understand the concept of education and economics. The objectives of this study are to identify the principal themes, significance writers, most significant country, trends of publications year and critical research domain in this field. Biblioshiny software (R) has used and this paper will helpful for researcher and academic in the concerned field.

Key words – bibliometric, education, economics, development, mapping

Introduction:

In addition to being a fundamental human right, education also has a significant role in promoting social mobility, economic expansion, and personal prosperity. Economics and education have a complex, varied relationship that is frequently the focus of heated discussion and examination. It is imperative for policymakers, educators, and the public to comprehend the economic processes that support educational institutions and programs. In this thorough examination, we go into the field of education economics and examine its fundamental ideas, practical applications, and policy consequences. With origins in the classical economists of the 18th and 19th centuries, the nexus between economics and education is a rich field for scholarly investigation. Adam Smith, who is frequently credited with founding modern economics, understood the value of education in developing human capital and advancing financial success. Since then, a range of theoretical frameworks, empirical techniques, and policy studies have been used by economists to investigate the complex relationship between education and economic outcomes. At the heart of education economics lies the concept of human capital, which refers to the knowledge, skills, and abilities that individuals acquire through education and training. Human capital is not only a crucial determinant of individual earnings and productivity but also a key driver of long-term economic growth. As such, investments in education are often viewed as investments in human capital, with potential returns that extend far beyond the individual level to encompass broader social and economic benefits. How to allocate resources optimally to increase the efficacy and efficiency of educational systems is one of the main concerns of education economics. This entails managing intricate trade-offs between the public and private delivery of education as well as striking a balance between conflicting agendas like efficiency and equity. Econometric modelling, cost-benefit analysis, and experimental techniques are only a few of the analytical tools that economists use to evaluate the effects of different educational interventions and policies. Education economics empirical research has provided important new understandings of the variables influencing learning outcomes and the efficacy of various educational interventions. Numerous studies have looked at how socioeconomic status, family participation, school quality, and teacher characteristics affect students' attainment. Furthermore, studies have shown how crucial lifelong learning, career training, and early childhood education are for fostering skill development and success in the labour market. The field of education economics research has a broad range of policy consequences, which include everything from early childhood education programs to higher education financial reforms. A few of the difficult issues facing policymakers are closing achievement gaps, raising the Caliber of teachers, and expanding educational access and affordability. Furthermore, new opportunities and challenges have been brought about by globalization and technological advancement, calling for creative approaches to education and training in the twenty-first century. In conclusion, education economics is a vibrant and dynamic field that offers valuable insights into the complex interplay between education and economics. By understanding the economic forces that shape educational outcomes and opportunities, we can develop more effective policies and interventions to promote educational equity, economic growth, and social progress.

Prior literature:

Suleyman et al. (2020) in his paper titled relationship between education and economy has found that education increases production capacity by providing the labour force required for economic productivity. But there are costs associated with it, both in terms of monetary outlays and training expenditures. Furthermore, the provision and funding of education are linked. Crucially, education influences macroeconomic and microeconomic processes by producing income gains at the individual and community levels. In addition, demand and supply for education change in reaction to the state of the economy. Notably, productivity rises with education, and in the context of the economy, education is a commodity. Shah (2017) in his

article titled education and economic development has found that economists blame inadequate investments in human capital for the poor growth observed in less developed nations. America's economic progress has been supported by higher education investment. Nonetheless, it is imperative to allocate resources optimally, considering all modes of capital production. When choosing how much to invest in human capital, countries must consider variables like return on investment, the need for a skilled labour force in the future, and shifting demand trends. Ozturk (2001) in his paper called the role of education in economic development: a theoretical perspective studied that good education is essential for economic progress, as it enhances productivity and individual income. A well-rounded education system fosters both economic development and prosperity at the family level.Ali & Khan (2023) in his study called health, education, and economic well-being in China: How do human capital and social interaction influence economic returns is concerned with how social contact and human capital affect economic returns and discovers a relationship between better well-being and strong human capital. This research indicates a substantial economic gain from social and human connection, in contrast to earlier studies that connected employment and income to human capital. There are clear gender differences in China, where males tend to have more high-profile occupations and better income benefits—especially those with better health and greater education. While other individual attributes are less dependent on father education, the research emphasizes gender bias in economic opportunities and the intergenerational influence on incomes and education. Hamdan et al. (2020) Saudi Arabia's GDP has expanded steadily over the past 40 years (1978–2017), coinciding with rising expenditure in postsecondary education. But there have been variations in this growth in investments. Contrary to predictions, there was no consistent relationship between economic development and periods of investment in higher education. Causality studies revealed that investment in postsecondary education comes before economic growth, indicating that in Saudi Arabia, higher education spending is driven by economic growth rather than the other way around. In the end, the study's conclusions cast doubt on the widely held belief that, in the Saudi context, investments in higher education and economic growth are related. Baired et al. (2017) in his study summarizes that in response to JSG1's criticism of Baird2, it is acknowledged that it is critical to weigh both the advantages and disadvantages of scientific theories. Respect is given to JSG1's viewpoint, but a fairer assessment of Baird2 is demanded, emphasizing the study's methodological advantages and the possible advantages of deworming campaigns, particularly in regions with high infection rates. As evidenced by recent actions by the Indian government, the discussion highlights the need of evidence-based policymaking and suggests that even a tiny chance of good outcomes from deworming could justify its cost-effectiveness.

Methodology:

The dimensional data base is used to gather the study's data. The terms "education" and "economics" are typed into the search field, filtered by title and abstract, yielding results of 3117 articles. The data is then further filtered by restricting it to the years 2000 to 2024 (March), resulting in a reduction to 2947 articles. The received results were filtered using chapters and articles, yielding results for 2736 article numbers, and then it was filtered using all open access, yielding results for 2119. Biblioshiny combines the functionality of the bibliometric package with the ease of use of web apps by utilizing the Shiny package environment. (Huang at el, 2021). We do bibliometric analysis on a set of publications using quantitative analysis methods. Bibliometric analysis (Panda & Maharana, 2023).

Table 1: Main information

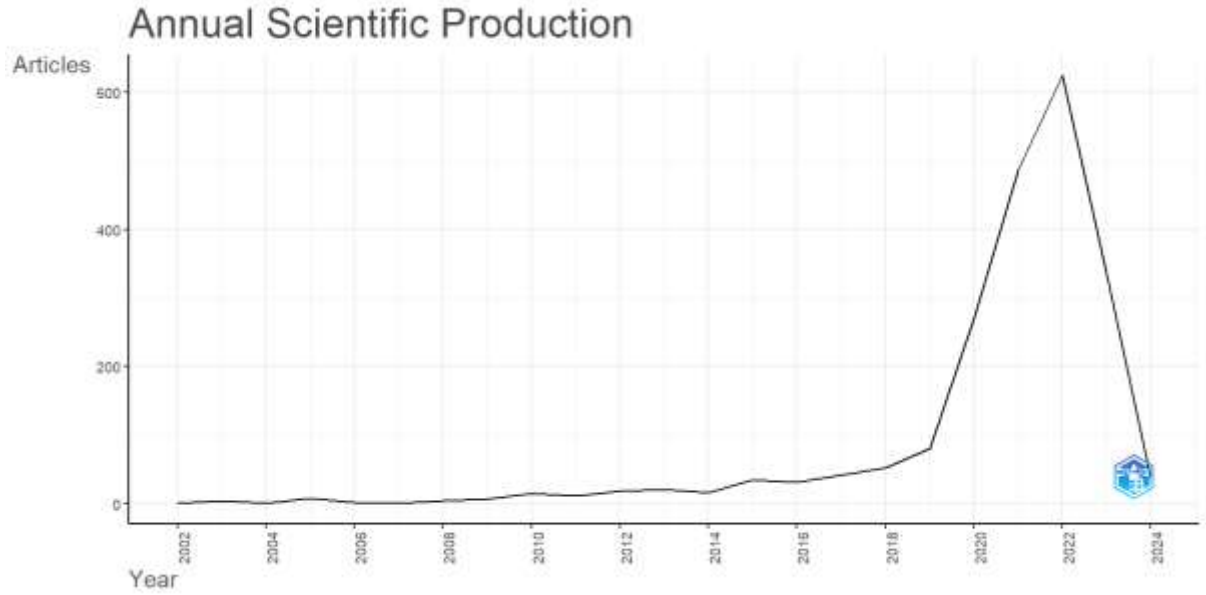
Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	2015:2024
Sources (Journals, Books, etc)	418
Documents	500
Annual Growth Rate %	-1.11
Document Average Age	3.75
Average citations per doc	7.602
References	0
DOCUMENT CONTENTS	
Keywords Plus (ID)	470
Author's Keywords (DE)	470
AUTHORS	
Authors	1600
Authors of single-authored docs	124
AUTHORS COLLABORATION	
Single-authored docs	137
Co-Authors per Doc	3.37
International co-authorships %	10.2
DOCUMENT TYPES	
article	483
chapter	17

Source: Compiled from Biblioshiny

Data analysis and results:

The below figure representing annual scientific production that means it showing the yearly trends of paper published related to the topic education and economic development. From the figure in the initial's year the annual production of papers related to the education and economics were low but with the passage of time it has gone into increasing trends significantly, from which we can conclude the interest of researchers in the field of education and economics increasing day by day that might be because of utilisation factors of published conclusion.

Figure 1: Annual scientific production



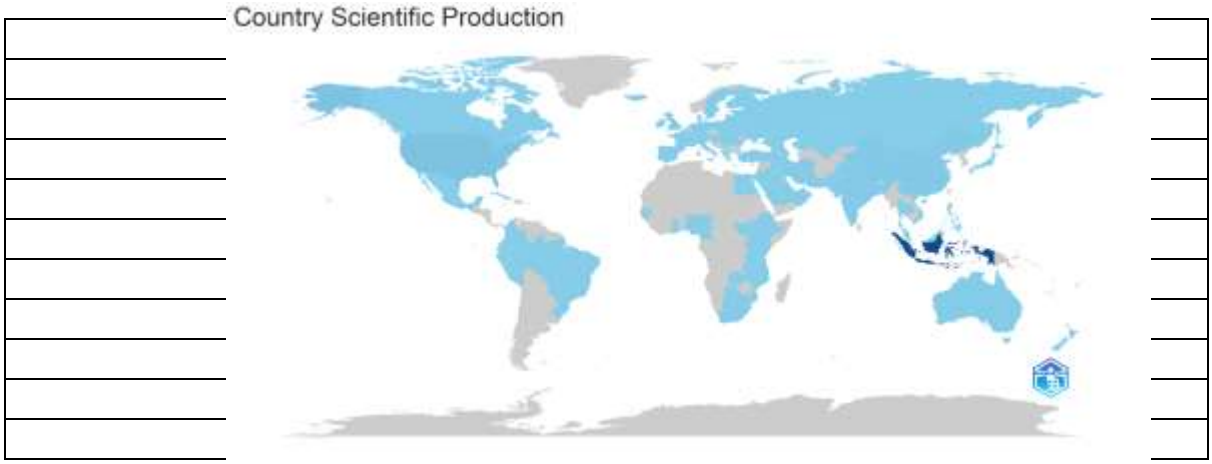
Source: Compiled from Biblioshiny

The below table and figure showing the data of country scientific production that means country's contribution to the field of education and economics till the date. Indonesia comes in the first place with the highest number of publications then comes USA and in third place comes UK. The figure below showing which country is publishing a greater number of articles, grey portion of figure representing country having low level of production while the more the dark colour representing country producing highest numbers of papers.

Table 2: Country scientific production

Source: Compiled from Biblioshiny

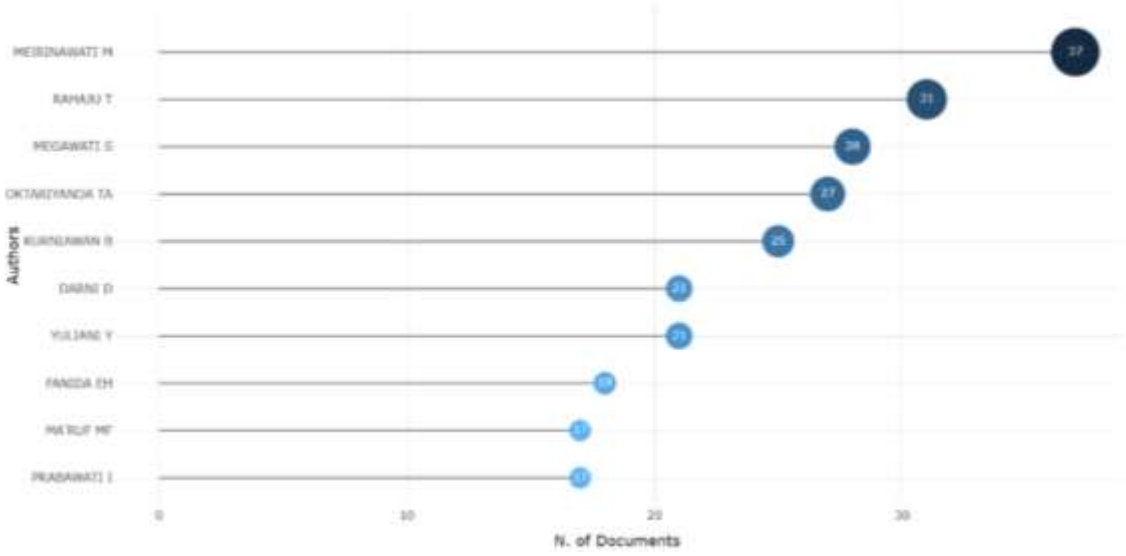
Figure 2: Country scientific production



Source: Compiled from Biblioshiny

The below figure showing the most relevant authors or authors who has contributed more to the field of education and economics and the related topics. Meirinawati m is considered as most relevant author then comes Rahuja t, megawati s, Oktariyanda Ta respectively.

Figure 3: most relevant author's



Source: Compiled from Biblioshiny

The following figure is concerned with the most globally cited document. The below documents are mostly cited by the researcher while conducting the research in the field of education and economics and related topics. The first paper which is mostly cited by the researcher is Fergusson DM, 2008, addiction in his study concluded that According to the current study's findings, using cannabis more frequently in late adolescence and early adulthood is linked to several unfavourable outcomes in the future. High cannabis usage is linked to worse life and relationship satisfaction, reduced income, increased welfare dependence, unemployment, and worse educational outcomes. The results contribute to the increasing amount of information about the negative effects of heavy cannabis use.

Figure 4: Most globally cited document

Source: Compiled from Biblioshiny

Conclusion: Based on the study presented above, it can be stated that Indonesia is the nation focusing more on economic and educational issues on a worldwide scale. Even if other nations have contributed less, throughout time, annual scientific production has expanded dramatically, indicating that other nations are also placing importance on and making efforts to comprehend the connection between economics and education. The analysis reveals that researchers have applied the concepts of education and economics to a variety of other fields, demonstrating the importance of these concepts and their understanding. Appropriately defining these two concepts will also clarify concepts in other fields.

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