

# A SYSTEMATIC LITERATURE AND COMMENTARY OF THE OBSERVATIONAL LITERARY WORKS ON SUSTAINABILITY OF SUSTAINABLE FINANCING

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## **Abstract:**

To attain prosperity via more sustainable, fair, and vigorous economic growth, one must not overlook the role of financial capital, which is one of the most essential drivers of all economies. The financial system (as the primary source of financial capital) must adapt by adopting sustainability concepts and practises and incorporating them into all aspects of its operations processes. The number of subjects relevant to "sustainable finance" continues to rise, as the paper will show significance, and it is obviously becoming a hot topic on the agendas of many governments, regulators, and international organisations, commercial enterprises, and financial institutions, to name a few. The purpose of this article is to give a general overview of the scholarly literature that covers themes connected to sustainable finance in a conceptual and/or empirical way. We identify major emerging research trends in sustainable finance and give a platform for academics to start creating their own research on the issue using a bibliometric methodology and a dataset of 1724 research materials derived from Scopus (covering the years 1991-2019).

**Key Words:** Sustainable Finance, Sustainable Development, Bibliometric Analysis

## **INTRODUCTION:**

William D. Nordhaus and Paul M. Romer were awarded the Nobel Prize in Economic Sciences in 2018 for combining innovation and climate change with economics growth. The prize was granted a year later to Michael Kremer, Abhijit Banerjee, and Esther Duflo for "their innovative strategy to addressing global warming" "Poverty" (a huge issue with several societal consequences) implications). These contrasts underline the importance of Environmental and social elements are extremely important and their ties to economic development. During this time, the three fundamentals will be highlighted cornerstones of long-term viability.

When formulating and executing successful policies that aim economic development, policymakers should not overlook the consequences on the environment or society. To attain prosperity in a society through more sustainable, egalitarian, and vigorous economic growth, one must not overlook the role of financial capital, which is one of the most essential drivers of all economies. Indeed, according to Scholtens (2006, p. 19), "money is the lubricant of the economy." As a result, it may have an impact on the firm's sustainability and social responsibility." As the primary source of financial capital, the financial sector must adapt by embracing sustainability practises and concepts and incorporating them into all of its internal operations. In reality, while channelling their funds toward investment possibilities, all active stakeholders in a particular economy (including financial institutions) must consider environmental, social, and governance parameters.

The expanding number of studies and activities now focused on environmental quality clearly demonstrates the importance of the problem at all levels of society (including the financial dimension). Climate change and sustainability have gotten a lot of press across the world. In face of contemporary events, topics relating to "sustainable finance" continue to develop in quantity and importance, obviously becoming a hot topic on the agendas of many governments, regulators, commercial entities, international organisations, and, not least, financial institutions.

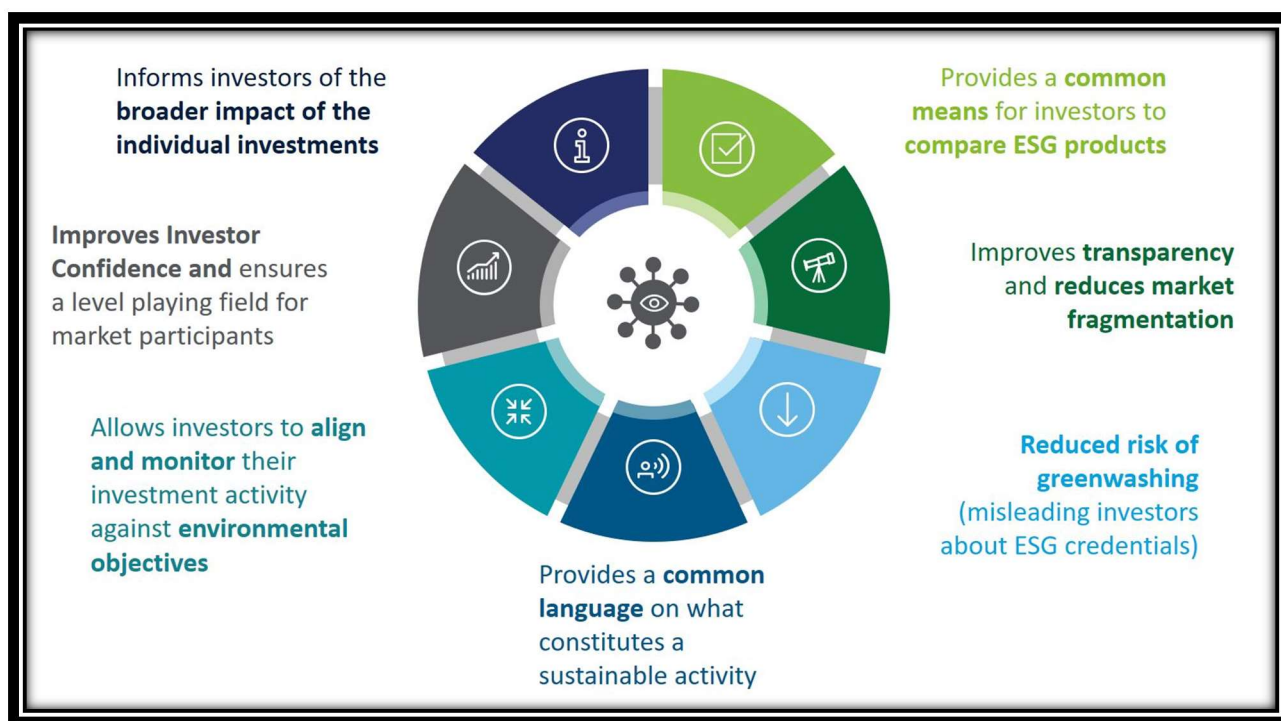
## **MILESTONES OF THEORY**

A review of the scholarly literature on Sustainable Finance (SF) indicates a diverse range of definitions and interpretations. The term sustainability' is difficult to grasp on its own, as it encompasses a broad range of concepts related to the mitigation of economic, social, and

environmental issues; according to Nierola et al. (2019), it encompasses "a broad range of concepts related to reconciling economic, social, and environmental issues, such as with the bio, green economy, or circular economies."

It is more difficult for practitioners and policymakers to put the notion into reality when it is difficult to nail it down. A brief literature survey of SF is provided in this part, with the most essential definitions and interpretations presented and analysed.

Haigh (2012) provides an overview of existing SF definitions, stating that "defining sustainable and ethical finance but also investment" is "somewhat tricky," and that this is partly due to the difficulty in defining its polar opposite, i.e. "what unsustainable and otherwise irresponsible financing but instead investing behaviour might mean."



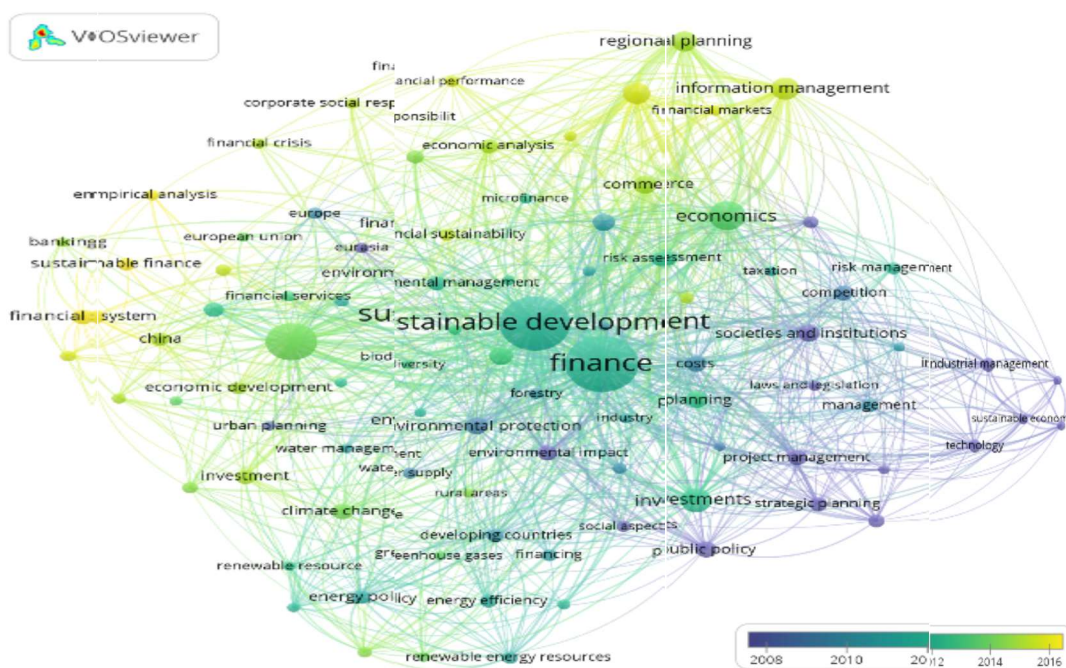
Jaeggi et al. (2018) suggest a larger and more exact definition of the word SF as a "collective notion that covers sustainable finance initiatives" in their paper (2018, p. 59). Such solutions are intended to reduce risks while maximising possibilities that arise from the interaction between sustainability concerns and finance. SF is "about financial institutions tackling the risks and possibilities associated to sustainability concerns such as climate change, water shortages, and other systemic problems," according to the authors (2018, p. 60), which outperforms long-term investing. Practitioners and academics alike frequently bring up the

latter term (sustainable investment) in debates about SF. According to Busch et al. (2016), this idea refers to investments that aim to contribute to long-term sustainable development by including long-term environmental, social, and governance aspects into their investment decisions.

However according Amaeshi et al. (2007), SF arose at the centre of the corporate social responsibility movement and was later referred to as 'socially responsible investments,' 'green banking,' (see also Apostoae, 2018), and 'responsible borrowing,' among other words.

Sandberg (2018) describes SF in a normative rather than descriptive manner, in the sense that the author is less interested because of how the financial system operates now and more preoccupied with how it should work in the future.

He begins by outlining the advantages and disadvantages of the mainstream financial theory, which is based on neoclassical economics and laissez-faire politics.



Then he suggests a "two-level sustainable financing model." His main point on SF is that financial actors should be free to pursue their profit or efficiency goals, but they must be aware of and act on significant conflicts with society's common interests. Except in circumstances with substantially mismatched incentives, public policy should promote market self-regulation in such cases.

When characterizing science fiction, some authors use the term 'risks.' Clarke and Boersma (2016) remind us that risk-taking behaviour was one of the drivers for the most recent global financial crisis, and that hazards come in a variety of shapes and sizes.

Risk, according to Beck (1992), is a "systematic manner of coping with dangers and vulnerabilities created and introduced by modernization itself." In this sense, hazards in our modern society are not limited to financial threats; they may also arise from outside the economic system. Civil society organisations have advocated, following Boersma et al. (2014), that risk should be considered in a social and environmental context in addition to financial risk. In a 2015 address, the Governor of the Bank of England stated, "Our societies face a succession of significant environmental and socioeconomic issues."

Climate change will endanger financial resilience and long-term prosperity in the long run, according to the weight of scientific data and the dynamics of the financial system. While there is still time to take action, the window of opportunity is closing." Carney et al., 2015. As a result, it is in financial institutions' best interests to understand how to manage the above-mentioned risks in both their own and their clients' investment portfolios in order to maintain future revenue growth and preserve a global system that provides a stable foundation for long-term productivity expansion (Jaeggi et al., 2018).

If we look at the Web of Science (WoS) web database, Soppe has the most referenced work in the SF field (2004). The author applies the Brundtland Report's definition of sustainable growth to finance as a discipline; according to the World Commission on Environment and Development, "sustainable development is development that meets current needs without jeopardising future generations' ability to meet their own needs" (1987). Then he applies four criteria to the new sustainable finance idea and compares them to a traditional and behavioural approach to finance. "A financial strategy that seeks for triple-bottom-line performance measurement with human actors who select for optimising multi-dimensional preference functions," he concludes (Soppe, 2004, p. 221).

Urban and Wójcik (2019) define SF throughout the spirit of the 'Brundtland Report,' that is, financing that maintains intergenerational justice and defends the basic right of "all human beings" to "an environment appropriate for their health and well-being."

We also investigated an institutional approach, especially the UNEP Inquiry into the Design of

a Sustainable Financial System. "Sustainable development necessitates changes in the mobilization and relative value of financial assets, as well as their link to the production, management, and generation of real wealth," according to the report.

As a result, a sustainable financial system is one that generates, values, and transacts financial assets in such a manner that actual wealth is shaped to meet the long-term demands of an inclusive, ecologically sustainable economy." (UN Environment Programme, 2015, p. 13).

Other ideas that might be investigated while studying SF, according to Carè et al. (2018), include climate finance (Richardson, 2014), green finance (Weber, 2015; Ryszawska, 2016), carbon finance (Schaefer, 2012; Ryszawska, 2016), environmental finance, or ecologically sustainable finance (Richardson, 2005).

Carè et al. (2018) argue that in previous research on these themes, the focus has been on the influence that finance may have on long-term development (identifying a major trend in terms of environmental sustainability of financial practises and products).

According to Jaeggi et al. (2018), the word SF has grown in relevance dramatically over the previous two decades, to the point that it currently serves as the unifying theme for hundreds of activities and studies:

United Nations Environment Programme, World Bank Group, Financial Stability Board, and University of Cambridge are just a few examples of international organisations.

Journal of Sustainable Finance and Investment, Journal of Environmental Investing, Journal of Cleaner Production, Handbook of Environmental and Sustainable Finance, and other academic publications cover sustainable finance issues.

The Boston Consulting Group, KPMG, McKinsey, and the World Wide Fund for Nature are examples of private enterprises and non-governmental organisations.

## **METHODOLOGY**

A bibliometric study was constructed to offer an overview of the scientific production connected to Sustainable Finance (SF). The phrase was initially used by Pritchard (1969) in a research where he used mathematical and statistical approaches to books and other forms of communication. It has strong ties to the recognised and comparable terms 'biometrics,'

'econometrics,' and'scientometrics.' Bibliometrics, in its most basic form, is the application of quantitative analysis and statistics to publications such as journal articles and the citation counts that accompany them.

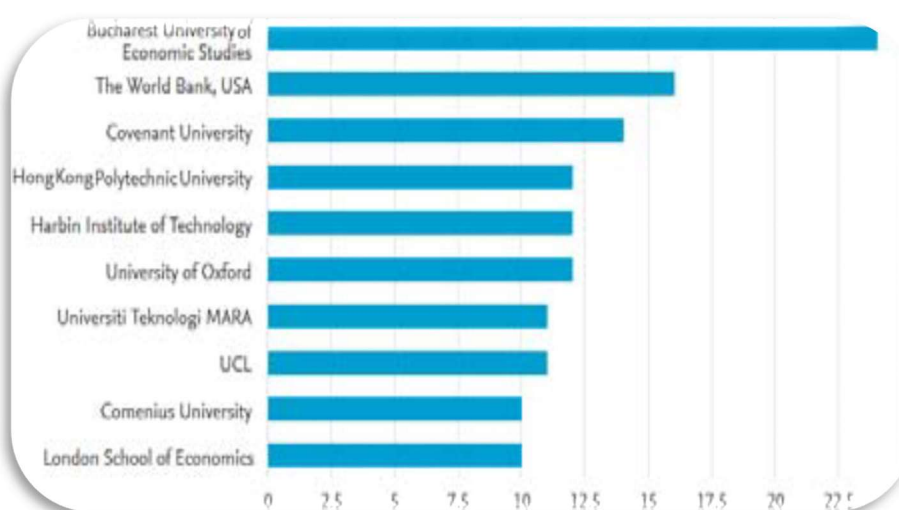
The report employs one of the most prominent bibliographic databases, Scopus, which belongs to Elsevier (2019) and includes over 69 million transdisciplinary entries, to fulfil the research's goal. We used a methodology similar to that used by Nierola et al (2019). The authors conducted a review of the relevant literature on sustainable tourism' as part of their research. In order to conduct our study, we looked for occurrences of numerous terms linked to sustainable finance and that originate in the literature cited above (sustainable OR sustainability WITH finance\* OR financing) inside the title and keywords. To find the most relevant literature on sustainable finance, we merely looked at titles and keywords.

Up till the beginning of 2020, the sample consisted of 2978 document findings. We next filtered the data by excluding topic areas including medical, nursing, mathematics, arts and humanities, neuroscience, and others that were not relevant to our study. After removing 20 entries from 2020, the search yielded 1997 results (given that we had data for only one month). We then proceeded to exclude document kinds that would not be termed "certified knowledge," as well as publications that had been critically assessed. Books, doctorate theses, and scientific congress records are included here by Ramos-Rodrguez and Ruz-Navarro (2004), and we also examined book chapters, letters, notes, conference evaluations, and reports by extension. Furthermore, retracted, erratum, in press, and undefined papers were not taken into account.

Up to the start of 2020, 2978 document findings made up the initial sample. The data was then further filtered by excluding fields including medical, nursing, mathematics, the arts and humanities, neuroscience, and others that did not fall inside the purview of our work. The query returned 1997 results, from which we removed 20 from 2020. (given that too we had data for only for one month). We next went about deleting document categories that would run the danger of not being regarded as "certified knowledge" or works that have undergone peer review. We also took into consideration book chapters, letters, notes, conference evaluations, and reports as Ramos-Rodrguez and Ruz-Navarro (2004) included books, doctorate theses, and scientific congress records in their analysis. Furthermore, papers that had been withdrawn, erratumed, inpressed, or left undefined were also ignored.

**In all, we now have 1779 documents.**

We were left with 1724 papers after removing those authored in languages other than English. (The remaining materials were primarily in Russian, 22 papers, and 13 papers in French). 1033 of the 1724 papers are articles, therefore 24 are reviews, 142 are conference articles, 511 are abstracts, 14 of the brief surveys are editorials. Furthermore, if we if we were to concentrate on them to condense our research papers whose titles include "sustainable finance," 25 results would be returned from the search (the oldest one first) originating in 1992). Moreover, there are only 52 documents use the term SF (the first paper dating in 2011).

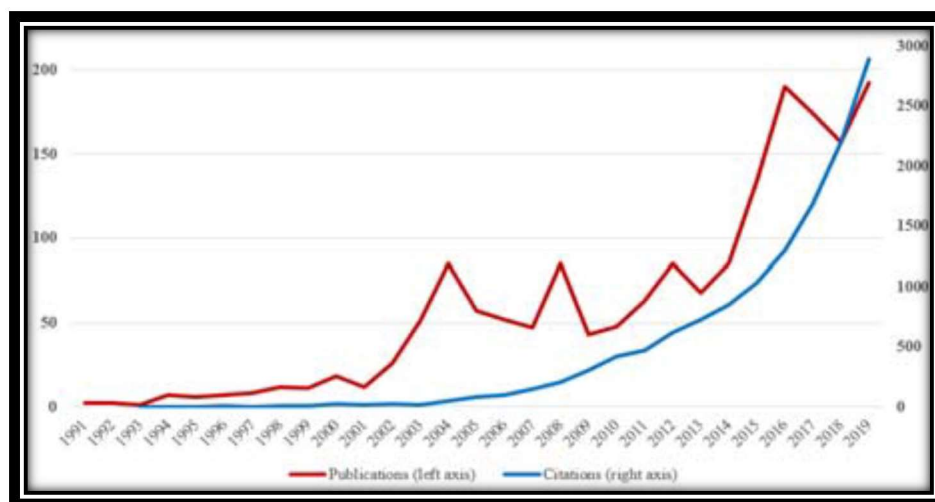


A total of 50603 distinct references are cited in the 1724 document sample. Each document's bibliometric information was exported into an Excel file, which was then analyzed with VOSviewer. This computer is accessible without charge. software that van Eck und Waltman created for creating and displaying bibliometric data, see (2010) maps. Particularly, this curriculum offers special paying close attention to the visual portrayal of Maps bibliometric.

#### **IV. RESULTS AND DISCUSSIONS**

Although evidence suggests that sustainable finance has existed in some form since at least the 16th century (Milano, 2011), the whole first academic research on the topic was published in the 1970s. that briefly directs the reader's attention to science fiction was manufactured in 1991. The authors of that study want to describe "the fundamental reasoning for adjustment lending by to evaluate some of the ramifications of the World Bank the Bank's knowledge in this field for the exercise of project financing (Qureshi, 1991). In this procedure of financing where the

legally enforceable agreements must additionally responsibility in some way for sustainability



The literature on the subject has swiftly expanded from the first publication that dealt with it in any way, as seen in Figure 1. An Particularly may be seen exponential growth following the 2000s. One significant improvement in Academic output increased following the adoption of all Member States of the United Nations in 2015, The United States' 2030 Agenda for Environmental Sustainability Countries, 2015).

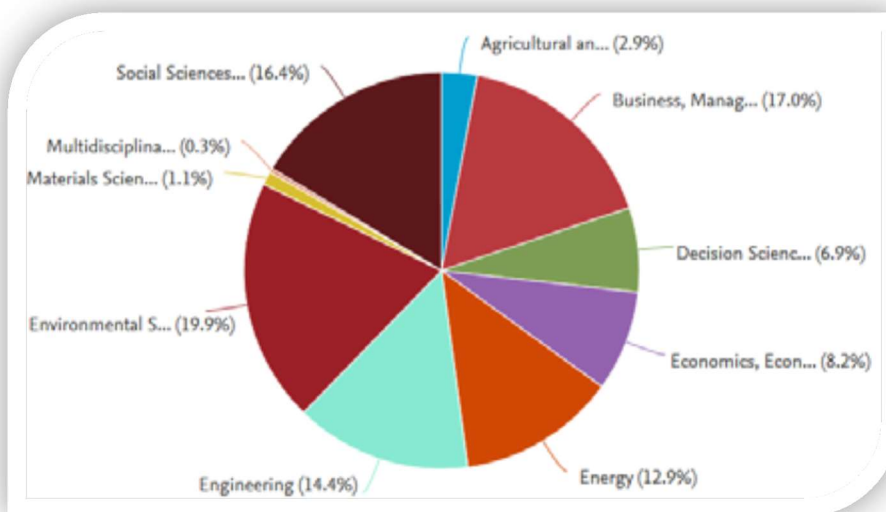


literature. There are 837 journals having just one SF-related work and 176 journals with at least two. Sustainability Journal does, however, capture the 56 papers pertaining to were brought to the viewer's attention. 2019 saw SF's first article on the subject published. recorded in 2014, just six years ago. The publication publishes at least two articles year practically continuously.

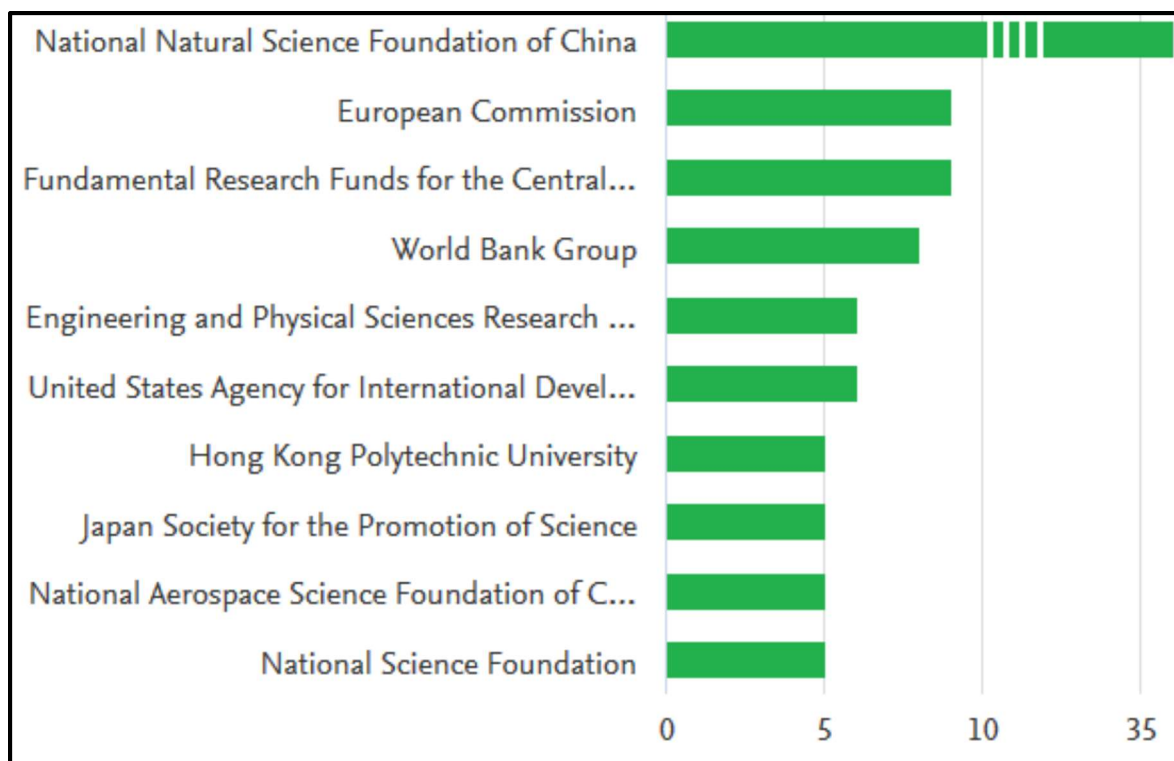
Is Climate Policy the same as it has been for the past 15 years? paper was published in 1996.

The key lesson from Here is the fact that SF is a fascinating subject, not just because authors to research, as well as publications for journals working nearby

Although Bucharest University of Economic Studies, which has 24 papers, tops the list of document counts by author affiliation, Figure 3 illustrates how it appears that the United Nations is the nation with the most prolific SF writing (with Figure 4 illustrates this (from 314 papers)).



A Chinese entity is by far the most generous sponsor, accounting for 36 papers, among the organizations that offer funding to promote the creation of this literature (see Figure 5). EU Commission is cited in 9 publications organized by topic and including the Environmental (627 documents), science, business, and management The Social Sciences (517), Accounting (536), and most heavily counted regions in this respect. Figure 6 shows a sort of uniform distribution of publications by topic area, with Environmental science (627 documents), Economics, Management, and The Social Sciences (517), Accounting (536), and locations most frequently counted in this regard



## V. CONCLUSION

As more articles about "sustainable finance" (SF) appear in academic journals, publishers are growing increasingly interested in these themes growing numbers of research resources primarily articles). In this study, 1724SF-related datasets were used using materials taken from Scopus to carry out a Bibliographic evaluation. In conclusion, although sluggish in the commencement (early 1990s), the productivity in regards to research papers increased significantly a decade later; b) although with a delay of approximately five years since an article's publication, the citations of the 1724 articles grew even more rapidly; c) the 1724 papers were created by a total of 3799 authors (and/co-authors) looking to start from the appears to work of other 50603 independent references; and; A Romanian university tops the list of document counts by author affiliation, a Chinese organization is by far the most generous sponsor, and the US ranks last in terms of territorial distribution. d) Among top publishers, we distinguish the journals Sustainability (for its high number of research papers) and Energy Policy (for its longevity); 20% of articles on SF-related themes account for 80% of all citations; the term "financial" is the most often used;

In our papers, "sustainable" came in second substantially outweighs "sustainable development"; h) in the possibly did not concentrate on SF in the early 1990s concerns in general, but more so on comprehending the idea of 'Sustainable development,' however, more specifically The publications may have become more targeted in recent years entirely on SF; also, whereas in the initial years, The research might have been more extensive considering that These publications did not refer to any particular nations or geographical areas are among the keywords), more recently the documents appear to be more precise and refer to others, to: Eurasia, China, European Union, In United States, also United Kingdom

The material in this article may aid scholars and practitioners in understanding the issue at hand and the leading developments in this subject more research and publication tactics. In Furthermore, the investigation could help in finding gaps, determining the focus and estimating the degree of understanding of one of the hotly debated issues at hand

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