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A BIBLIOMETRIC ANALYSIS OF INSTITUTIONAL QUALITY AND ECONOMIC GROWTH NEXUS

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Abstract:

Despite the increased attention given to the relationship between institutional quality and economic growth, there are limited studies that have taken a comprehensive approach to explore this relationship. Hence, this study aims to comprehensively investigate the field of research on institutional quality and economic growth from 2000 to 2023 by employing a bibliometric analysis of 855 publications from the Scopus database. This study emphasises prominent countries, authors, sources, and journal articles, as well as research topics in the field. The results revealed that China, Pakistan and the United States are the top three most prolific countries in institutional quality and economic growth research. Law, S.H., Khan, H., and Sohag, K. are the top three productive authors in terms of their total publications. Environmental Science and Pollution Research is the most published and cited journal. The journal article written by Glaeser et al. (2004) has received the most cited article. It has been found that several currently extensively researched areas, including financial development, human capital, trade openness, and renewable energy. The study also included a few recently studied keywords that should be further investigated, namely ecological footprint, environmental sustainability, technological innovation, financial inclusion, and sustainable development goals. The results of this study trace the trend and add to the academic discussion on the common knowledge of institutional quality and economic growth research.

Keywords:

Bibliometric Analysis, Economic Growth, Institutional Quality, VOSviewer

Introduction

Institutional quality is widely recognised as a crucial factor that affects economic growth. Numerous studies have shown that a strong institutional framework can lead to higher levels of economic growth (Docquier, 2014; Glaeser et al, 2014; Murdipi et al., 2023; Ngom et al., 2021). In particular, good governance, transparent regulatory policies, and control of corruption are important determinants of institutional quality in fostering a conducive environment for economic growth (Dellepiane-Avellaneda, 2010; Gründler & Potrafke, 2019; Nicoletti & Scarpetta, 2003; Sutono et al., 2023). Effective and reliable institutions provide a favourable environment for investment, innovation, and overall economic activity, leading to sustainable economic growth (Jude & Levieuge, 2017; Hayat, 2019, Kafka & Kostis, 2022).

Developed countries have strong institutions with effective legal systems and clear rules that create a stable environment for businesses and investors (IMF, 2003; Fergusson, 2006). Fair and predictable regulations encourage long-term investments and innovation while ensuring competition and efficiency for the growth of the economy. Weak institutions due to corruption and political instability can hinder economic growth in developing countries (Gani, 2011). By improving institutions, these countries can confidently attract investment and achieve sustainable growth. Similarly, in both developing and least-developed countries, good institutions can reduce poverty and ensure equal opportunities for everyone, unlocking their economic potential with confidence (Grindle, 2004). Improving governance and prioritising sustainable development can lead to a better life for all (De Guimarães, 2020).

Understanding the relationship between the quality of institutions and economic growth is important for policymakers, economists, researchers, businesses, investors, and the general public (Raimi et al., 2024; Tran et al., 2021). Institutions have a significant impact on a country's economic landscape, including regulatory frameworks, property rights enforcement, and the effectiveness of the legal system. Analysing the complex interplay between these institutional factors requires a multi-dimensional approach. Hence, this paper aims to comprehensively investigate the field of research on institutional quality and economic growth from 2000 to 2023 by employing a bibliometric analysis of 855 publications from the Scopus database, so that stakeholders can gain valuable insights for crafting effective policy interventions and fostering sustainable economic growth.

Despite the increased attention given to the relationship between institutional quality and economic growth, it is disappointing that limited studies have attempted to address the following crucial research questions. This has left a significant gap in our understanding of the complex interplay between institutional quality and economic growth.

RQ1: What is the trend in the field of institutional quality and economic growth to date?

RQ2: Which countries make the most important contributions to the research on institutional quality and economic growth?

RQ3: Who are the most prolific authors in the institutional quality and economic growth research?

RQ4: What are the most influential journals and articles in the institutional quality and economic growth research?

RQ5: What are the top keywords, relevant research clusters and development of keywords in the institutional quality and economic growth research?

Bibliometric analysis can certainly contribute to answering the above research questions. By analysing and evaluating the impact of scholarly publications on this topic, bibliometric analysis can provide insights into the research trends, influential authors, and key concepts driving the understanding of this relationship. It can also help in identifying gaps in the existing literature, and areas requiring further exploration. Furthermore, researchers can map the network of citations and collaborations, identifying the most influential studies and researchers in the field. This can aid in understanding how the discourse around institutional quality and economic growth has evolved, and how different perspectives and methodologies have contributed to the current literature.

The structure of the paper includes the materials and methods applied in the later section. The results are presented in the next, which identifies the article and citation count, notable journals, countries, authors and keyword occurrence. The conclusion is made in the last section to identify the contribution and limitations of the study.

Materials and Methods

Bibliometric Analysis Method

This study employs the bibliometric analysis method to investigate the topic of institutional quality and economic growth. Bibliometric analysis method is known as the use of quantitative tools to analyse bibliographic data. Bibliometric analysis can be used to analyse productivity and performance in terms of eminent journals, authors, institutions, and countries, as well as to identify trends within a certain scientific topic (Herrera-Franco et al., 2021).

Data Collection And Processing

The bibliographic data was obtained by using Scopus as a data source. The Scopus database was selected over the Web of Science database because it has a higher quantity of journals and publications. About 20% more citations are included in the Scopus database, which also offers a number of tools that enable researchers compare, evaluate, and visualise published scientific literature (Zhang et al., 2019). Figure 1 shows the process flow chart for choosing the sample documents. The data extraction from the Scopus database was performed on 25 January 2024. The search string used for obtaining the bibliographic data was (TITLE-ABS-KEY ("institutional quality" and "economic growth")). This made it possible to find and retrieve every document that had the terms "institutional quality" and "economic growth" in the title, abstract, or keywords. This search successfully obtained 943 documents from the Scopus database. This study continues the filtering process by only include article as the document types and journal as the source type. The selection of journal articles is meant to undergo thorough peer review of the highest quality and be evaluated based on creativity (Paul et al., 2021). The search for documents spans the years 2000 to 2023 and excluded 2024 for all languages. This filtering process successfully retrieved 855 documents as final sample and excluded 88 documents.

Data Analysis

This study conducted performance analysis and science mapping analysis in the bibliometric studies (Donthu et al., 2021) to investigate the trends in publication (RQ1), and the most influential countries (RQ2), authors (RQ3), journals and articles (RQ4) and the top keywords, related research clusters and development of keywords (RQ5) in the institutional quality and economic growth research. This study employs several quantitative tools to perform bibliometric analysis namely (i) Microsoft Excel to produce the appropriate charts and graphs

and determine the frequencies and percentages of the published contents; (ii) Publish and Perish program to compute the citation metrics; (iii) VOSviewer to develop and visualise the bibliometric networks.

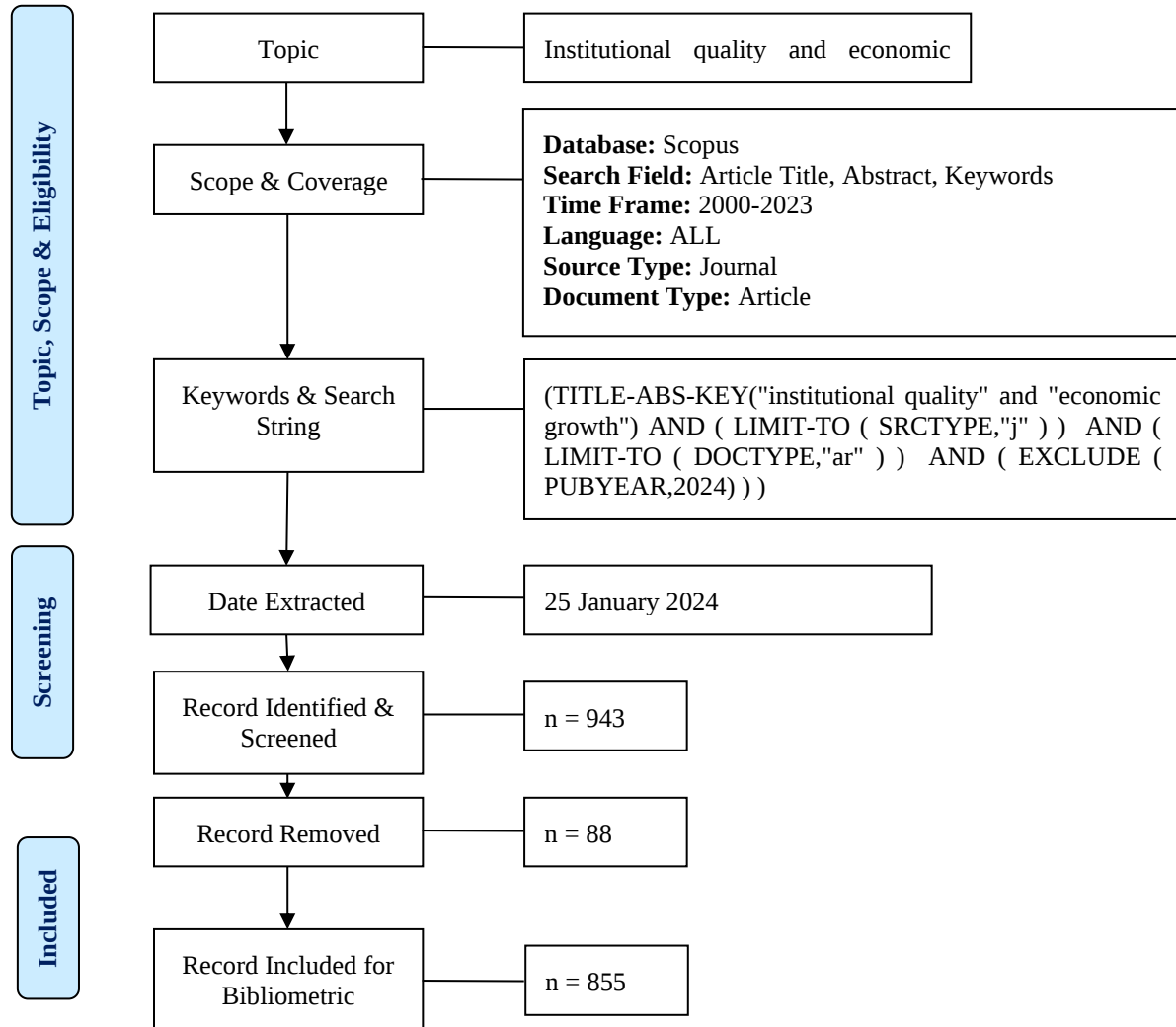


Figure 1: Flow Diagram of the Search Strategy

Source: All Authors

Results and Discussions

A total of 855 scientific publications are available for analysis once the data that was extracted from the Scopus database has been thoroughly filtered and cleaned. This section is separated into five sub-sections, namely trends in publication, publications by countries, publications by authors, publications by source titles and documents, and lastly analysis of keywords.

Trends in Publication

The trends in the number of publications that were related to institutional quality and economic growth in the last 24 years are presented in Figure 2. Based on the timeline of the annual publication, following the publication of the first research in 2000, a slow upward trend began to emerge and persisted until 2011. However, the momentum of annual publications was still viewed as low until the beginning point of 2018, when the number of publications grew rapidly.

The rise in frequency shows that institutional quality is widely recognized in economic growth and academic communities have gradually come to understand the significance of studying the relationship between institutional quality and economic growth. The annual publications during the years 2000-2011 are considered low, which on average is 5.75 per year only. Nonetheless, from 2012 to 2017, the trend increased gradually, averaging 24.17 publications per year. After that, between 2018 and 2023, the number of publications increases dramatically, averaging 106.83 every year. This trend is indicative of the growing interest in this field during the past decade.

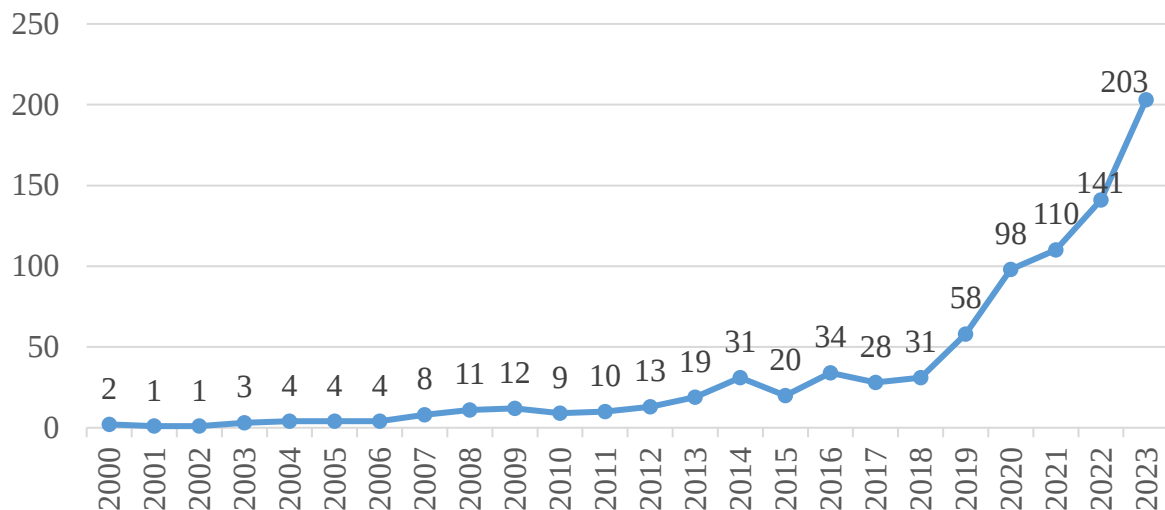


Figure 2: Trend in the Publication (2000-2023)

Source: Scopus database

This study also identifies the distribution of the languages used for the published documents in this study field. Table 1 presents the different types of languages used. 98.25% (n=840) of the published documents are written in English. This situation implies that publication in this language is a preference for most academic research. Moreover, the published documents for other languages with fewer representatives, namely Spanish (6, 0.70%), and Russian (5, 0.59%). The other languages such as Chinese, French, Italian and Portuguese published (1, 0.12%) only.

Table 1: Languages

Language	Total Publications (TP)	Percentage (%)
English	840	98.25
Spanish	6	0.70
Russian	5	0.59
Chinese	1	0.12
French	1	0.12
Italian	1	0.12
Portuguese	1	0.12
Total	855	100.0

Source: Scopus database

Publications by Countries

Table 2 indicates the top 20 countries contributed to the institutional quality and economic growth publications. The selection of the top 20 prolific countries is based on the benchmark of at least twenty pertinent publications in each country. China is in the leading position with 140 documents, followed by Pakistan with 101 documents and third place is the United States with 99 documents. By comparing the number of publications in this field of interest across the continents, the Asia continent (China, Pakistan, Malaysia, India, Vietnam, Saudi Arabia and the Russian Federation) are the most productive in the publication on this field, where the total number of publications is 468 documents. This was followed by the European continent (United Kingdom, Turkey, France, Germany, Italy and Spain) with a total of 228 document publications. The third and fourth places are the African (Nigeria, Ghana, South Africa and Tunisia) and North American (United States and Canada) continents with a total of 131 and 119 document publications respectively. The last is the Oceania (Australia) continent with a total of 41 document publications.

Table 2: The Top 20 Countries Contributed to the Publications

Country	Continent	TP
China	Asia	140
Pakistan	Asia	101
United States	North America	99
United Kingdom	Europe	74
Malaysia	Asia	69
India	Asia	59
Nigeria	African	50
Viet Nam	Asia	50
Turkey	Europe	48
Australia	Oceania	41
Ghana	African	33
France	Europe	28
Germany	Europe	27
Italy	Europe	27
South Africa	African	27
Saudi Arabia	Asia	25
Russian Federation	Asia	24
Spain	Europe	24
Tunisia	African	21
Canada	North America	20

Note: TP = total number of publications

Source: Scopus database

On the other hand, the country's co-authorship occurs when authors from different countries work together indirectly by contributing to one or more publications in particular countries or regions (Xu et al., 2021). VOSviewer software tool developed countries/regions collaboration network for research on institutional quality and economic growth from 2000 to 2023 resulting in 111 countries. By setting a minimum of five published documents per country as a threshold, 44 countries were chosen, and they were grouped into 6 clusters with different colours as illustrated in Figure 3. Every node stands for a country. The larger the node, the greater the number of articles published by the respective country. Thicker lines between nodes indicate more frequent interactions and links between countries. Greater centrality, or essential nodes,

are indicated by larger circles (Xu et al., 2021). The United Kingdom, India, the United States, Malaysia, China, Canada, and Turkey are the countries with the larger circles. This result implies that these countries show strong cooperation and contact with other countries in this field.

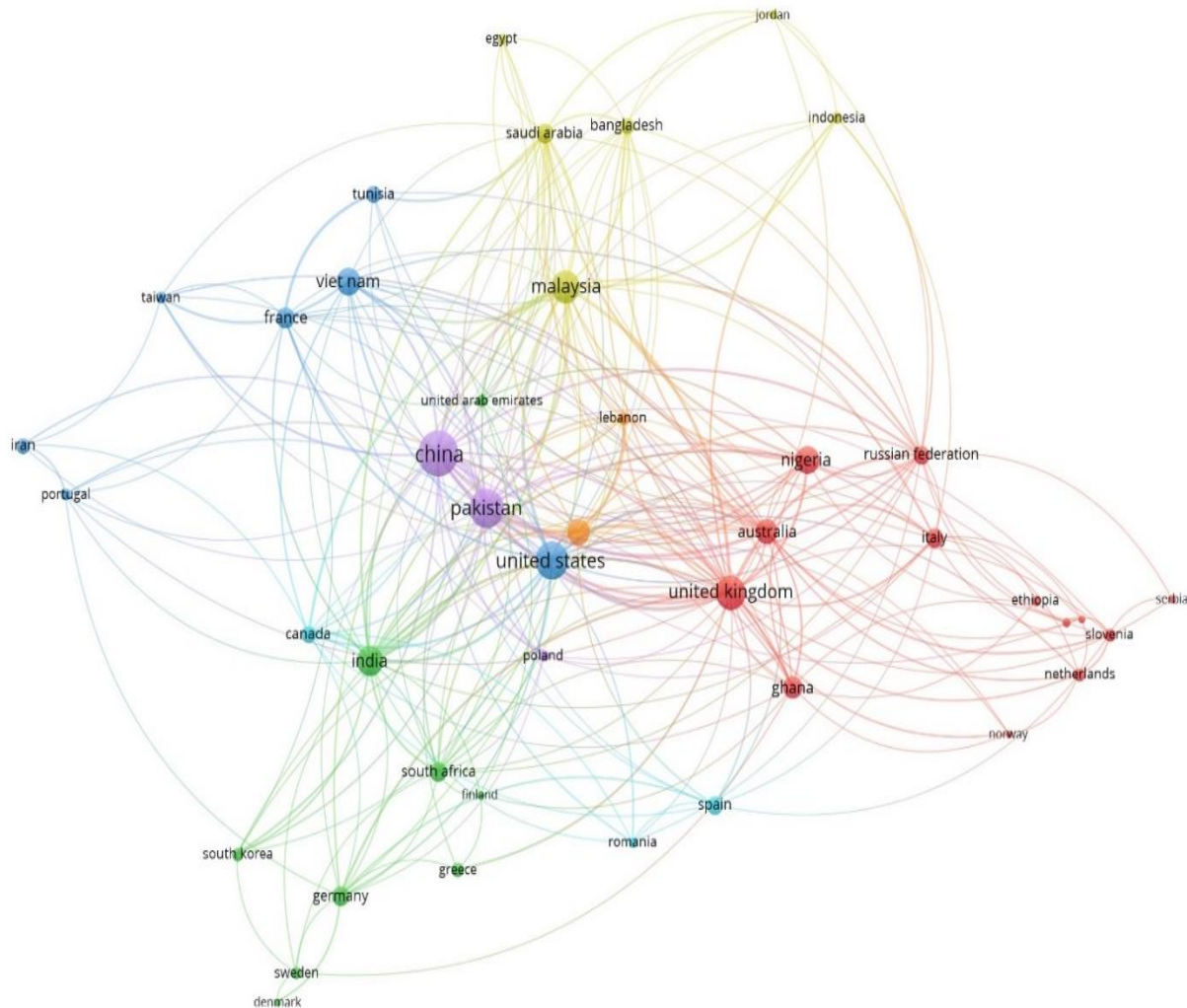


Figure 3: Countries Co-authorship Grouped by Cluster

Note: The colours, namely red, green, dark blue, yellow, purple, light blue, and orange denote the cluster of the United Kingdom, India, United States, Malaysia, China, Canada, and Turkey.

Source: Scopus database, generated by using the  VOSviewer

Figure 4 illustrates the phases of collaborations among authors in specific associated countries. During the early phase (2014-2018), the United States (purple node) contributed the most to publications of institutional quality and economic growth research and is linked to Germany, Spain, Australia and the United Kingdom. During the second phase (2019-2020), Malaysia, South Africa, Tunisia, Canada, Indonesia, Portugal, and the Russian Federation (green node) are the countries appeared to be the most contributing countries. In recent years (2021-2023), the authors have extended their collaboration to China, India, Vietnam, Nigeria, Saudi Arabia, Iran, Ethiopia, Bangladesh, and Lebanon (yellow node). Author collaborations in particular associated countries are diverse throughout continents.

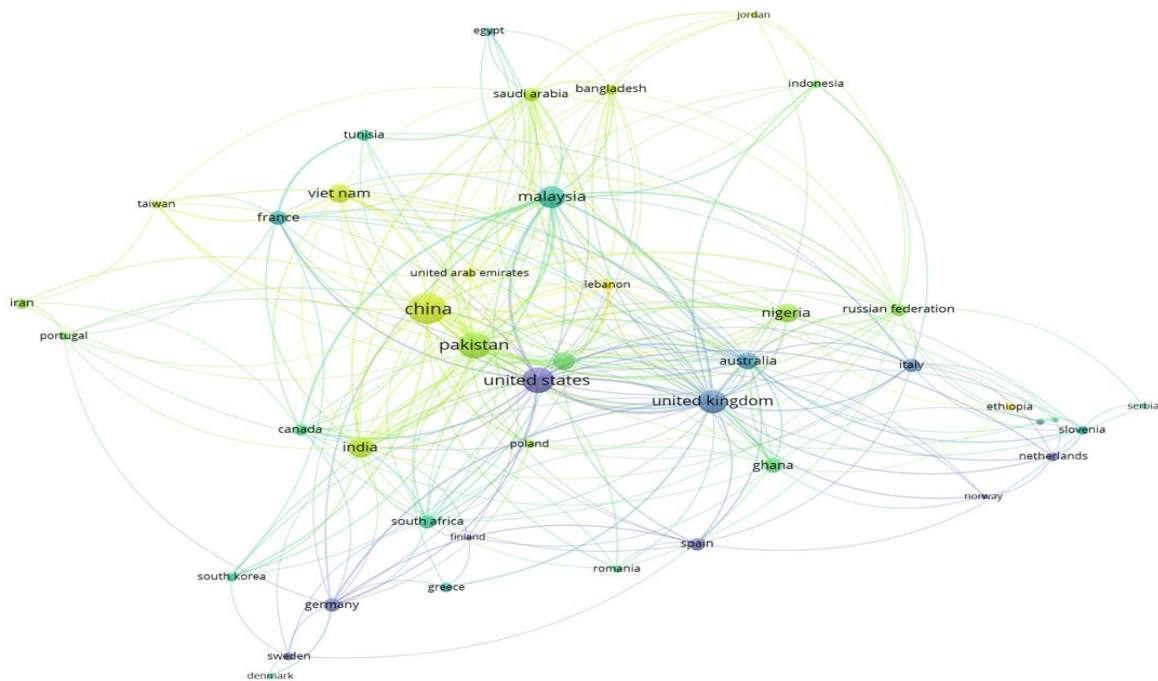


Figure 4: Overlay Visualisation of the Country's Co-authorship

Note: The range of colours, denotes the phases of collaboration among the countries from 2014 to 2023.

Source Scopus database, generated by using the VOSviewer

Publications by Authors

Table 3 displays the most productive authors that contributes to institutional quality and economic growth research. The criteria for selecting the top authors on the list are those who have published at least six documents. Law, S.H., Khan, H., and Sohag, K. are the top three productive authors in terms of their total publications, with each author having eight published documents. In respect to total citation, Adams, S., Law, S.H., and Anwar, A. are the top three authors who obtained the greatest number of total citations, with the number of citations of 933, 275 and 200 respectively. Majority of these top authors came from Asia continent, namely three of which were in China and India, and two of which were in Malaysia, and the other one of which in Pakistan, Vietnam, and Russian.

Table 3: Top Authors Contributing to Institutional Quality and Economic Growth Research

Author's name	Affiliation	Country	TP	NCP	TC	C/P
Law, S.H.	Universiti Putra Malaysia	Malaysia	8	8	275	34.37
Khan, H.	Zhejiang University of Science and Technology	China	8	6	111	13.87
Sohag, K.	Ural'skiĭ Federal'nyi Universitet	Russian	8	7	108	13.50
Khan, I.	Shenzhen University	China	7	5	176	25.14
Bekun, F.V.	İstanbul Gelişim Üniversitesi	Turkey	7	7	116	16.57
Gyamfi, B.A.	Sir Padampat Singhanian University	India	7	7	98	14
Sethi, N.	National Institute of Technology Rourkela	India	7	5	32	4.57
Abdul-Rahim, A.S.	Universiti Putra Malaysia	Malaysia	6	6	57	9.5

Adams, S.	Ghana Institute of Management and Public Administration	Ghana	6	6	933	155.5
Alsaleh, M.	Shanghai Ocean University	China	6	6	47	7.83
Anwar, A.	Ilma University	Pakistan	6	6	200	33.33
Nguyen, C.P.	University of Economics Ho Chi Minh City	Vietnam	6	5	107	17.83
Pradhan, R.P.	Vinod Gupta School of Management	India	6	5	113	18.83

Notes: The authors of the top contributing authors with more than five published articles. TP = total number of publications; NCP = number of cited publications; TC = total citations; C/P = average citations per publication.
Source: Scopus database

Figure 5 illustrates the authorship relationships in institutional quality and economic growth documents, with three separate groups represented by various colours namely red, blue and green. These clusters connect authors who work on related topics, but cross-cluster ties also exist. The nodes denote the number of citations, whereas the link indicates the co-citation relationship. The red cluster is considered the largest group, with the total of 407 authors. The biggest nodes of this red cluster include Shahbaz M., Pesaran M.H., Ozturk I., Bekun F. V., Adams S., Khan I., and Khan H. Moreover, Bekun F. V., Adams S., Khan I., and Khan H. are some of the most productive authors in the field of institutional quality and economic growth (see Table 3). There are 329 authors in the green cluster, with most dominant authors are Acemoglu D., Johnson S., Shleifer A., Bond S., and Sachs J. D. Apart from that, a total of 138 authors included in the blue cluster. Levine R. is the author dominating the blue cluster, with the highest total link strength of 38865. This is followed by Law S. H. with a total link strength of 32530. Specifically, Law S. H. is also the most productive author in the institutional quality and economic growth research. This blue cluster also contains other influential authors, namely Shin Y., Demircug-kunt A., Pradhan R. P., Arvin M. B., and Odhiambo N. M.

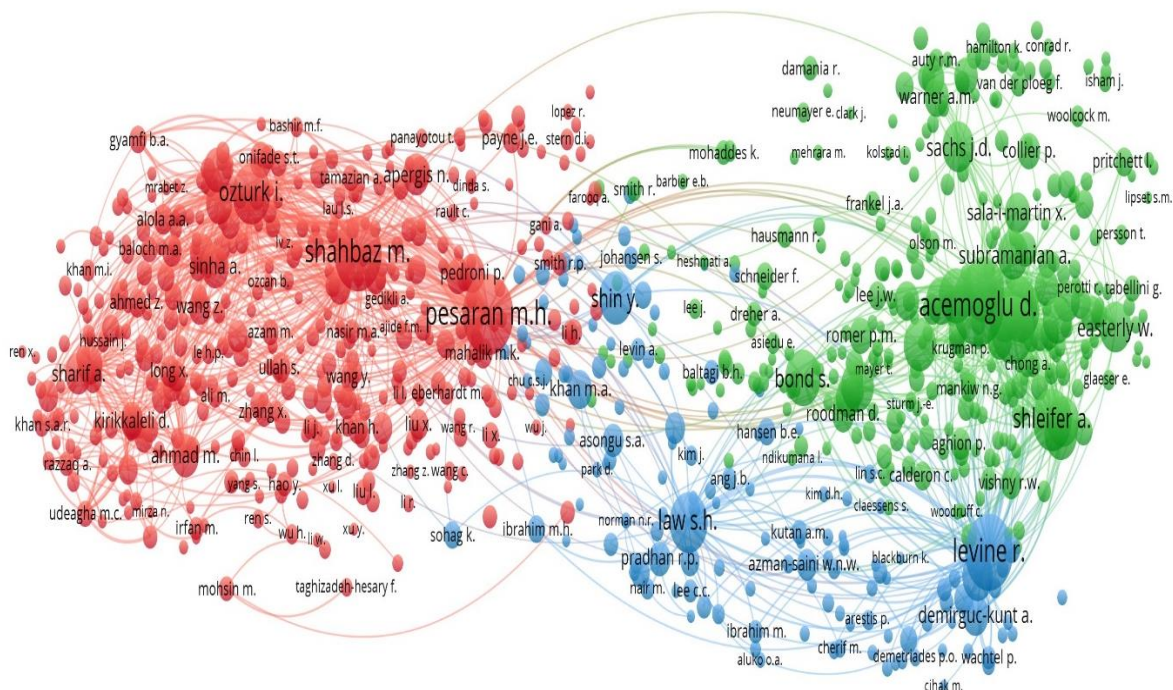


Figure 5: Network Visualisation Map of the Author's Co-citation Analysis

Source Scopus database, generated by using the VOIviewer

Publications by Sources Titles and Documents

Table 4 presents a list of 11 journals that have at least ten publications published in the field of institutional quality and economic growth. The most frequently publishing journal in the field of interest is Environmental Science and Pollution Research, which contributes 47 documents. This was followed by Resources Policy and Sustainability Switzerland, which contributes 35 and 21 documents respectively. The degree of impact a paper has is generally indicated by the total number of citations (TC) it receives. Environmental Science and Pollution Research is a leading journal with the 1444 total number of citations. The second place is obtained by the Resources Policy (1184 citations) and the third place is received by World Development (733 citations). This result demonstrates the significant contributions made by these three journals to the field of institutional quality and economic growth study.

Table 4: Most Active Source Titles

Source Title	TP	TC	Publisher	Cite Score 2022	SJR 2022	SNIP 2022
Environmental Science and Pollution Research	47	1444	Springer Nature	7.9	0.944	1.214
Resources Policy	35	1184	Elsevier	11.3	1.869	2.001
Sustainability Switzerland	21	481	MDPI	5.8	0.664	1.198
Economic Modelling	15	359	Elsevier	6.6	1.303	1.769
Cogent Economics and Finance	12	66	Taylor & Francis	2.4	0.379	1.109
World Development	12	733	Elsevier	10.9	2.504	2.613
Journal Of the Knowledge Economy	11	80	Springer Nature	4.2	0.576	1.314
Applied Economics	10	233	Taylor & Francis	3.4	0.590	1.089
Environment Development and Sustainability	10	113	Springer Nature	7.2	0.835	1.291
International Journal of Energy Economics and Policy	10	98	Econjournals	3.9	0.309	0.561
International Journal of Finance and Economics	10	134	Wiley-Blackwell	3.7	0.606	1.091

Notes: TP = total number of publications; TC = total citations; CiteScore = average citations received per document published in the source title; SJR = SCImago Journal Rank measures weighted citations received by the source title; SNIP = source normalised impact per paper measures actual citations received relative to citations expected for the source title's subject field.

Source: Scopus database

In Table 5, we present the top 10 most cited articles in order to identify the most influential documents in the field of institutional quality and economic growth research. The article's title of "Do institutions cause growth?" that written by Glaeser et al. (2004) has received the most cited articles with 1699 citations. Subsequently, the article's title of "Do economic, financial and institutional developments matter for environmental degradation? Evidence from transitional economies" by Tamazian et al. (2010) and "The resource curse revisited and revised: A tale of paradoxes and red herrings" by Brunnschweiler et al. (2008), which received of 741 and 594 citations, respectively.

Table 5: Top 10 Highly Cited Articles

Authors	Title	Total Citations	Cites per year
E.L. Glaeser, R. La Porta, F. Lopez-de-Silanes, A. Shleifer (2004)	Do institutions cause growth?	1699	84.95
A. Tamazian, B. Bhaskara Rao (2010)	Do economic, financial and institutional developments matter for environmental degradation? Evidence from transitional economies	741	52.93
C.N. Brunnschweiler, E.H. Bulte (2008)	The resource curse revisited and revised: A tale of paradoxes and red herrings	594	37.13
J.L. Arcand, E. Berkes, U. Panizza (2015)	Too much finance?	579	64.33
R.S. Sobel (2008)	Testing Baumol: Institutional quality and the productivity of entrepreneurship	453	28.31
S.A. Sarkodie, S. Adams (2018)	Renewable energy, nuclear energy, and environmental pollution: Accounting for political institutional quality in South Africa	418	69.67
C.N. Brunnschweiler (2008)	Cursing the Blessings? Natural Resource Abundance, Institutions, and Economic Growth	395	24.69
E.H. Bulte, R. Damania, R.T. Deacon (2005)	Resource intensity, institutions, and development	380	20
A.D. Boschini, J. Pettersson, J. Roine (2007)	Resource curse or not: A question of appropriability	337	19.82
A.O. Acheampong, S. Adams, E. Boateng (2019)	Do globalization and renewable energy contribute to carbon emissions mitigation in Sub-Saharan Africa?	336	67.2

Source: Scopus database

Analysis of Keywords

Keywords Co-occurrence

The key ideas of an article are described in keywords. Analysing keywords is crucial when looking at popular topics and trends in a certain field of study (Wang et al, 2018). A co-occurrence analysis of keywords starts this section. This co-occurrence analysis of keywords is designed to identify the most important terms and how they relate to one another (Zupic & Cater, 2015). The dataset is imported from the Scopus database using the VOSviewer software tool to generate the frequency keyword information (Table 6). The 20 most popular keywords that appeared in the 855 articles of the sample under analysis during the studied period (2000–2023) are displayed in Table 6. The most often used keywords are economic growth (349 articles), institutional quality (315 articles), institutions (136 articles), financial development (82 articles), growth (41 articles) and corruption (35 articles). The quantity of articles with two keywords that occurred together was indicated by the total link strength characteristic. The keyword “Economic growth” is the one with the highest total link strength (624). This was followed by the keywords “Institutional quality” (573), “Institutions” (238), “Financial development” (195), “Growth” (63) and “Corruption” (54).

Table 6: Top 20 Author's Keywords

Author Keywords	Total link strength	Articles Occurrences
Economic growth	624	349
Institutional quality	573	315
Institutions	238	136
Financial development	195	82
Growth	63	41
Corruption	54	35
Human capital	70	34
Renewable energy	67	34
FDI	65	32
Trade openness	81	31
Foreign direct investment	66	29
Africa	66	28
Sub-Saharan Africa	61	25
Sustainable development	52	25
Economic development	44	24
Resource curse	53	24
Governance	40	23
Natural resources	60	23
CO2 emissions	58	22
Panel data	39	22

Source: Scopus database, generated by using the VOSviewer

Keywords Clustering Analysis

In order to shed more light on the connection between institutional quality and economic growth, this section carried out a keywords clustering analysis using VOSviewer software tool. Figure 6 illustrates the network map for the keywords of the articles related to institutional quality and economic growth. Using the colour of the connections in the Figure 6, one may distinguish between clusters according to how many co-occurrences of the keywords. A node is used to represent each keyword. The number of each keyword occurrence is indicated by the size of each node. Six primary research lines created by the various keyword groups have been identified by the VOSviewer software tool. The cluster and the related research line are categorized under the terms “Institutional Quality”, “Institutions”, “Economic Growth”, “Trade Openness”, “Corruption”, and “Innovation” in accordance with the term connected with a higher number of articles within each component.

Cluster 1 (red), the biggest group with 33.33% of the keywords. The red cluster has been defined as a “institutional quality” cluster. This cluster 1 is related to finance, clean energy and environmental sustainability issues. The most commonly used terms were financial development (82 articles), renewable energy (34 articles), sustainable development (25 articles), CO2 emissions (22 articles), globalization (19 articles), ecological footprint (16 articles), energy consumption (13 articles), environmental sustainability (13 articles), environmental degradation (11 articles), sustainability (11 articles), environmental kuznet curve (10 articles), renewable energy consumption (9 articles), and carbon emissions (8 articles).

Cluster 2 (green) comprised 18.33% of the keywords. The green cluster has been defined as a “institutions” cluster. This cluster 2 research line is dedicated to examine resources, economic growth and development. The most regularly used terms were growth (41 articles), human capital (34 articles), economic development (24 articles), resource curse (24 articles), governance (23 articles), natural resources (23 articles), and development (8 articles).

Cluster 3 (blue) is made up of 13.33% of the keywords. The blue cluster has been classified as an "economic growth" cluster. The research line is associated with the research on international trade and investment in developing countries. The most frequently used terms were foreign direct investment (32 articles), Africa (28 articles), Sub-Sahara Africa (25 articles), foreign aid (14 articles), China (11 articles), democracy (10 articles), and trade (7 articles).

Cluster 4 (yellow) encompassed 13.33% of the keywords. The yellow cluster has been defined as a “trade openness” cluster. The research line is related to investigating the quality of institutions, poverty and income inequality that affect public debt in developing countries. The most regularly used terms were income inequality (17 articles), developing countries (16 articles), public debt (10 articles), human development (8 articles), poverty (8 articles), and quality of institutions (7 articles).

Cluster 5 (purple) consisted of 13.33% of the keywords. The purple cluster has been classified as a "corruption" cluster. This fifth research line is studying the aspect of finance, investment, remittances and the global goals. The most commonly used terms were foreign direct investment (29 articles), panel data (22 articles), environmental quality (11 articles), inequality (10 articles), remittances (10 articles), financial inclusion (9 articles), and sustainable development goals (7 articles).

Cluster 6 (pink) is made up of 8.33% of the keywords. The pink cluster has been defined as a “innovation” cluster. The sixth research line is mostly related to economic freedom and entrepreneurship. The common appeared terms are economic freedom (14 articles), entrepreneurship (9 articles), and system generalized moment of method (7 articles).

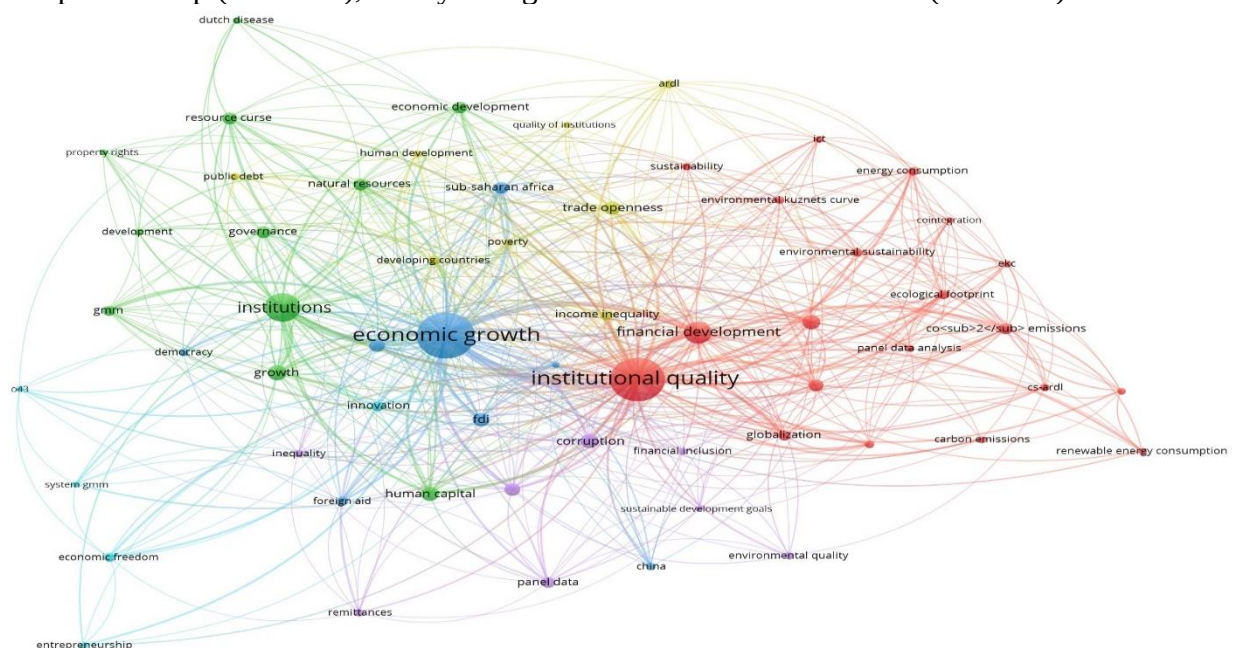


Figure 6: Network Map of Keywords Co-occurrence Grouped by Clusters

Note: The colours, namely red, green, blue, yellow, purple, and pink denote the cluster of institutional quality, institutions, economic growth, trade openness, corruption, and innovation.

Source Scopus database, generated by using the  VOSviewer

Evolution of Keywords

To illustrate the historical distribution of keywords in different groups, Figure 7 shows the evolution of keywords over time. This demonstrates how the keywords used to explore the connection between institutional quality and economic growth have evolved. This is then further separated into three sub-periods: 2017–2018, 2019–2020, and 2021–2023.

In the purple phase (2017-2018), the main keywords frequently used related to research topic were development, growth, human development, entrepreneurship, property right, economic development, resource curse, democracy, quality of institutions, institutions, natural resources, foreign direct investment, and Dutch disease.

In the green phase (2019-2020), the primary keywords that are often utilized in relation to the study topic were poverty, corruption, developing countries, panel data, foreign aid, economic growth, economic freedom, panel data analysis, Africa, inequality, China, globalization, governance, trade, public debt, innovation, financial development, remittances, institutional quality, sustainability, Sub-Saharan Africa, and income inequality.

In the yellow phase (2021-2023), the main keywords that are commonly employed in relation to the research topic were human capital, sustainable development, carbon emissions, trade openness, energy consumption, renewable energy consumption, CO2 emissions, cointegration, environmental quality, ecological footprint, environmental sustainability, technological innovation, financial inclusion, and sustainable development goals.

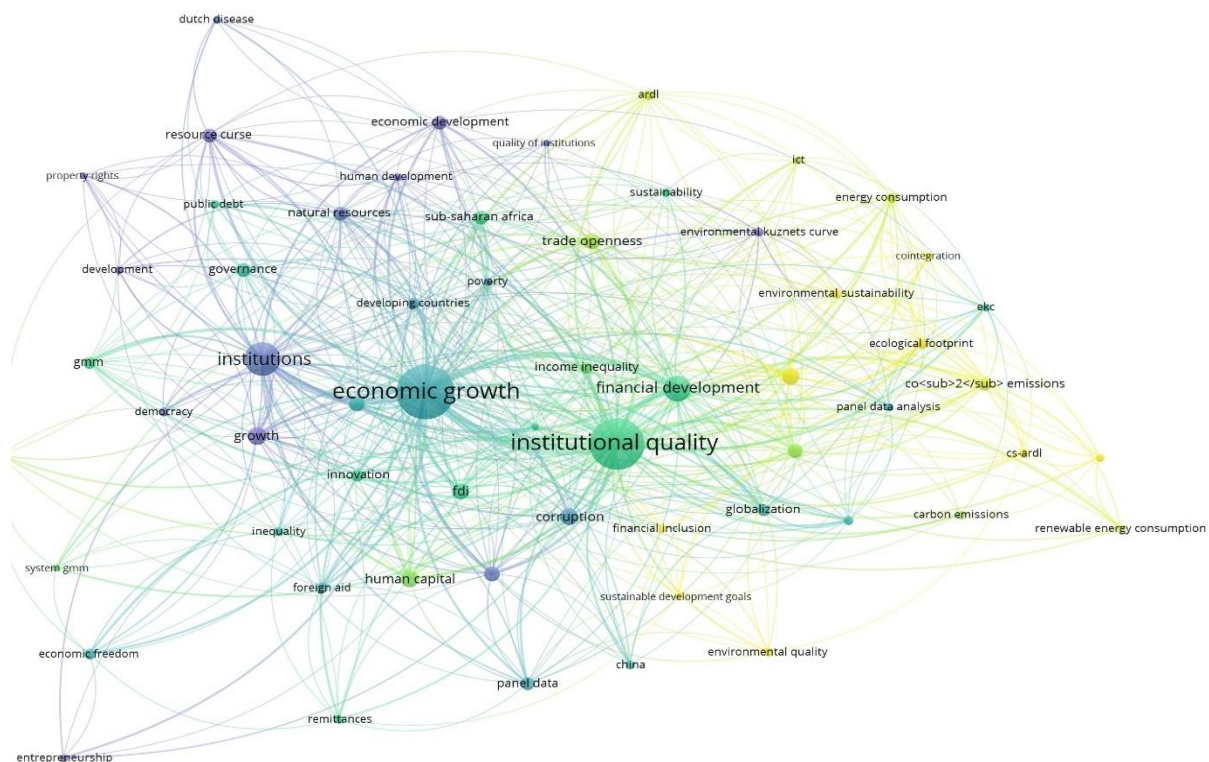


Figure 7: Evolution of Keywords Over Time

Note: The range of  colours, denotes the publication year development of the keyword from 2017 to 2023.

Source Scopus database, generated by using the  VOSviewer

Conclusions

Summary of the Findings

The objective of this study is to comprehensively investigate the field of research on institutional quality and economic growth from 2000 to 2023. To achieve this objective, this study used the bibliometric analysis method to investigate a thorough overview of published scientific papers in the field of institutional quality and economic growth over the years 2000-2023 by employing VOSviewer and Publish and Perish software tools. A total of 855 scientific documents were obtained for this study's sample from the Scopus database. The following is a summary of the primary findings based on the research questions stated in the introduction section of this study:

RQ1: What is the trend in the field of institutional quality and economic growth to date?

Regarding the trends in the quantity of scientific publications that have been produced, the first one appeared in 2000. There was a gradual increasing trend that started up to 2011. However, the rate of increase annual publication still considered low. The start of 2018, when there was a sharp increase in the quantity of publications, averaging 24.17 publications per year. Furthermore, the number of publications per year keep increasing between 2018 and 2023, with the averaging 106.83 every year. This pattern reflects the increasing attention that this field has received over the last few decades.

RQ2: Which countries make the most important contributions to the research on institutional quality and economic growth?

Concerning the influential countries on this study field, with 140 documents, China holds the top spot. Pakistan comes in second with 101 documents, and the United States comes in third with 99 documents publications. On the other hand, the countries that exhibit strong collaboration and interaction with other countries in this field are the United Kingdom, India, the United States, Malaysia, China, Canada, and Turkey.

RQ3: Who are the most prolific authors in the institutional quality and economic growth research?

By analysing the most prolific authors, the top three authors in terms of overall publications are Law, S.H., Khan, H., and Sohag, K., each of whom has eight publications to their record. Besides, the three authors with the highest total citation counts are Adams, S., Law, S.H., and Anwar, A., with 933, 275, and 200 citations, respectively.

RQ4: What are the most influential journals and articles in the institutional quality and economic growth research?

With respect to most influential journals, Environmental Science and Pollution Research is the journal that publishes the most regularly in the relevant topic, with 47 contributions. Resources Policy and Sustainability Switzerland, with 35 and 21 documents contributed, placed the second and third rank. With a total of 1444 citations, Environmental Science and Pollution Research is a prestigious journal. Resources Policy (1184 citations) comes in second, and World Development (733 citations) comes in third. In terms of most cited articles, with 1699

citations, the article "Do institutions cause growth?" by Glaeser et al. (2004) has been cited more than any other work. Next, the articles titled "Do economic, financial and institutional developments matter for environmental degradation? Evidence from transitional economies" by Tamazian et al. (2010) and "The resource curse revisited and revised: A tale of paradoxes and red herrings" by Brunnschweiler et al. (2008), which received of 741 and 594 citations, correspondingly.

RQ5: What are the top keywords, relevant research clusters and development of keywords in the institutional quality and economic growth research?

The most frequently appearing keywords in the articles are: economic growth (349 articles), institutional quality (315 articles), institutions (136 articles), financial development (82 articles), growth (41 articles) and corruption (35 articles). Six significant research clusters were identified by examining the relationships between the keywords used in the publications. Cluster 1 (red) is the largest group, containing 33.33% of the keywords. Cluster 2 (green) comprised 18.33% of the keywords. Cluster 3 (blue), Cluster 4 (yellow), and Cluster 5 (purple) are made up of 13.33% of the keywords, respectively. Lastly, Cluster 6 (pink) consisted of 8.33% of the keywords. In general, each cluster contains different research line according to the combination of the keywords. The phase of the keyword development was separated into three different periods: 2015–2017, 2018–2020, and 2021–2023. During the purple period (2017–2018), development, growth, human development, entrepreneurship, and property rights were the most commonly used keywords associated with the research topic. The study topic was frequently associated with the following primary keywords during the green phase (2019–2020): poverty, corruption, developing countries, panel data, foreign aid, economic growth, and economic freedom. The research issue was frequently associated with the following keywords during the yellow phase (2021–2023) in recent years: human capital, sustainable development, trade openness, carbon emissions, energy consumption, renewable energy consumption, and CO2 emissions, ecological footprint, environmental sustainability, technological innovation, financial inclusion, and sustainable development goals.

Contributions and Limitations of the Study

This study contributes in a number of ways. First, this study used the bibliometric analysis approach, which combines the use of two bibliometric tools—VOSviewer and Publish and Perish—to evaluate and understand a thorough feature and evolution of the relationship between institutional quality and economic growth. Secondly, this study examines the most productive authors, countries, sources, and documents to trace the trend and add to the academic discussion on the common knowledge of institutional quality and economic growth research. Lastly, the findings demonstrate the way in which knowledge is developing over time through the use of keywords that can be used as a basis for further research.

The advantage of this study is to use bibliometric analysis to explore a comprehensive overview of published scientific publications in the field of institutional quality and economic growth. Bibliometric analysis can provide insights into the research trends, influential authors, and key concepts driving the understanding of this relationship. It can also help in identifying gaps in the existing literature, and areas requiring further exploration. Moreover, scholars can visualize the network of citations and collaborations to find the most significant papers and researchers in the subject. This can help to comprehend how the discussion around institutional quality and economic growth has changed over time, as well as how diverse perspectives and techniques have contributed to the current research. However, a consideration of the study's limitations is

necessary to conclude the current investigation. Firstly, the objective of this study was to make a descriptive quantitative analysis of the idea of institutional quality and economic growth's occurrence in particular databases, rather than to evaluate the papers' content quality, which may be the focus of future research. Secondly, The Scopus database is the source of data for this study. It is advised that future research make an effort to gather information from additional sources, such as the Web of Science database, which contains important articles in the field. As a result, additional information can be obtained for the study. Finally, additional software tools (such CiteSpace, BibExcel, CitNetExplorer, UCInet, etc.) might be used in future research to help with the analysis and produce different results and conclusions.

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