The Impact of Green Economy to enhance Sustainable Development Goals"

L'Impact de l'Economie Verte pour améliorer le Développement Durable

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Abstract:

During the last decade, the world suffered from environmental, climate and health changes which have clearly impacted the development of different Sustainable Development goals (SDGs).For that, the growing appetite for Green Economy is clearly seen aiming at environmentally friendly projects, especially in Morocco. In this study, we will use a comparative method that examines relationships, influence and associations between countries in Africa. After that, we will be using a conservative (Maximin) model by stating which country has the most contribution on Green Finance. Moreover, this study will investigate the relationship; association and contribution of Green Economy in the enhancement of Sustainable Development Performance in Morocco in comparison with others African geographically, culturally and linguistically close but economically and financially diversified countries that hold different gross domestic products citing South Africa, Egypt, Kenya and Rwanda. Thus, it will meet the objective of measuring the contribution of some countries to enhance their Sustainable Development Performance. Our findings will prove that this study is an added value to the research world by making greater theoretical contributions, filling gaps and improving life satisfaction in Morocco, Africa and the World.

Keywords: *Sustainable development Goals; Green Economy; Morocco; Africa;World.*

Résumé:

Au courant de cette dernière décennie, notre univers a souffert de plusieurs changements environnementaux, climatiques et sanitaires qui ont eu un impact direct sur le développement des différents objectifs de développement durable (ODD). En effet, l'envie croissante à mettre en œuvre l'économie verte se manifeste clairement par des projets qui protègent l'environnement en particulier au Maroc. Dans cette étude, nous utiliserons une méthode comparative qui examine les relations, l'influence et les associations entre les pays Africains. Pour cela, nous utiliserons un modèle conservateur (Maximin) en indiquant quel pays a le plus de contribution à l'économie verte. En outre, cette étude examinera la relation, l'association et la contribution de l'économie verte dans l'amélioration des performances du développement durable au Maroc par rapport à d'autres pays africains géographiquement, culturellement et linguistiquement proches mais économiquement et financièrement diversifiés qui détiennent différents produits intérieurs bruts, citant l'Afrique du Sud, l'Égypte, le Kenya et le Rwanda. Ainsi, notre recherche répondra à l'objectif de mesurer la contribution de certains pays à améliorer leur performance en matière de développement durable. Nos résultats prouveront que cette étude est une valeur ajoutée au monde de la recherche en apportant de plus grandes contributions théoriques, en comblant diverses lacunes et en améliorant la satisfaction de vivre au Maroc, en Afrique et dans le Monde.

Mots clés: *Objectifs de Développement Durable; Économie Verte; Maroc; Afrique; Monde.*

1. INTRODUCTION:

In 1960, the concept of Corporate Social Responsibility (CSR) made its appearance to be known worldwide three decades after that (Freeman & Hasnaoui, 2011, Kuhneral.2014). As a result, this Corporate Social Responsibility is directly linked to Sustainable Development Goals as well as Green Economy. The ultimate objective of the Green Economy is to deliver economic advantages by providing environmentally friendly goods and services to individuals and companies in order to reduce CO_2 and SO_2 emissions linked to the burning of fossil fuels. However, most of the enterprises evolve in the market to maximize profits which pushes them to omit some of the environmental, societal and eco-friendly rules, values and norms. For that, the achievement of Sustainable Goals remains low in some countries. Studying the contribution of Green Economy on the Financial and Economic Performance of SDG's in a country is very complex depending on every country and its vision, mission and contribution in the World. That's why, a good research on this subject, and data collection remains necessary developing a multidimensional framework by investigating the contribution of Green Economy influence on decision-making processes, its effectiveness and impact on the 7th SDG of affordable and clean energy, the 8th SDG of decent work and economic growth, the 12th SDG of responsible consumption and production, the 13thSDG of the climate action in a Moroccan perspective and the 17th of partnerships of goals.

Despite the difficult circumstances, a well-developed and structured green economy can boost the Financial and Economic Performance of any country. In this research paper, we will be analyzing indicators to analyze the Financial and Economical Behavior of Morocco during the last years. A Comparison of Morocco's decisions with African Countries is a great opportunity to value the position of Morocco in Africa and in the World. In addition, the study will show the reaction of SDG's facing the crisis using available resources involving the Moroccan Economic Growth.

" To what extent Green Economy contributes to development of Sustainable Development Goals Performance in Morocco, as an African country?" is the question answered in this research paper by examining, developing and analyzing the association, influence and contribution of Green Economy and Sustainable Development Goals Performance in Morocco, compared with other African countries. Thus, this study has the objective to rebuild trust in the governments of African countries by understanding the basic key indicators that will be stated and will lead to high effectiveness and growth.

As a contribution, this research paper will be an added value to our country Morocco, Africa as a continent, the World as a growing population since it will guide, inspire and help many governments by seizing many opportunities for a better future. Following that, the structure of this study is divided into five main sections. After introducing our topic, we will be discussing our literature review. Following that, we will analyze our research framework and the methods used for the analysis, to finally examine the empirical results and before ending up into conclusions. Thus, this study will strengthen the consistent progress and integration of SDG's in Morocco.

2. BiBLIOMETRICS: HISTORY AND DEFINITIONS:

After the rapid evolution of the scientific world, as well as the diverse specialties and apparition of any other gray areas of new developed subjects, it became very hard for scientists to search and master all information assembled. The amount of research papers exceeded the normal capacity to search, analyze and deeply understand them (Rostaing, 1996). For sure, the early developers of bibliometric analysis tried their best to master scientific research writing since it is still considered as one of the best ways of communicating information. This method clearly defines and shows the similarities and differences between bibliometric techniques and statistical and linguistic filtering. This relationship is considered to be more maintained since different bibliometric research centers have proven themselves to meet the main objective of setting writings in natural language. For that, the gap is clearly seen between the two scientific principles where the nature of the writings treated belongs. Thus, bibliometrics has an objective of analyzing research papers and scientific writings; however, the statistical and linguistic analysis are therefore made to analyze texts, grammatical proceedings, vocabularies and others that are very different to be fully developed into bibliometric studies (Rostaing, 1996). Before starting to implement the bibliometric analysis, we should recall the two main principles of this method. As first, the first principle has the objective of the product of thought. In other words, using scientific context, any publication is an illustration of the author's research activity as it supply every technical, conceptual, economic or social element that presented as an argument to confirm the writing, on the other side, the second principle is mainly about presenting each of the author's beliefs with others beliefs and conclusions which means that this article becomes the study of differences of an individual compared to a collective thought. As a conclusion, there is a direct, indirect relationship between every scientific research that should clearly be

understood. Therefore, we can say that bibliometrics gathers together the diverse methods that help manage libraries where scientometrics go to study the different laws that rule over the art of science. In other words, bibliometrics is the use of statistical or mathematical methods regarding the bibliographic references (Rostaing, 1996).

3. LITERATURE REVIEW:

Clean energy is the fundamental driver of economic and environmental sustainability giving many countries in the world the opportunity to focus more on renewable energies (Belaid Zrelli, 2019). For a long time, fossil fuels (oil along with coal and natural gas) has always been the primary source of energy, meanwhile it have always had an impact on the establishment and development of alternative energy resources (EESI, 2024). According to the Economic Commission for Africa, the continent of Africa has enormous potentials of fossil fuels counting more than 9.5%, 8% and 4% of the total reserves of crude oil, natural gas and coal respectively. Consequently, this represents the majority of total energy supply and energy consumption. Nevertheless, the growing reliance on fossil fuels on a daily basis to produce energy has led to a negative impact on many environmental and social aspects in Africa and the World. As a result, our continent is facing very harsh climate change, water scarcity and low food production lately compared to other places in the World which gathers increasing instabilities and higher immigrations (IEA, 2022). As stated in the European Neighbourhood Policy and Enlargement Negotiations (DG NEAR, 2022), Morocco as an African country signed a new partnership with the European Union on October 2022, in the aim of protecting biodiversity, and lowering climate change by working on three main areas including climate and energy, environment marine and maritime issues, and green economy. This will for sure strengthen the bridge between Europe and Morocco in a win-win situation (DG NEAR, 2022). In addition, the impact of Fossil fuels has been clearly apparent in the global achievement of SDG's. As stated in a research made by the United Nations Development Program (UNDP), a huge social and economic gap has been enlarged regarding environmental issues impacting economies of the World especially in the African country. For this reason, governments all around the World gather in many events to encourage Green Finance and Greener economies to protect our earth. Thus, by proving the importance of SDG's and their achievement will be a great push for economies, especially of our country, to reduce gaps and risks since they can recover several steps of development improvement on a timeline basis.

4. CONCEPTUAL MODEL:

While studying the different relationships between variables, we have conceptualized a «Conceptual model » that gives a holistic view about the different relationships that will be discussed further. For that, we have hypothesized many positive and negative relationships. For instance, taking into consideration the Sustainable Development Goals report, there is a positive relationship between Green Economy and SDG 7, SDG 8, SDG 12, SDG 13 and SDG 17.

4.1 Green Economy:

Africa as a continent contributes to 4% of the world's CO_2 emissions which means that it counts as one of the most exposed to the negative influence of climate change (see Ritchie and Roser 2019; Hsiang and Meng 2014; Kudamatsu et al. 2012; Fjelde and von Uexkull 2012; Schlenker and Lobell 2010; Burke et al. 2009; IPPC 2018). Through its low levels of adaptation capacity, Africa will suffer from highly negative consequences on many sectors as Agriculture, Water supply, Healthcare, Labour productivity and conflict (Person et al., 2020).

4.2 Economic and Financial Sectors:

On one side, African countries find themselves at the core of competing demands and records of global green adaptations. For that, the continent is highly wealthy to consider the upgrading transition towards green energies. However, the shift into low carbon emissions highly impacts the African economic development in many ways by increasing the pressure of going under a fossil fuel-driven industrialization pathway (Atedhor, 2023). Following the shift from the spectrum of economic development to the green climate change, the economy has many risks to manage, costs to save, adaptations to consider... (Atedhor, 2023).. In other words, Africa as a continent doesn't hold the same conditions as other continents, but goes under the same conditions which mean that the weather is Africa is more vulnerable to climate change; the anti-fossil fuel demand won't be supporting the emerging natural gas for exports and domestic consumption... (Atedhor, 2023).. On the other side, there are many regional initiatives and organizations going through the sustainability of finance in Africa. Various programs are launched, as for the Cop 26 World Leaders Summit, which has an objective to gather African countries to pool resources for Green Economy acceleration through innovative initiatives (Volz & Schoenmaker, 2022).

4.3 Sustainable Development Goals:

A plan of action has always been released since the appearance of the 17 Sustainable Development Goals. As we embark, the main goals targeting the different areas of people, planet, prosperity, peace and partnership, the Green Economy shares the same vision of these goals (United Nations, SDG report, 2024). In my research paper, I will be conducting research on the SDG 7, SDG 8, SDG 12, SDG 13 and SDG 17.

5. RESEARCH METHODS:

The number of articles on Green Economy and Sustainable Development in Africa remain poor since it is a very new subject that discusses the causality and objectives of Green Economy in different African countries, some with a very low GDP can't even afford the basics of a healthy lifestyle. However, it is very important to cite that the first article published within my area was written in 2019. The following figure shows the evolution of Business and Economics publications over the years. It also illustrates the improvement of journal publications over the years.
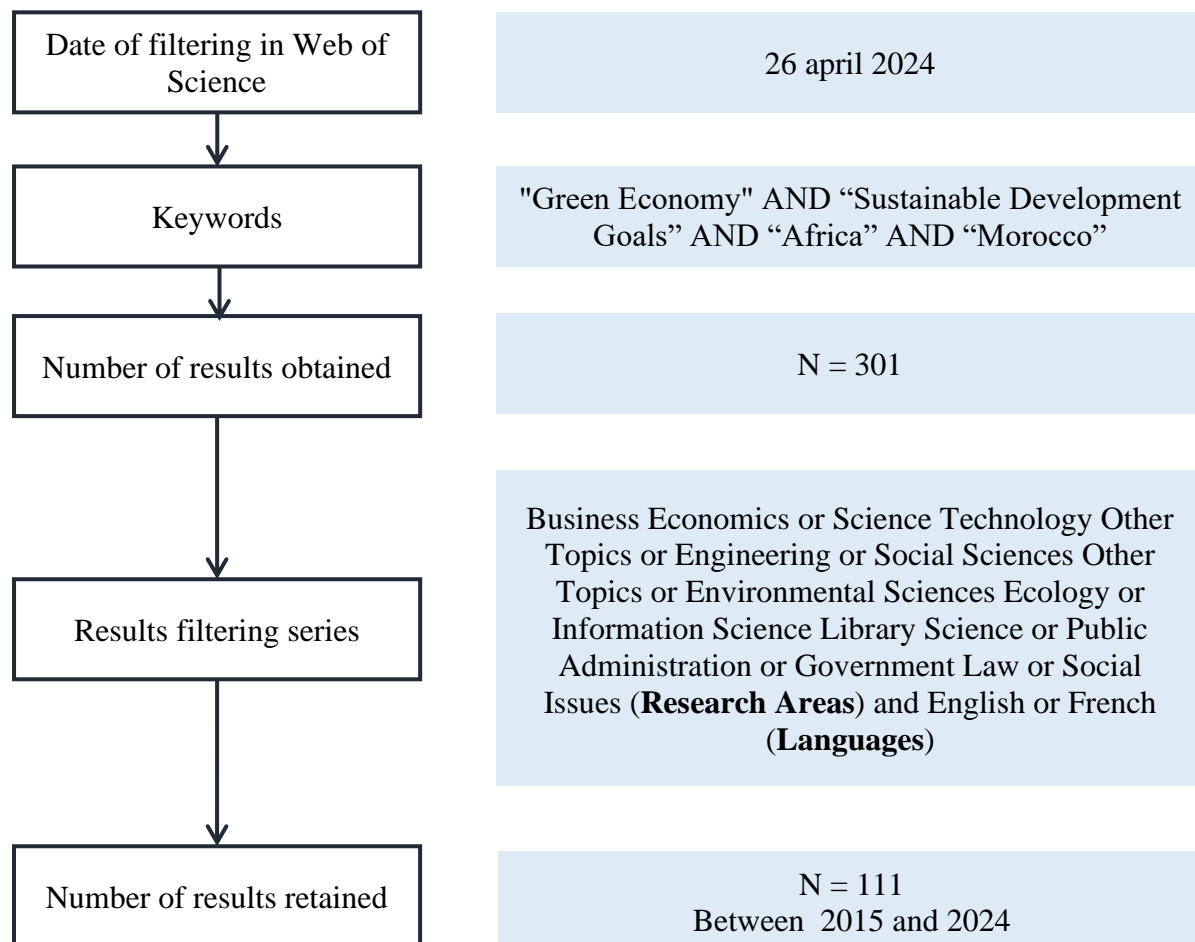
5.1 Data source (Scopus):

Since we are using bibliometric analytic tools, my study tries to dig into the Green economy and its sustainable development in African countries. The Bibliometric Analysis cites the concrete representation of theory taken from bibliographic articles, journals and books using statistical methods to a quantitative analysis. This analysis has always been used to study the different areas of research and classify papers accordingly. My study will gather data from the Scopus database by taking into consideration three key words: "Green Economy" AND "Sustainable Development" AND "Africa". In addition, we should note that Scopus gathers all the conference papers, journals, scientific books and research papers merged by ELsevier, a scholar of publications in the year 2004.

5.2 Research Methods (VOS Viewer):

As a tool needed to analyze bibliometric data from a Scopus database, we use software under the name of VOSviewer that accommodates with this specific procedure of examining data. Furthermore, this platform considers the recognition of distinguished research within different areas with visualizing it graphically through graphs networking dots representing authors. This representation, for sure, allows students to easily identify their area of work and interpret the publications smoothly. The first search in Scopus with the three Key Words "Green Economy" AND "Africa" yielded to 301 publications in different areas. To better dig

into the most important publications, I have added one keywords "Sustainable Development Goals" and restricted the years from 2015 to 2024, te research resulted into a total number of 111 publications. To better understand this behavior, the following figure represents this narrow system of elimination.

Figure1: Document search and selection process

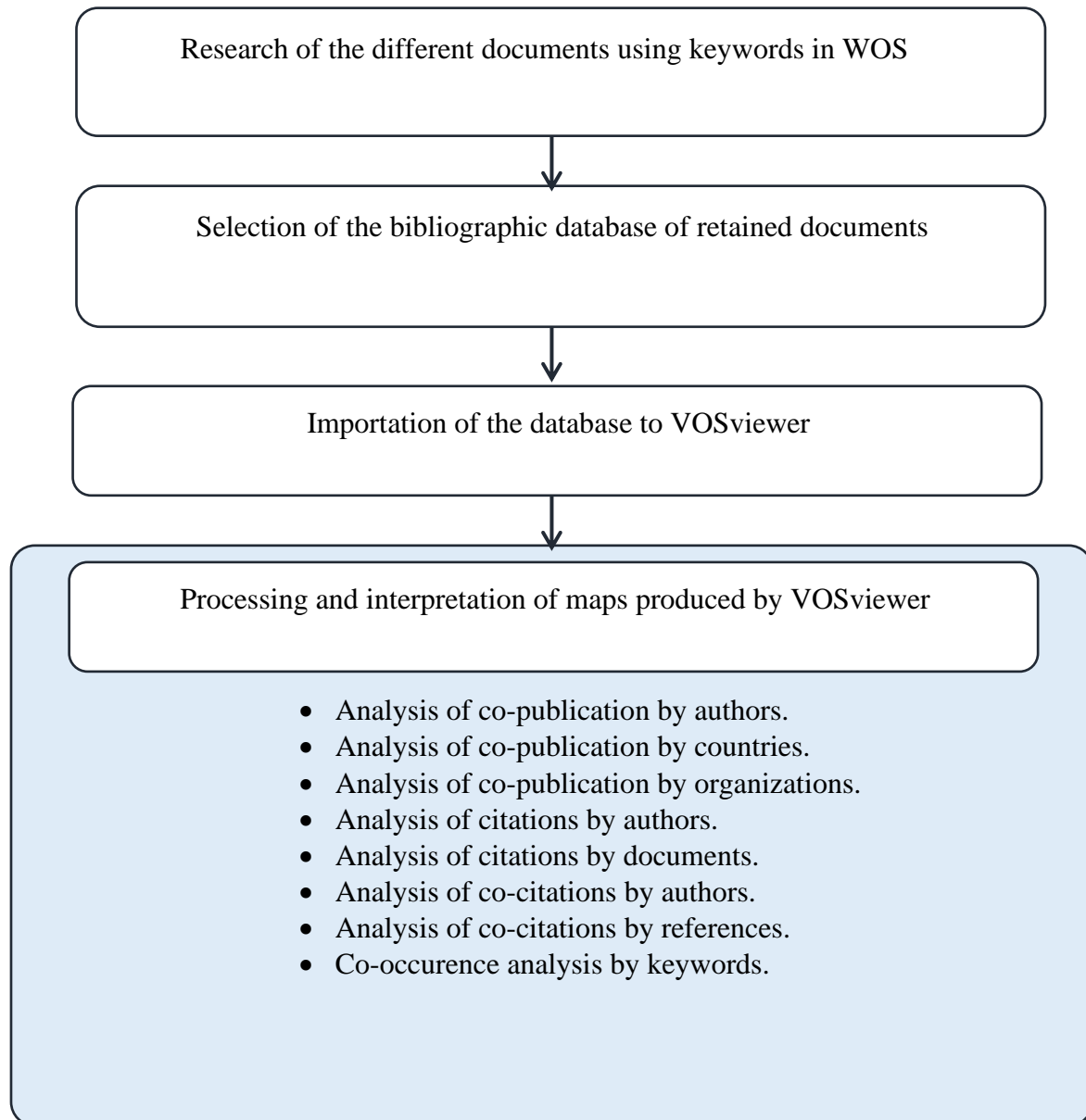|	
Date of filtering in Web of Science	26 april 2024
Keywords	"Green Economy" AND "Sustainable Development Goals" AND "Africa" AND "Morocco"
Number of results obtained	N = 301
Results filtering series	Business Economics or Science Technology Other Topics or Engineering or Social Sciences Other Topics or Environmental Sciences Ecology or Information Science Library Science or Public Administration or Government Law or Social Issues (**Research Areas**) and English or French (**Languages**)
Number of results retained	N = 111 Between 2015 and 2024

Source: by us

After building our database, we carried out a series of bibliometric treatments available on VOSviewer, as presented in Figure 2. This platform refers to software that works as a visual representation of bibliometric networks. Basically, these networks are classified into different types of publications gatherings either by co-publication by authors or co-publication by countries or co-publication by organizations or citations by documents or references as represented in figure 3. When two keywords are cited together, we call it co-occurrence, when two authors are cited together we call it co-authorship, same for co-citation meaning two

publications are cited one paper. In addition, bibliographic coupling means that there is a similarity in the references of two publications.
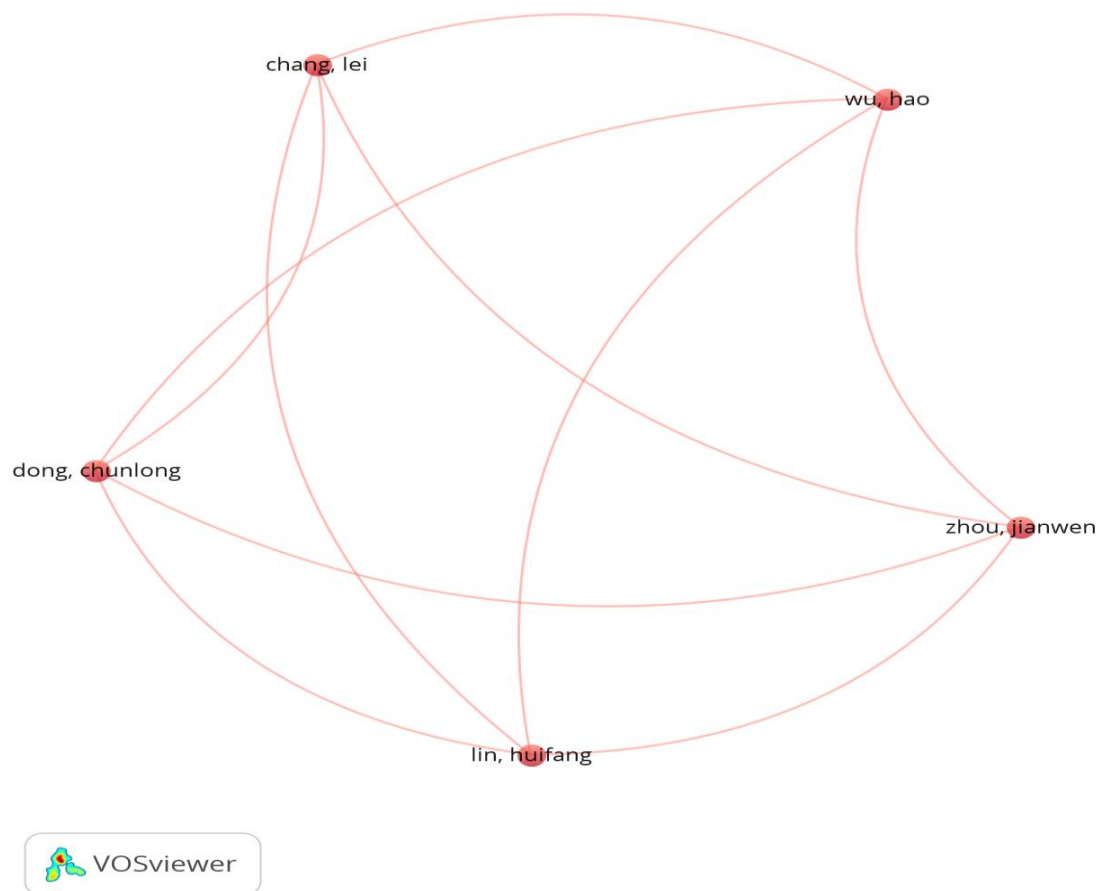
Figure 2: General Study Process

Research of the different documents using keywords in WOS

Selection of the bibliographic database of retained documents

Importation of the database to VOSviewer

Processing and interpretation of maps produced by VOSviewer

- Analysis of co-publication by authors.
- Analysis of co-publication by countries.
- Analysis of co-publication by organizations.
- Analysis of citations by authors.
- Analysis of citations by documents.
- Analysis of co-citations by authors.
- Analysis of co-citations by references.
- Co-occurence analysis by keywords.

Source: by us

6. DATA SOURCE AND ANALYSIS OF RESULTS:

6.1. Co- authorship analysis: Unit of analysis "authors"

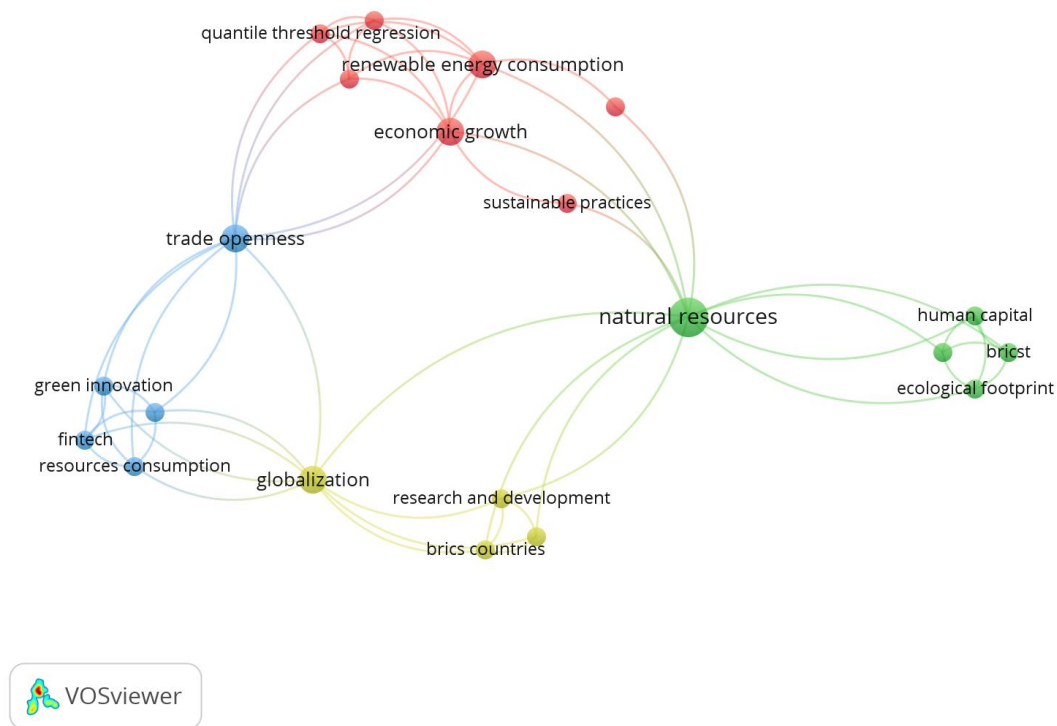**Fig.3 Network visualization of authors co-authorship analysis from VOSviewer**

Source : *by us*

The results of the co-authorship analysis gave many connected authors, however, we have chosen to only select a few of them that demonstrate the strong relationship between these author's publication's keywords. Thus, these authors merged their different and specific knowledge to improve our subject's competence.

6.2 Co-occurrence analysis: Unit of analysis "all keywords:

Fig.4 Network visualization of co-occurrence analysis for keywords from VOSviewer
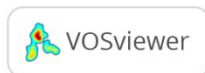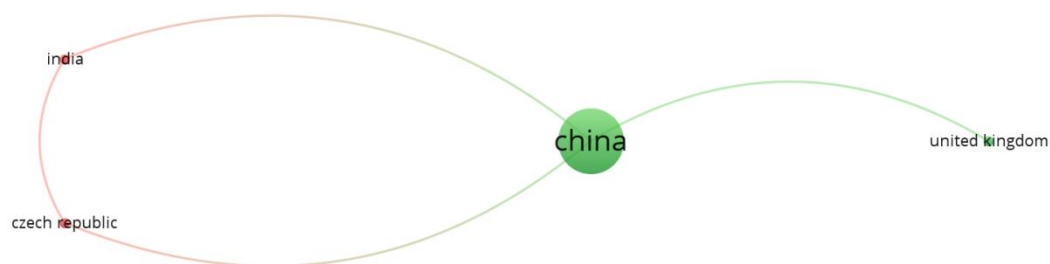

Source: by us

Co-occurrence of keywords cited in publications is represented as nodes that are interconnected visualized by the figure above. Many important keywords were cited and economic growth, renewable energy consumption, sustainable practices, green innovation and so on. For my network visualization, the most dominant keyword is economic growth and natural resources illustrated by bigger nodes. Thus, these dominant keywords show that our research area will mainly work on. Moreover, the arcs represented in this network visualization illustrate the interconnections between keywords usually cited in papers. For that, they create a cluster that has the exact color and closer emplacement.

6.3 Co-occurrence analysis: Unit of analysis "countries":

Fig.5 Network visualization of countries co-occurrence analysis from VOSviewer

Source: by us

When we filtered our search of subjects, and reduced the number of years from 2015 to 2024, the Scopus results brought out 111 research papers in different geographic regions. Inside the network visualization, we can count a major circle representing the main country (illustrated with a bigger circle) publishing about our subject in the Asian continent which is China directly connected to India and to the United Kingdom in the European continent as well as Czech Republic. Thus, it clearly shows that China has made enormous efforts in the number of publications around "Green economy" and "Sustainable Development", equally followed by the United Kingdom, India and Czech Republic.

As discussed above in the literature review section, we have stated that governments all around the World gather in many events to encourage Green Finance and Greener economies to protect our earth. In addition, when finalizing our bibliometric analysis, we have mentioned that the amount of research papers processing this research area is still low compared with others especially in our continent. In other words, proving the importance of SDG's by helping our country and World to pursue their achievement will be a great push for economies to reduce gaps and risks since they can recover several steps of development improvement on a timeline basis.

7. CONCLUSION:

Studying the contribution of Green Economy on the Financial and Economic Performance of SDG's in a country is very complex depending on every country and its vision, mission and contribution in the World. In conclusion, we can say that this study will be important research in a way that will prove one of the main pillars of any country's economic performance, especially the case of African countries. For that, this study will for sure influence some future research afterwards all around the globe by investigating deeper in this subject. Consequently, every other country in Africa should be aware of the importance of clean energy nowadays by learning about past mistakes to avoid them in the future for a better Africa. Africa, as a continent, because it will prove that there is many opportunities to catch for a better future. Furthermore, as a fertile land, Africa needs to encourage openness towards other continents in order to improve its governance towards local and international institutions; thus, this will only boost growth and reduce human capital problems. Morocco, as a country, since this study will show an important aspect that will contribute to the research & development of the country. This research paper can guide, inspire and help the Moroccan government to dig into the development of Green Finance within the country. Our research through Scopus remained very important since it showed significant insights about the growing potential of this subject that is still considered as fertile and interesting. Many keywords provided for us guidance into the core definition of our subject stating mainly economic growth, renewable energy consumption, sustainable practices, and green innovation and so on. For that, we can say that there are high chances that we are going to use these results as a support to my future findings; yet, there are some limitations while using Scopus illustrated as a poor availability database with low coverage of books. Consequently, other

research methods remain necessary to provide a complete overview of our subject. To conclude, during my first research, we have pointed out some limitations that narrows the scope of our analysis since we can include in future and deeper studies and research papers other frameworks from different countries all over the World in different continents citing Asia, America and Europe to discover other behaviors concerning other economies and how is their impact on Sustainable Development Goals where we can start analyzing their relationship with Economic and Financial factors. Also, it would be much recommended to develop during our analysis a larger view of the economic development that will result in a better understanding of the World's efforts to protect our planet. For that, this can only raise new questions concerning the implementation of clean energies in developed countries, its limitations and advantages. As of the managerial and scientific achievements related to my research paper, we are confident enough that this will for sure push different organizations and policymakers to develop their decision-making processes in order to attain high effectiveness while managing the Economic and Financial Sector accordingly with the different SDG's stated.

REFERENCES:

Atedhor, G. O. (2023). Greenhouse gases emissions and their reduction strategies: Perspectives of Africa's largest economy. Scientific African, 20, e01705. https://doi.org/10.1016/j.sciaf.2023.e01705

Bélaïd, F., & Zrelli, M. (2019). Renewable and non-renewable electricity consumption, environmental degradation and economic development: Evidence from Mediterranean countries. Energy Policy, 133, 110929. https://doi.org/10.1016/j.enpol.2019.110929

Environmental and Energy Study Institute (EESI). (n.d.). Fossil fuels. EESI. Available at: https://www.eesi.org/topics/fossil-fuels/description (Accessed: 20 June 2024).

European Neighbourhood Policy and Enlargement Negotiations (DG NEAR). (2022). The EU and Morocco launch the first Green Partnership on Energy, climate and the environment ahead of COP 27. Available at: https://neighbourhood-enlargement.ec.europa.eu/news/eu-and-morocco-launch-first-green-partnership-energy-climate-and-environment-ahead-cop-27-2022-10-18_en (Accessed: 05 October 2023).

Freeman, I., & Hasnaoui, A. (2011). The meaning of corporate social responsibility: The vision of four nations. Journal of Business Ethics, 100(3), 419–443. https://doi.org/10.1007/s10551-010-0688-6

HILMI, Y., & HELMI, D. (2024). Impact du big data sur le métier de contrôleur de gestion: Analyse bibliométrique et lexicométrique de la littérature. Journal of Academic Finance, 15(1), 74-91.

IEA. (n.d.). Key findings – Africa energy outlook 2022 – analysis. IEA. Available at: https://www.iea.org/reports/africa-energy-outlook-2022/key-findings (Accessed: 05 October 2023).

Ritchie, H., & Roser, M. (2019). CO2 and greenhouse gas emissions: Our world in data. Updated December. https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions

Rostaing, H. (1996). La bibliométrie et ses techniques. Sciences de la Société; Centre de Recherche Rétrospective de Marseille.

United Nations. (n.d.). Transforming our world: The 2030 agenda for sustainable development. Department of Economic and Social Affairs. Available at: https://sdgs.un.org/2030agenda (Accessed: 18 April 2024).

Volz, U., & Schoenmaker, D. (2022). Scaling up sustainable finance and investment in the Global South. CEPR. Available at: https://cepr.org/voxeu/columns/scaling-sustainable-finance-and-investment-global-south (Accessed: 18 April 2024).