# Research On The Corporate Social Responsibility In Developing Countries: A Visual Bibliometric Analysis

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#### Abstract

This detailed study assesses trends in CSR research in developing nations from 2006-2023 using CiteSpace software. A total of 288 documents indicate a steadily increasing scholarly attention, with roughly 16 papers produced annually. England stands out as the most prolific contributor, with leading institutions being the Comsats University Islamabad (CUI) and American University of Beirut. Comsats University Islamabad (CUI) hold significant influence. Ahmad Naveed, Jamali Dima as the most published authors. Crucial publishing platforms include the Sustainability. The Journal of Business Ethics is the most cited journal in the field. Performance, governance, financial performance, antecedents and adoption are the most influential research keywords mentioned by scholars in the field. Clarify corporate social responsibility policies and management methods and the research of relationship between corporate social responsibility and stakeholders like employees and consumers among will be the future research hot point in this field. By dividing keywords into time zones and combining the annual trend of publications, this study divides the research on CSR in developing countries into three periods. These findings offer fresh perspectives for future CSR practice.

Key words: corporate social responsibility; developing

countries; corporate management; CiteSpace; visual analysis.

#### 1. Introduction

The concept of corporate social responsibility (CSR), which has been updated in the academic community, refers to a certain historical period in which society expects a business as a for-profit socio-economic organization to assume legal, economic, ethical and charitable responsibilities for its stakeholders and society as a whole. Due to the rapid development of globalization, trade and economy, developing countries of corporate social responsibility attention gradually increased, now developing countries are changing their way, make the CSR work is conducive to their competitive position in global trade, for example, China has begun to take a positive way, become the CSR standard makers (Gugler & Shi, 2009). However, corporate social responsibility countermeasures are unlikely to be easily translated into unified standardized practice globally (Abreu et al., 2015), so there is a broad space for research in this field. Many foreign scholars studied corporate social responsibility, involving developed countries and development countries corporate social responsibility research progress (Jamali & Carroll, 2015), small and medium-sized enterprise corporate social responsibility (Jamali et al., 2017), developing countries in the global value chain environment upgrade (Achabou, et al., 2017), corporate social responsibility practice factors (Aggarwal et al., 2019), corporate social responsibility and financial performance (Akben-Selcuk, 2019), multinational corporate social responsibility practice legitimacy (Beddewela & Fairbrass, 2016), motivation (Momin & Parker, 2013), corporate stakeholder responsibility scale (El et al., 2015) and so on. Through reviewing the previous researches in this field, we find that many scholars, institutions and countries have made a lot of contributions in this field, but there are still many directions worth studying in this field. Each period has its own characteristics, so whether it is concept, method or trend, it needs to be summarized and sorted out in a macro and comprehensive way. Only in this way can we provide a comprehensive and valuable reference for future scholars.

Chen of Drexel University created the Citespace, which is convenient for many researchers to organize and summarize literatures in various fields, this software utilizes the JAVA platform to visually illustrate potential connections and scientific knowledge (Chen, 2006). Through visual interpretation of data in different fields, researchers can accurately

understand the development status of the field, current research priorities and new directions in the future (Chen, 2007). The purpose of this study is to summarize and analyze relevant researches in this field. It not only summarizes the development of previous researches, but also explores the latest research trends and directions. At the same time, it is presented in a visual form to provide theoretical reference for other scholars' future researches.

#### 2. Method

#### 2.1 Data acquisition

The source database for this study is the Web of Science Core Collection (WOSCC). The specific search and screening process is shown in Figure 1. After searching the two keywords, a total of 300 articles met the domain requirements. Later, the article type was set as "paper" and "review", and the language was only English. Finally, 288 papers meeting the requirements were obtained. The retrieval period is not restricted, with the specific search time being July 6, 2023. A total of 288 documents were retrieved using the search strategy outlined in Figure 1, and the content was downloaded in plain text format with the "Full record with all references" option selected. Import CiteSpace software for merge and deduplicate, and obtain the final data set of 288 documents.

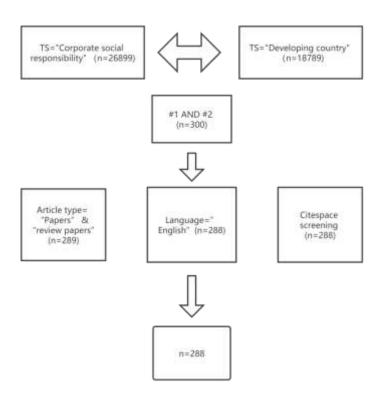


Figure 1. Data search and screening logic diagram

#### 2.2 Analysis tool

CiteSpace.6.2.R3 is used to analyze the country and region, institutions, authors, keywords, literature citation, journals cited numbers, each map node represents the corresponding country / region, institutions, authors, keywords, citation, citation. The connections between the nodes represent cooperative, co-occurrence, and co-cited relationships, respectively. The size of the node reflects the published numbers of country and region, institutions, and authors. Nodes in the map show purple edges indicating centrality 0.1 and high school centrality representing a turning point in the field. Software parameter setting is as follow: time span=2006-2023; time slice =1 year; Node type is selected as country, institution, author, keyword, cited refrence and cited journal respectively; node threshold mainly adopts TOPN=50; Pruning mainly adopts Pathfinder algorithm for data characteristics. Keyword cluster map is obtained by using the LLR algorithm on the basis of keyword co-occurrence and identifying it with "K". The cluster information table is obtained by using the "Cluster Export" function to explore the specific information of the cluster. The modules divided in the cluster map are identified by #, and the structure and clarity of the cluster are mainly determined by two indicators: module value (Modularity Q value) and average contour value (Silhouette S value). The larger the Q value, the better the clustering of the network. The value interval of Q is [0,1], and Q> 0.3 indicates that the cluster network structure is significant, while S measures the homogeneity of the cluster map. If closer to 1, it indicates high homogeneity and vice versa. At S=0.7, the clustering result is of high reliability, and at between and above 0.5, it can be considered reasonable (Chen, 2004).

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#### 3. Results

#### 3.1 Annual publication amount analysis

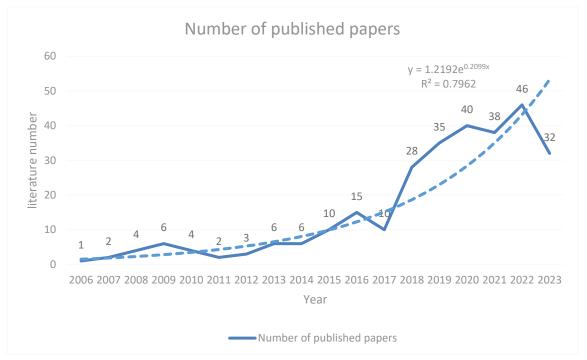


Figure 2. Total number of publications during 2006-2023

As can be seen from the Figure 2, the number of literature and research in the field of combining corporate social responsibility with developing countries has steadily increased, and has a continuous upward trend, as demonstrated by a fitting curve with an index of  $y = 1.2192e^{0.2099x}$ , with an average of 16 published per year. The roots of this field can be traced back to the 2000s, between 2006 and 2012, this period is the "initial period" of CSR research in developing countries, with an average of only 3.14 articles per year. Following this period, from 2013 to 2017 is a "growth period". The number of publications in this area remained relatively stable and there is a significant increase compared to the previous period, with an average of 9.4 publications per year. In contrast, the period from 2018 to 2022 saw a significant uptick in publications, reaching a peak in 2022. This period is the "burst period" of CSR research in developing countries. As the data for this analysis was collected until July 6, 2023, the statistics for 2023 are incomplete, but the line chart shows that the number of relevant studies and published papers will continue to increase after that. And maybe occur new heights.

#### 3.2 National research situation analysis

The national cooperation map (Figure 3) generated by CiteSpace software has 77 nodes and 249 connections (N=77, E=249), from which it can be clearly seen the contributions of different countries in this field and the

network situation of cooperation between countries. Detailed data for the top 10 countries in terms of literature production in this field are presented in Table 1. The analysis reveals a closely intertwined network of collaboration among these countries. England tops the list with 47 articles, constituting approximately 16.32% of the total literature, followed by Australia (42 articles, 16.92%) and Peoples R CHINA (40 articles, 10.57%) in second and third place, respectively. Pakistan and Malaysia are fourth and fifth place with 38 articles and 22 articles each, followed by Saudi Arabia (20), India (18), USA (17), Bangladesh (16), and Ghana (14). The countries with the highest centrality are England (0.37), Peoples R CHINA (0.23), Pakistan (0.19), USA (0.18), and Saudi Arabia (0.09), indicating that the research output of these countries is widely recognized.

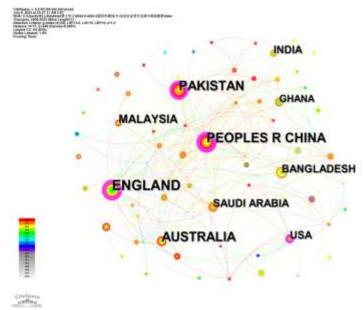


Figure 3. National Cooperation Knowledge Map of CSR in the field of developing country research

**Table 1** Results of national collaborative analysis in the field of CSR in developing country

Ranking	Country	Frequency	Centrality
1	England	47	0.37
2	Australia	42	0.07
3	Peoples R China	40	0.23
4	Pakistan	38	0.19
5	Malaysia	22	0.06
6	Saudi Arabia	20	0.09
7	India	18	0

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8	USA	17	0.18
9	Bangladesh	16	0.02
10	Ghana	14	0

#### 3.3 Organization distribution analysis

Figure 4 presents a collaborative network generated by CiteSpace software, featuring 79 nodes and 123 connections. Each node corresponds to an institution or organization, and the larger the node in the chart, the greater the number of articles contributed by that field. The less vice versa. The connections denote collaborative relationships between institutions. Table 2 provides data on the institutions with more than 5 publications.

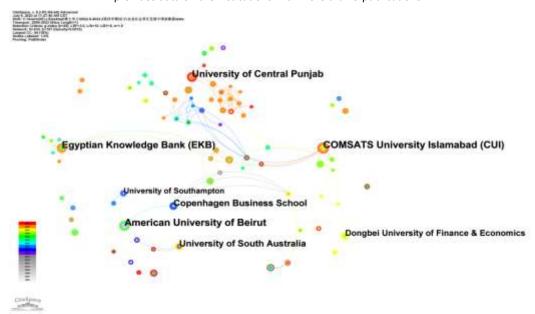


Figure 4: Organization Cooperation Knowledge Map of CSR in the field of developing country research

**Table 2** Results of organization collaborative analysis in the field of CSR in developing country

Ranking	Institution	Frequency	Centrality
1	COMSATS University Islamabad (CUI)	9	0.05
2	American University of Beirut	9	0.01
3	University of Central Punjab	8	0.01
4	Egyptian Knowledge Bank (EKB)	8	0.01
5	Copenhagen Business School	7	0.01
6	University of South Australia	7	0.01
7	Dongbei University of Finance & Economics	6	0
8	University of Southampton	5	0

The organization publishing Network shows that there are already many institutions, organizations and schools that have made outstanding contributions to developing countries and the field of CSR, and have established relatively close cooperative relations. The COMSATS University Islamabad (CUI) and the American University of Beirut produced the most literature, respectively with 9 articles. The institution with the highest centrality is the COMSATS University Islamabad (CUI), with 0.05. American University of Beirut, Copenhagen Business School, University of South Australia and University of Southampton have more contacts and more cooperation, forming a close cooperation network. Dongbei University of Finance & Economics as the only Chinese university ranked in the top 10 in this field, it rarely cooperates with other institutions.

#### 3.4 Author analysis

The author collaboration network (Figure 5) generated by CiteSpace software comprises 284 nodes and 205 connections. Each node represents an author, with the size of the node corresponding to the number of posts by the author, and the connections indicating cooperative relationships between authors. Table 3 shows authors with more than five individual publications. Ahmad Naveed, who first studied in 2020, is the most prolific author in the field with 7 posts. Jamali Dima has published the same number of articles as Ahmad Naveed, but Jamali Dima has been working in the field much earlier, publishing his first article in 2007. Lund-thomsen Peter has published six articles in the field, ranking third. After him, Badulescu Daniel has contributed 5 articles in this field, ranking fourth. From the analysis, it can be seen that the centrality of relevant studies is not high, and the topics are very different and scattered. There are fewer prominent authors in the field and fewer articles per capita.

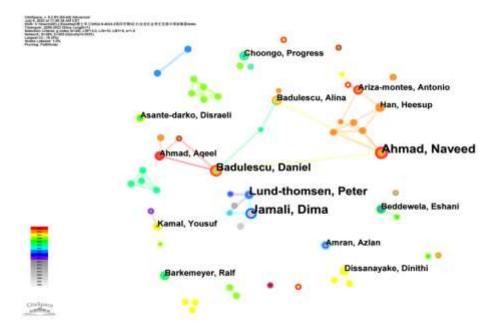


Figure 5. The researcher Cooperation Knowledge Map of CSR in the field of developing country research

**Table 3** Results of researcher collaborative analysis in the field of CSR in developing country

Ranking	Researcher	Frequency	Year
1	Ahmad Naveed	7	2020
2	Jamali Dima	7	2007
3	Lund-thomsen Peter	6	2008
4	Badulescu Daniel	5	2018

#### 3.5 Magazines and periodicals distribution analysis

Table 4 shows the publication of research on CSR and developing countries in different journals. The information of the top 10 journals with the largest number of published articles is summarized in the table. The Journal of Sustainability, with 30 related research articles, is the journal with the most contributions in this field, accounting for about 10.42% of the total literature published in this field. This journal's Journal Citation Indicator (JCIIF 2021) is 0.65. The second-highest number of publications is in Social Responsibility Journal (18 articles), which JCIIF is 0.68. Journal Of Business Ethics comes in third with 13 articles, JCIIF is 1.92. Journal Of Cleaner Production published 10 articles, JCIIF is 1.51. Although the literature contribution of the well-known journals "Business Strategy and Environment" in related fields is not high, the JCIIF of the journals is 2.21, which are well-known to most scholars in this field.

Table 4 Results of magazines publishing analysis in the field of CSR in

developing country

Ranking	Magazines and periodicals	Frequency	JCIIF (2021)
1	Sustainability	30	0.65
2	Social Responsibility Journal	18	0.68
3	Journal Of Business Ethics	13	1.92
4	Journal Of Cleaner Production	10	1.51
5	Corporate Social Responsibility And Environmental Management	9	1.81
6	Cogent Business Management	6	0.42
7	Corporate Governance The International Journal Of Business In	6	1.01
,	Society	O	1.01
8	Journal Of Accounting In Emerging Economies	6	1.07
9	Business Strategy And The Environment	5	2.21
10	International Journal Of Environmental Research And Public Health	4	0.74

Generated by the CiteSpace software, pruning is set to Minimum spanning tree, Pruning sliced networks & pruning the merget network. The scale factor K=10. Figure 6 illustrates a map of co-cited journals in the field, comprising 249 nodes and 118 connections, with a density of 0.0038. The co-cited journals are marked with nodes in the figure, and the network lines represent the co-cited relationships among journals. The closeness and relevance of the connections between journals in this field are well represented. Table 6 lists the 10 most cited journals in this field.

As per the Table 5 , Journal of Business Ethics was the most cited journal (253 citations). Following that, Academy of Management Review was the second most cited journal (186 citations), and Corporate Social Responsibility and Environmental Management ranked third (156 citations). The top three journals with high centrality were Corporate Social Responsibility and Environmental Management (1.02), Harvard Business Review (0.91), and Academy of Management Journal (0.89).

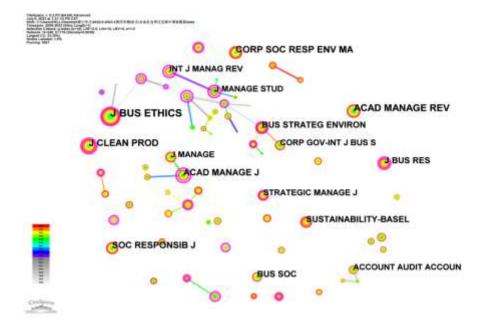


Figure 6. Magazines cooperation knowledge map of CSR in the field of developing country research

**Table 5** Results of top 10 co-cited magazines analysis in the field of CSR in developing country

Ranking	Cited magazines and periodicals	Frequency	Centrality
1	Journal of Business Ethics	253	0.38
2	Academy of Management Review	186	0.06
3	Corporate Social Responsibility and Environmental Management	156	1.02
4	Journal of Cleaner Production	141	0.43
5	Academy of Management Journal	123	0.89
6	Social Responsibility Journal	115	0
7	Sustainability	105	0
8	Business & Society	105	0.04
9	Business Strategy and the Environment	103	0.16
10	Journal of Business Research	94	0.6

#### 3.6 Research hot spot and trend analysis

In order to better summarize and explore the research hotspots and trends of CSR in developing countries, in addition to the relevant analysis of the total number of publications, authors, institutions and countries, the analysis methods of keywords, cluster analysis, literature co-citation, mutation and other contents in this field have been used by many scholars, making the research more rigorous and scientific. Keyword analysis in the title or topic of a document is crucial, which can accurately summarize the core ideas of the document. Through the study of keywords, one can quickly understand a field and accurately grasp the core research content in this field (Chen, 2010).

#### 3.6.1 Keywords and cluster analysis

The keyword map shows 127 nodes and 214 connections in the CiteSpace software (Figure 7). Different keywords are represented by different nodes, and the connection indicates the co-occurrence relationship. The larger the node, the higher the frequency mentioned in related studies. In the early data collection stage, the keywords "corporate social responsibility" and "developing countries" were searched, so these two terms will be excluded from the keyword analysis section. Among the top 10 keywords, the number of mentions and the centrality of the research are shown in Table 6. On the map, the keyword "performance" was mentioned 74 times, the most numerous keyword, corresponding to the largest node, and the keyword "impact" was mentioned 72 times, ranking second. Followed by the "governance", "financial performance", "business", "management", "determinants", "strategy", "sustainability" and "company". The important keywords are performance (0.42), governance (0.27) and financial performance (0.25).

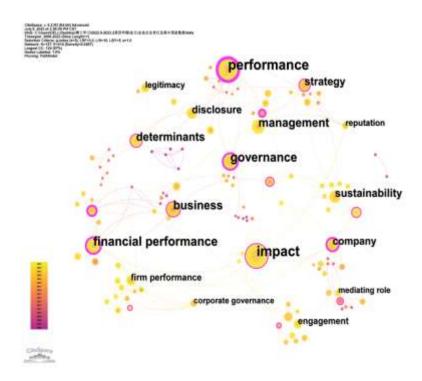


Figure 7. Keyword knowledge map of the field of CSR in developing country **Table 6** Results of keyword occurrence analysis in the field of CSR in developing country

Ranking	Keyword	Centrality	Frequency	Centrality	Keyword	Frequency
1	performance	0.42	74	0.42	performance	74

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2	impact	0.13	72	0.27	governance	43
3	govornanco	0.27	43	0.25	financial	41
J	governance 0.27 43 0.25	performance	41			
4	financial performance	0.25	41	0.25	antecedents	8
5	business	0.16	35	0.21	adoption	4
6	management	0.05	34	0.2	company	23
7	determinants	0.14	29	0.17	brand experience	2
8	strategy	0.16	24	0.16	business	35
9	sustainability	0.03	24	0.16	strategy	24
10	company	0.2	23	0.15	commitment	9

In this study, after keyword clustering, it was found that the overall clustering was reasonable and significant (Figure 8), with Q value of 0.7198 and S value of 0.886. There are 10 keyword clusters in Figure 7, the largest of the clusters is "#0 competitive strategy, followed by #1 small and medium enterprises (smes), #2 institutional theory, #3 sustainability, # 4 corporate social responsibility, # 5 climate change, # 6 employee, # 7 corporate governance, #8 customer and #9 CSR disclosures."

Table 7 shows information about 10 clusters from 0 to 9. Each cluster has a high homogeneity, especially the keyword representation in each cluster is concentrated, and the index is within a reasonable scientific range. Individual clusters performed well. 19 keywords were summarized in Cluster #0, the top five key words are competitive strategy (7.07, 0.01); sustainable development (3.74, 0.1); institutional theory (3.74, 0.1); hotel industry (3.53, 0.1); decarbonization of healthcare (3.53, 0.1); The cluster #1 has 16 representative words. developing countries (11.63, 0.001); developing country (8.17, 0.005); industrial clusters (5.24, 0.05); small and medium enterprises (smes) (4.96, 0.05); sustainability (4.85, 0.05) the top 5 feature words; There are 15 keywords in cluster #2, The top 5 feature words are institutional theory (7.64, 0.01); subsidiary (5.09, 0.05); innovation (5.09, 0.05); board diversity (5.09, 0.05); performance (5.09, 0.05); The cluster #3 has 14 representative words, the sustainability reporting (10.73, 0.005); sri lanka (8.65, 0.005); social (8.58, 0.005); corporate social responsibility (5.46, 0.05); gri (5.01, 0.05) are the top five key words; There are 14 keywords in cluster #4, The top five extracted were china (9.26, 0.005); manufacturing sector (5.65, 0.05); csr (5.49, 0.05); corporate social responsibility (5.14, 0.05); improvement and corporate financial performance (4.62, 0.05); There are eight keywords in the cluster #5, The top five key words were climate change (7.1, 0.01); governance (5.57, 0.05); corporate social responsibility disclosure (5.51, 0.05); banking industry (5.51, 0.05); corporate performance (5.38, 0.05); There are 10 keywords in cluster #6, The top 5 feature words extracted are employee creativity (9.42, 0.005); work engagement (9.42, 0.005); subjective norms (6.56, 0.05); organizational cynicism (oc) (6.56, 0.05); entrepreneurial selfefficacy (6.56, 0.05); There are 9 keywords in cluster #7, The top 5 feature words are jordan (13.55, 0.001); corporate governance (13.34, 0.001); csr disclosure (7.02, 0.01); ownership structure (7.02, 0.01); board independence (6.75, 0.01); There are 9 keywords in the #8, customer loyalty (14.45, 0.001); customer citizenship behavior (8.56, 0.005); affective commitment (7.44, 0.01); service quality (7.44, 0.01); sem (6.96, 0.01). There are 7 keywords in the #9, disclosures (9.24, 0.005); payment for ecosystem services (pes) (6.47, 0.05); mining companies (6.47, 0.05); textile and garments (6.47, 0.05); selective decoupling (6.47, 0.05).

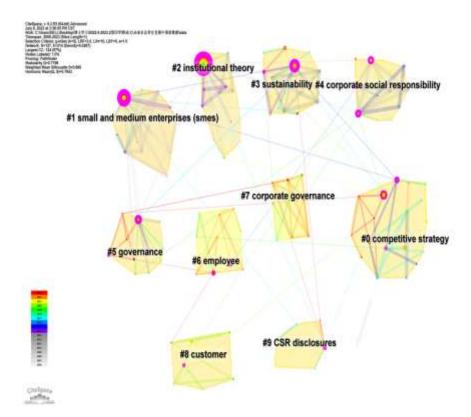


Figure 8. Keywords clustering network of the field of CSR in developing country

**Table 7** Results of keyword Cluster information of the field of CSR in developing country

ID	Size	Top 5 Key words	Silhouette	Main Theme
#0	19	competitive strategy $(7.07, 0.01)$ ; sustainable development $(3.74, 0.1)$ ; institutional theory $(3.74, 0.1)$ ; hotel industry $(3.53, 0.1)$ ; decarbonization of healthcare $(3.53, 0.1)$	0.798	competitive
#1	16	developing countries (11.63, 0.001); developing country (8.17, 0.005); industrial clusters (5.24, 0.05); small and medium enterprises (smes) (4.96, 0.05); sustainability (4.85, 0.05)	0.91	small and medium enterprises (smes)
#2	15	institutional theory (7.64, 0.01); subsidiary (5.09, 0.05); innovation (5.09, 0.05); board diversity (5.09, 0.05); performance (5.09, 0.05)	0.991	institutional theory
#3	14	sustainability reporting (10.73, 0.005); sri lanka (8.65, 0.005); social (8.58, 0.005); corporate social responsibility (5.46, 0.05); gri (5.01, 0.05)	0.926	sustainability
#4	14	china (9.26, 0.005); manufacturing sector (5.65, 0.05); csr (5.49, 0.05); corporate social responsibility (5.14, 0.05); improvement and corporate financial performance (4.62, 0.05)	0.89	corporate social responsibility

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#5	11	climate change (7.1, 0.01); governance (5.57, 0.05); corporate social				
		responsibility disclosure (5.51, 0.05); banking industry (5.51, 0.05);	0.818	climate change		
		corporate performance (5.38, 0.05)				
#6	10	employee creativity (9.42, 0.005); work engagement (9.42, 0.005);				
		subjective norms (6.56, 0.05); organizational cynicism (oc) (6.56, 0.05);	0.825	employee		
		entrepreneurial self-efficacy (6.56, 0.05)	preneurial self-efficacy (6.56, 0.05)			
#7	9	jordan (13.55, 0.001); corporate governance (13.34, 0.001); csr		corporate governance		
		disclosure (7.02, 0.01); ownership structure (7.02, 0.01); board	0.858			
		independence (6.75, 0.01)				
#8	9	customer loyalty (14.45, 0.001); customer citizenship behavior (8.56,				
		0.005); affective commitment (7.44, 0.01); service quality (7.44, 0.01);	0.977	customer		
		sem (6.96, 0.01)				
#9		disclosures (9.24, 0.005); payment for ecosystem services (pes) (6.47,				
	7	0.05); mining companies (6.47, 0.05); textile and garments (6.47, 0.05);	0.868	CSR disclosures		
		selective decoupling (6.47, 0.05)				

To further examine the time patterns of how keyword clusters evolve over time, information about frequently repeated terms and clusters is transformed into a timeline view, as shown in Figure 9. In timeline visualization, clusters are displayed horizontally along the timeline, and the labels for each cluster are displayed at the end of the cluster's timeline. The legend above the display area is marked every 5 years, and only the highest keyword is displayed per year for each timeline. The color of the links between keywords represents the time slice of the first concurrency.

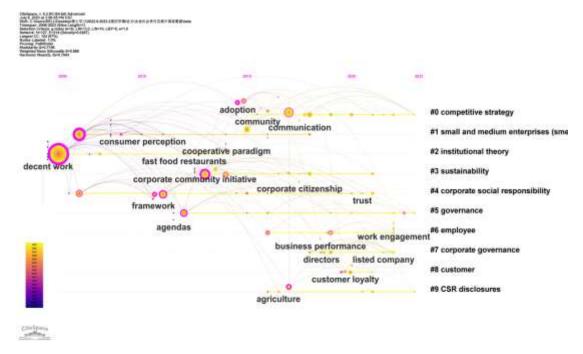


Figure 9. Timeline view of popular keywords in different clusters of the field of CSR in developing country

For example, cluster #0 includes "adoption", "community", "communication" and other keywords. There are three clusters still active in 2023, respectively competitive stategy, governance and CSR disclosures. In addition, the earliest keyword "decent work" appears in cluster #2 institutional theory.

#### 3.6.2 Evolution trend analysis

Evolution trend refers to the development direction and change trend of a certain research field. Using the time zone analysis of CSR related research in developing countries and the emergent keyword network graph, the focus of CSR research in developing countries at different stages and the trend of The Times are identified, so as to reveal the future development trend of CSR research in developing countries.

As shown in Figure 10, different eras have different research characteristics and directions, and the time zone analysis of keywords gives researchers good guidance. According to the trend of the number of published documents in this field, the field is divided into three stages. 2006 and 2012 "initial period", from 2013 to 2017 is a "growth period", from 2018 to 2022 is the "burst period". Combining these three periods, we can see that the research direction of each period has its own characteristics. Corporate social responsibility has been a hot topic mentioned by many scholars before 2006, so the earliest appearance in the time zone chart and the formal mention of the analysis related to developing countries was in 2007. From 2006 to 2012, research in this field focused on the definition and classification of CSR. From 2013 to 2017, some scholars began to study specific methods such as strategy and management, which also contributed to the rapid development of this field. During this period, a large number of relevant keywords appeared. For example, performance, disclosure, strategey, management, impact. From 2018 to 2022, through the deepening of sustainable development in various fields, CSR research in developing countries presents a detailed state, combined with the Internet 2.0 era, The methods of corporate social responsibility communication and self-disclosure are put forward. In the research on the relationship with stakeholders, most of the research focuses on customers, shareholders and employees. The generation and verification of mediating factors and models included in many relationships also provide reference for more and more subsequent scholars.

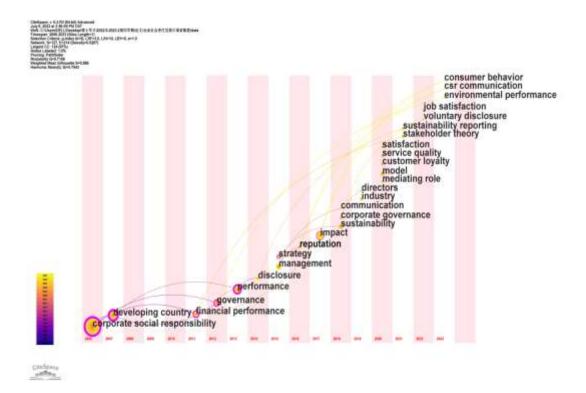


Figure 10. Time-zone view of the popular keywords of the field of CSR in developing country.

### **Top 15 Keywords with the Strongest Citation Bursts**

Keywords	Year	Strength	Begin	End	2006 - 2023
developing country	2007	3.9	2007	2011	
codes	2009	2.59	2009	2018	
business	2007	3.69	2015	2016	
ethics	2015	3.45	2015	2018	
perspectives	2016	2.6	2016	2018	
firm	2018	2.76	2018	2019	
corporate governance	2018	2.51	2018	2019	
firm performance	2019	2.91	2019	2019	
model	2020	3.71	2020	2021	
implementation	2020	2.88	2020	2021	
customer loyalty	2020	2.72	2020	2020	
service quality	2020	2.72	2020	2020	
antecedents	2011	2.6	2020	2021	
stakeholder theory	2021	2.67	2021	2023	
voluntary disclosure	2022	2.4	2022	2023	_

Figure 11. Keywords bursts in the field of CSR in developing country

Keyword burst research mainly uses the previous relevant research to study the trend of the field after the keyword changes or mutations (explosion)

occurred in a certain period. Figure 11 shows the mutation detection capability in CiteSpace. In software operations, the main time span is set to the least 1 year,  $\gamma$  is 0.8, f (x) =  $\alpha$ \*e- $\alpha$ x ( $\alpha$ 1/ $\alpha$ 0=2.0,  $\alpha$ i/ $\alpha$ i-1=2.0). The red part of the figure shows the time span of the mutation.

In the total 17 years from 2006 to 2022(Figure 11). In addition to the search keyword "developing country", the keyword "model" has been changing. Its mutation strength is the largest, and the mutation intensity is 3.71, which indicates that this keyword has been mentioned the most times in the whole field and is also the hottest content discussed by researchers, which is of great significance to the study of corporate social responsibility. As the keywords favored by researchers at present, "stakeholder theory (2021-2023, 2.67)" and "voluntary disclosure (2022-2023, 2.4)" are also the direction of future research. Combined with the above keyword analysis, this trend can be used for reference, because in the third period, that is, the "burst period", the main feature is that CSR research in developing countries shows a trend of refinement, especially in the study of the relationship with various stakeholders. At the same time, in the ways and methods of CSR, scholars believe that active disclosure and maintaining good communication with stakeholders are beneficial.

Top 14 References with the Strongest Citation Bursts



Figure 12. Citation burst in the field of CSR in developing country

On the other hand, Figure 12 shows the explosion of the cited literature in this field over the years. Miles M.B. 's articles have been cited the longest, from 2014-2019. Since this is a methodological guide book on qualitative research, it will be cited by many scholars who use qualitative research methods (Miles et al., 2014). Jamali D's article has the highest explosive intensity, is also the most frequently cited and the most concerned article in the field. This article has conducted a multi-level review of the literature on corporate social responsibility in developing countries through a comprehensive scientific research method. In particular, recommendations

are made on how to practice CSR in developing countries (Jamali & Karam, 2016). According to the analysis of the latest cited articles, the outbreak intensity of Murtaza SA is relatively high, with a score of 4.0. Through questionnaire survey, staff of different banks in Pakistan are tested, and it is found that corporate social responsibility will have an impact on employees' environmental behavior (Murtaza et al., 2021). Most of the rest of the latest cited articles focus on the analysis of the relevant impact on employee behavior. Through the mediating role of work autonomy, corporate social responsibility significantly affects employees' creativity and sense of identity with the company (Afsar & Umrani, 2019, Zulfiqar et al., 2019). This also proves that the impact of CSR on employees and consumers among stakeholders in the above trend analysis will become a trend in recent years.

#### 4. Conclusion

The data retrieval for this article comes from WOS and focuses on the relevant research areas of corporate social responsibility and developing countries from 2006 to 2023. Under the use of visualization software CiteSpace, the key words, literature co-citation and other aspects are comprehensively analyzed. Through the in-depth mining and visual display of relevant literature, the present situation of this field and the direction that future researchers should pay attention to are revealed.

#### 4.1 Review summary

In terms of publications, there is a growing trend in international literature on corporate social responsibility in developing countries. The number of publications has grown exponentially over the years, with an average of 16 published per year, indicating a growing interest in the field. England is the largest contributor in this field, followed by the Australia, the People's Republic of China, Pakistan, Malaysia and other countries. At the same time, the five countries mentioned above have established strong cooperative relations.

Institutions such as COMSATS University Islamabad (CUI) and American University of Beirut have high productivity and strong cooperative relationships with other institutions in the field. Highly influential institutions include University of Central Punjab and Egyptian Knowledge Bank (EKB). It is the unremitting efforts of these institutions and organizations that have enabled the rapid and healthy development of this field.

In terms of authors, the field has established good cooperative

relationships, with high-yield and influential authors forming cooperative teams. Ahmad Naveed is the most productive author in this field, with extensive research covering social responsibility interventions, corporate social responsibility systems, corporate governance and multinational corporate social responsibility in developing countries. Other authors with significant contributions include Jamali Dima. Lund-thomsen Peter and Badulescu Daniel. Because researchers tend to be concentrated and research directions are not consistent, the centrality of authors is not high. In terms of journal publication, the journal with the largest number of publications is the Sustainability, and the journal with the largest influence is Business Strategy And The Environment. Journals Journal of Business Ethics cited 253 times, while journals with better centrality performance were Corporate Social Responsibility and Environmental Management (1.02), Academy of Management Journal (0.89), and Journal of Cleaner Production (0.43).

#### 4.2 Current situation and trend study

It can be seen from the summary analysis that the following keywords are favored by future researchers. Performance, impact, governance, financial performance, business, management, determinants, strategy. sustainability, company, etc. Performance, governance, financial performance, antecedents and adoption are the most influential research keywords mentioned by scholars in the field. Clustering results were divided into # 0 competitive strategy, #1 small and medium enterprises (smes), # 2 institutional theory, # 3 sustainability, #4 corporate social responsibility, #5 climate change, #6 employee, #7 corporate governance, #8 customer and #9 CSR disclosures . According to the keyword clustering analysis, the current research on CSR in developing countries is divided into three directions (Figure 12), namely, the status quo of CSR in developing countries (#2, #3, #4), and the research on problems and countermeasures in CSR management in developing countries (#0, #1, #5, #7. #9) and studies on CSR and stakeholders in developing countries (#6, #8).

#### 4.2.1 The research status of CSR in developing countries

Corporate social responsibility (CSR) has received increasing attention worldwide, but most research has focused on developed countries. Corporate social responsibility has been promoted in developing countries, but its development is different from that of developed countries due to different geographical, political and economic contexts. In 2018, Hoque et al, after analyzing relevant literature on corporate social responsibility in developed and developing countries, found that corporate managers did

not care about the real goal and function of corporate social responsibility, and more managers used corporate social responsibility practice as a strategic marketing, thus undermining the social welfare goal of sustainable development. Therefore, a clear and correct understanding of corporate social responsibility is crucial to the development of enterprises and the business environment (Hoque et al., 2018). In the analysis of CSR in specific developing countries, it is found that China's CSR implements four types of practices, which are related to employee rights, consumer issues, fair management and labor practices (Zhu & Zhang, 2015). There is a lack of a systematic, centralised and institutionalised approach to corporate social responsibility in Lebanon and the understanding and practice of corporate social responsibility in Lebanon is still based on the context of charitable action (Jamali & Mirshak, 2006). In developing countries, the development of small and medium-sized enterprises has been one of the key concerns of industry and academia. In particular, when multinational subsidiaries fulfill their corporate social responsibility, the most critical thing is the power exerted by the country and other key institutions. Building relationships with governments and other powerful non-governmental actors is critical to the long-term viability of businesses. (Beddewela & Fairbrass, 2015, Momin & Parker, 2013).

## 4.2.2 Research on problems and countermeasures of developing countries in CSR management

Corporate social responsibility in developing countries is still in its initial stage, and enterprises are still faced with many problems and difficulties in the actual implementation of social responsibility.

Firstly, the level and quality of CSR disclosure are generally low in developing countries. Belal & Owen took the development and subsequent suspension of the independent corporate social responsibility (CSR) report of a multinational subsidiary in Bangladesh as an example to show that national policies may lead to a rapid change from "trust" to "distrust" when the requirements of stakeholders are gradually unable to be met in the performance of CSR. This also better explains the main reasons why many enterprises reduce the disclosure of corporate social responsibility (Belal & Owen, 2015). In Indonesia, the level of voluntary disclosure is still low, simply to comply with government regulations, which is still considered a cost affecting the value of a company (Mahmudah et al., 2023). Soobaroyen et al examined the evolution and determinants of the extent and quality of corporate social responsibility (CSR) disclosure in a

developing country (Mauritius) and found that the quality of CSR disclosure information is low (Soobaroyen et al., 2022).

Secondly, lack of policies and management methods. Bux found that 'lack of resources',' lack of regulations and standards' and 'lack of policy incentives' were the most critical barriers to CSR implementation in Pakistan's manufacturing sector (Bux et al., 2020). The level of CSR action of smes often depends on the decisions of their managers and the value orientation of their entrepreneurs, and the younger the company, the less likely it is to participate in CSR. However, there is no essential difference between the theory and practice of CSR participation in developed countries (Badulescu et al., 2018).

Third, government policies have a greater impact. In many developing countries with a lack of transparency and high levels of corruption, the appointment, rather than election, of local government officials creates a hierarchy of upward dependence and a culture in which most officials express similar views and political alliances. The power relationships that exist among stakeholders in lucrative industries go beyond efforts to achieve "good governance" through voluntary community engagement (Smith et al., 2012). Pressure exerted by governments and external stakeholders has a considerable impact on promoting CSR disclosure at the corporate level, and board meetings have a positive impact on corporate social development (Alshbili et al., 2019).

In view of the above problems in this field, researchers have also put forward many corresponding countermeasures. The establishment of a clear corporate social responsibility committee and related management policies can effectively improve the level of CSR implementation. Taking a sample of multinational companies observed during 2003-2012, it is found that the level of CSR fulfillment is higher among multinational companies that adopt explicit CSR policies (Hoque et al., 2018). Board size (quality and quantity) and the presence of a board social responsibility subcommittee (quality) are positively correlated with CSR development, and when a company's board of directors has a subcommittee responsible for CSR, it is important to provide high-quality CSR development to stakeholders (Coffie et al., 2018). Understand the policies of country and government, and make good use of them to help firm fulfill CSR. Governments, as key stakeholders and implementing agencies, can play a moderating role to overcome these obstacles and take initiatives for the effective implementation of corporate social responsibility.

4.2.3 Stakeholder research in the field of CSR in developing countries Stakeholder theory is widely used in the field of CSR research. Academics are also exploring the links between different stakeholders (especially shareholders, employees and customers) in adopting corporate social responsibility (CSR) practices in developing countries. Javeed & Lefen collected data from the State Bank of Pakistan (SBP), the Securities and Exchange Commission of Pakistan (SECP), the Pakistan Stock Exchange (PSX) and annual corporate reports from 2008 to 2017. It is found that the interaction between management ownership and ownership concentration and CSR has a significant positive impact on corporate performance (Javeed & Lefen, 2019). Meanwhile, some scholars have demonstrated that there is a positive correlation between corporate social responsibility and financial performance (Javeed & Lefen, 2019; Akben-Selcuk, 2019). After conducting a questionnaire survey on 293 hospital employees, it is found that CSR has a direct impact on employees' behaviors (Deng et al., 2022), such as: Corporate social responsibility initiatives can not only directly improve employee well-being, but also improve employee positive emotional states by increasing organizational commitment and job satisfaction (Hayat & Afshari, 2022). The employeerelated corporate social responsibility (ERCSR) orientation of hotel organizations significantly reduces the turnover intention of employees (Xu et al., 2022). Corporate social responsibility has a long-term impact on customer behavior, such as customer loyalty (Raza et al., 2020). There is a significant positive correlation between restaurants' social responsibility efforts and customers' civic behavior responses (Ahmed et al., 2020). Banks must incorporate CSR into their long-term marketing plans to improve overall customer behavior, as banks' CSR activities lead to customer identification and co-creation (Raza et al., 2020). A sample analysis of 280 bank customers in Pakistan found no direct relationship between corporate social responsibility and customer loyalty, contradicting previous research in developed countries (Raza et al., 2020).

Through the analysis of the burst of research on keywords and cited articles, it is found that "stakeholder theory" and "voluntary disclosure" are the keywords favored by researchers at present. Most of the latest highly cited articles in this field focus on the research on CSR and stakeholders, especially the impact on employees and consumers. Therefore, in the third period, that is, the "outbreak period", the trend of CSR in developing countries showed a detailed trend, especially in the research on the relationship with various stakeholders and the research on the

independent disclosure of CSR by enterprises.

From the above research (Figure 13), it is found that the research fields related to corporate social responsibility and developing countries are diversified and have broad development prospects. In particular, clarify corporate social responsibility policies and management methods and the research of relationship between corporate social responsibility and stakeholders like employees and consumers among will be the future research hot point in this field.

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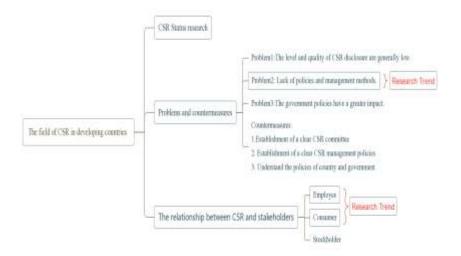


Figure 13. Map of Current situation and trend study

#### 4.3 Period division

By dividing keywords into time zones and combining the annual trend of publications, this study divides the research on CSR in developing countries into three periods. From 2006 to 2012 (initial period), research in this field mainly focused on the definition and classification of corporate social responsibility. From 2013 to 2017 (growth period), some scholars began to study specific methods such as strategy and management, which also contributed to the rapid development of this field. During this period, a large number of related keywords appeared. For example, performance, disclosure, strategy, management, impact. From 2018 to 2022 (burst period), by deepening sustainable development in various fields, the research on corporate social responsibility in developing countries presents a detailed state, combined with the Internet 2.0 era, puts forward the principles of corporate social responsibility communication and self-disclosure method.

#### 5.Limitations

In this study, CiteSpace software was used to analyze relevant literature on corporate social responsibility in developing countries. The WOS database is used because of its high quality, authoritative and scientific articles, however, it does not guarantee a comprehensive literature collection. Other databases, such as scopus, still include a large number of articles. In addition, the visualization process imposes a specific threshold setting that focuses primarily on the main aspects of the field, which leads to limitations in the content of the study.

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