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# A bibliometric analysis of the link between women leadership and corruption: A review of the literature from 2009 to 2023

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#### **Abstract**

The recent focus on women's leadership emphasizes the global movement towards gender equality in multiple sectors, underscoring the significance of inclusive governance and decision-making processes. Corruption continues to be a significant barrier to economic growth, social justice, and political stability. Women are underrepresented in leadership roles, occupying only 24% of parliamentary seats worldwide and 7.4% of CEO positions in Fortune 500 companies. This study aims to investigate the relationship between increased female leadership and the incidence of corruption. This study conducts a bibliometric analysis of 125 scholarly articles to examine the literature on the intersection of gender, leadership, and corruption from 2009 to 2023. The findings indicate a notable research gap, especially within the Global South, where African nations are inadequately represented in studies concerning corruption and leadership. Furthermore, the funding allocated for research in this area is insufficient, hindering the formulation of evidence-based policies. Current research primarily addresses political governance, education, and socioeconomic factors, while neglecting critical areas such as gender disparity, economic development, business ethics, violence, and organizational management concerning women's leadership and corruption. Empirical studies play a crucial role in informing policy development, bridging knowledge gaps, and directing future research efforts.

Keywords: Corruption, Economic development, Gender equality, Governance and ethics, Political representation, Women's leadership.

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**Authors' Contributions:** Both authors contributed equally to the conception and design of the study. Both authors have read and agreed to the published version of the manuscript.

**Transparency:** The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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#### 1. Introduction

The relationship between gender dynamics and corruption presents a complex challenge with significant implications for global societies. Recent scholarly focus has shifted towards analyzing the impact of gender on the perpetration and

experience of corrupt practices. This inquiry centers on the significant issue of corruption's impact on women and, in turn, the role of women in addressing corruption [1, 2].

Corruption, a widespread issue that appears in forms including bribery, embezzlement, and nepotism, imposes significant costs on economies, institutions, and individuals [3]. The corrosive effects erode trust in governance, distort resource allocation, and sustain inequality. In this context, it is essential to comprehend the specific impacts of corruption on women to promote inclusive and equitable societies [4].

Women are frequently more adversely impacted by corruption, encountering distinct challenges and vulnerabilities that arise from deep-rooted gender inequalities and societal norms. Discriminatory practices, restricted access to resources, and unequal involvement in decision-making processes can increase women's vulnerability to corruption and impede their capacity to obtain justice and redress [5, 6].

Women concurrently assume crucial roles in combating corruption, utilizing their positions as political leaders, activists, and grassroots organizers to advocate for transparency, accountability, and integrity [7, 8]. Amplifying women's voices and agency in anti-corruption initiatives is crucial for advancing sustainable development goals and fostering democratic governance [9].

This study examines the relationship between women and corruption levels, aiming to elucidate the complexities of this connection through a thorough bibliometric analysis. This research analyses publication volume and citation patterns, country contributions, funding sources, intellectual structures, and key concepts to provide insights into the evolving landscape of scholarship on women and corruption.

This investigation aims to enhance scholarly understanding and inform evidence-based policies and interventions that address gender disparities in corruption, promoting more inclusive and accountable societies. We aim to contribute to the discourse on gender, governance, and integrity through rigorous analysis and interdisciplinary inquiry, working towards a future that upholds women's rights and confronts corruption with determination and unity.

#### 1.1. Empirical Literature Review on Gender and Corruption

The relationship between gender dynamics and corruption presents a complex challenge with significant implications for global societies. Recent scholarly focus has increasingly examined the impact of gender on both the perpetration and experience of corrupt practices. This inquiry centers on a significant issue: the effects of corruption on women and, in turn, the contributions of women to the fight against corruption [1, 10, 11].

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This paper, therefore, reviews existing studies on women, leadership, and corruption to pinpoint gaps in knowledge and set the agenda for future studies. Specifically, the study aims to answer the following research questions.

- What is the volume and citation of publications on women's leadership and corruption levels from 2009 to 2023?
- Which countries have contributed the most to the knowledge base of women's leadership and corruption levels?
- What sponsors or funding bodies provide resources for research and publications on women's leadership and corruption levels?
- What is the intellectual structure of the knowledge base on women's leadership and corruption levels?
- What are the key concepts that have been explored on the topic of women's leadership and corruption levels, and how are they related?

### 2. Methodology

This study employed a bibliometric analysis in conjunction with content analysis to examine research on women and levels of corruption. Bibliometric analysis represents an innovative methodology employed across multiple disciplines, as evidenced by studies including Ellegaard [14], Donthu et al. [15], Gaviria-Marin et al. [16], and Atambo and Nyongesa [17].

The study utilized the Scopus database to obtain data. Scopus was selected due to its extensive journal coverage and inclusion of publications addressing women and corruption [18, 19].

The search terms "women," "protected areas," and "corruption level" were employed to direct the search within the titles, abstracts, and keywords of documents in Scopus. The search was restricted to studies conducted between January 1, 2009, and December 31, 2023, to identify current research. This aimed to facilitate the examination of current issues within the discipline. The initial search yielded 175 documents. The search was subsequently limited to journal articles published exclusively in English, resulting in the retention of 130 articles at the final publishing stage. This measure was implemented to guarantee the inclusion of solely complete and peer-reviewed publications. An exclusion criterion was applied, limiting consideration to articles written in English. One hundred twenty-five articles advanced to the subsequent stage. Additional screening was performed using Vosviewer, focusing on articles that contained four keywords. Seventy-five keywords met the established threshold. A subsequent screening was conducted to exclude terms that were not pertinent to the primary keywords. Thirty-five keywords were selected for analysis.

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The last search for the study was run on the 27<sup>th</sup> of August 2023. The Boolean search query used for the study was: Your query: (TITLE-ABS-KEY (women and "corruption levels") AND PUBYEAR > 2009 AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (LANGUAGE, "English")).

#### 2.1. The Document Search and Screening Process

## Initial Identification (2009-2023)

Scopus database search using key words and refined by date-175 documents

## Screening and Eligibility by Predefined Criteria

Exclusion of documents that are not final journals articles-130 documents

Exclusion of documents that are not in English-125 documents

## Screening for Relevance and removal of duplicates on Vosviewer

Threshold of 4 keywords per article-75 met threshold

Further screening to eliminate words not related to the main keywords-35

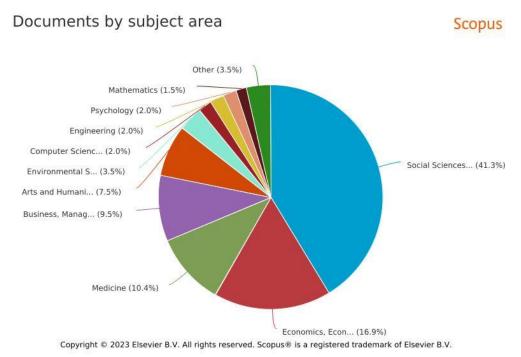
#### Inclusion

Final documents for bibliometric analysis- 125 documents

**Figure 1.** Identification, Screening and Eligibility Criteria Flowchart.

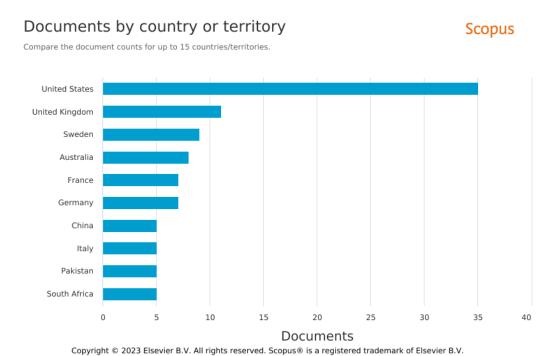
A bibliometric analysis of the remaining 125 documents was performed utilizing VOSviewer software for similarity visualization. VOSviewer is a software tool designed for the creation, visualization, exploration, and analysis of maps derived from network data [19-22]. Co-occurrence analyses were conducted. A descriptive analysis of background information, including the number of publications and citations from Scopus and VOSviewer output, was conducted using Microsoft Excel. The results were presented in the form of tables, figures, and network maps. The network maps consist of circles interconnected by lines. The subject of analysis is represented as circles. Larger circles indicate a higher frequency of occurrence of the analyzed item. A thicker line between two circles indicates a stronger connection between the items [23].

#### 3. Results and Discussions



**Figure 2.** Documents by subject area from Scopus Abstracts.

The figure indicates that the majority of publications on women and corruption are found in the social sciences (41.3%), followed by economics (16.9%), medicine (10.4%), business management (9.5%), arts and humanities (7.5%), environmental science (3.5%), computer science (2%), engineering (2%), psychology (2%), mathematics (1.5%), and other areas (3.5%). Consequently, journals in the social sciences, economics, and medicine are at the forefront of publishing papers related to the subject area of this study.



**Figure 3.**Documents by Country or Territory from Scopus Abstracts.

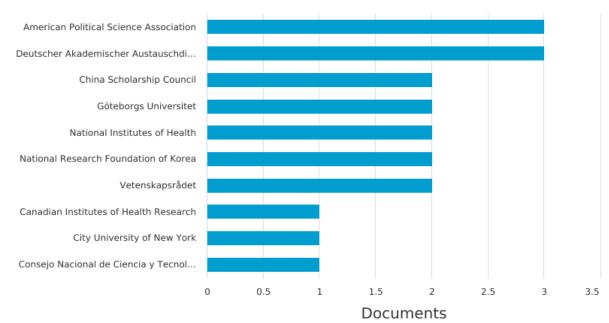
Figure 3 indicates that the United States has the highest number of publications concerning women and corruption levels. The United States has 35 papers, while the United Kingdom has 13 papers. Sweden ranks third with nine published papers. Australia has eight papers, while France and Germany each have seven. At the lower end, China, Italy, Pakistan, and South Africa each have five papers. It is observed that in European countries, a higher number of women have occupied leadership

positions, which serves as evidence of reduced corruption under their governance. Notably, South Africa is the only African country with scholarly articles addressing the intersection of women and corruption. This provides an opportunity for researchers to conduct further studies on women and levels of corruption.

## Documents by funding sponsor

Scopus

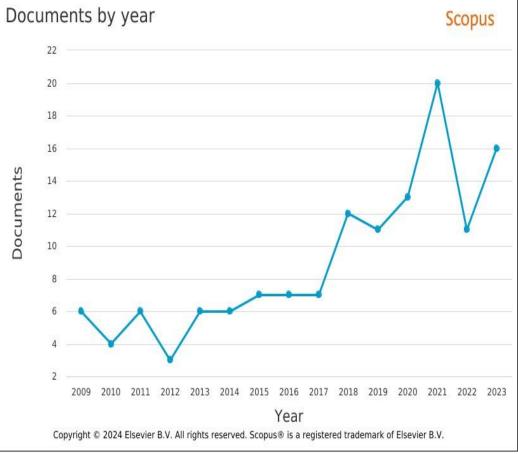
Compare the document counts for up to 15 funding sponsors.



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**Figure 4.**Documents by Funding Sponsor from Scopus Abstracts.

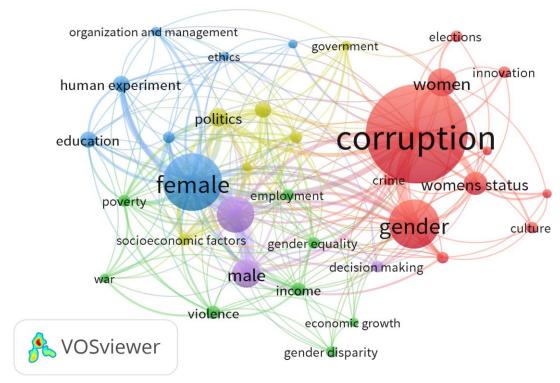
From Figure 4 above, it's noted that the American Political Science Association and Deutscher Akademischer Austauschdienst have sponsored research and publication of 3 papers each. While China Scholarship Council, Goteborg Universitet, National Institute of Health, National Research Foundation of Korea, and Vetenskapsrådet had sponsored 2 papers each. At the bottom of the list, we have the Canadian Institute of Health Research, City University of New York, and Consejo Nacional de Ciencia y Tecnología sponsored 1 paper each. The findings paint a not-so-good picture, that not more institutions are sponsoring research on women and corruption levels. Despite this, the findings help research on where they can search for grants to do research in this area.



**Figure 5.**Documents by Year of Publication from Scopus Abstracts.

Figure 5 indicates a rising trend in the number of publications concerning women and corruption since 2012, peaking in 2021 with a total of 20 papers published. In 2021, the number of published papers decreased to 11, likely due to the suspension of research activities caused by COVID-19. However, there has been a resurgence, with 16 papers published in 2023.

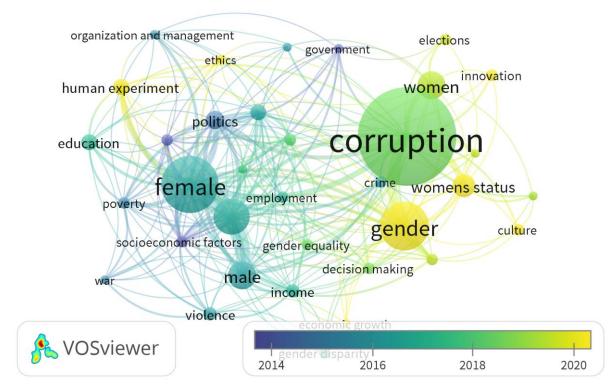
#### 3.1. Network Visualization



**Figure 6.**Vosviewer Network Visualization of the Keywords from the Abstracts Key Research Themes on Women and Corruption Levels.

A co-occurrence analysis was conducted to investigate the principal concepts related to the topic of Women and Corruption Levels. The analysis focused on keywords that met a minimum threshold of four occurrences, excluding those unrelated to the subject matter. The analysis yielded 35 keywords and 5 clusters, illustrated through a network visualization Figure 6 and an overlay visualization (Figure 7). Network visualization illustrated emerging and current themes, whereas overlay visualization depicted trends over time. The identified five clusters are: Corruption and gender, Female, Politics, Employment, and Economic growth. The networks depicted in Figure 6 illustrate the relationships represented in various colors. A network illustrates the co-occurrence of keywords in the studies. The proximity of links correlates with an increase in the number of studies conducted on them. The distance of the links correlates with a decrease in the amount of research conducted on them. The unexamined areas encompass: the intersection of women and corruption concerning gender disparity, economic growth, organizational management, governance, education, and violence. This aligns with Jha et al. [24], who similarly identified these as emerging research frontiers for scholars.

#### 3.2. Overlay Visualization



**Figure 7.** Vosviewer Overlay Visualization of the Keywords from the Abstracts.

Overlay visualization illustrates temporal trends. The color yellow indicates recent studies conducted from 2019 onwards, encompassing topics such as gender, women's status, culture, decision-making, and ethics. The color green represents studies conducted in 2018, which encompass corruption, crime decision-making, and women. The third color, blue, signifies the distant past of 2015-2016, during which studies focused on female employment, income, violence, and education. The final color is purple, representing studies conducted prior to 2014 in the fields of politics, socioeconomic factors, war, and government.

Table 1.

	ID	Keyword	Occurrences	Total Link Strength
1.	10	Adult	15	73
2. 3.	143	Corruption	46	72
3.	150	Crime	4	16
4. 5.	161	Culture	4	6
5.	164	Decision making	4	13
6.	174	Developing Countries	6	37
7.	175	Developing Country	4	29
8.	198	Economic Growth	3	7
9.	203	Education	6	19
10.	204	Educational Status	4	27
11.	206	Elections	4	5
12.	217	Employment	4	15
13.	230	Ethics	3	15
14.	256	Female	25	99
15.	292	Gender	21	44
16.	296	Gender Disparity	4	9
17.	298	Gender Equality	4	15
18.	306	Gender Role	3	7
19.	317	Government	3	17
20.	373	Human Experiment	6	23
21.	391	Income	5	27
22.	406	Innovation	4	5
23.	495	Male	11	52
24.	587	Organization and Management	3	14
25.	600	Parliament	3	8
26.	610	Perception	4	20
27.	649	Politics	7	39
28.	654	Poverty	4	31
29.	801	Socioeconomic Factors	4	33
30.	858	Unemployment	3	8
31.	868	Violence	5	19
32.	873	War	3	13
33.	881	Women	11	19
34.	892	Women's Rights	3	20
35.	895	Women's Status	9	22

Source: Scopus Analysis (2023).

The table indicates that "corruption" has the highest frequency of occurrence at 46, followed by "female" at 25, and "gender" at 21. The high frequency indicates that these keywords are prevalent in the literature, extensively examined in numerous studies, and significant in the field. The keywords with the fewest occurrences of three are: economic growth, ethics, gender roles, government, organization and management, unemployment, war, and women's rights. The minimal occurrence suggests that existing literature has inadequately addressed these areas, indicating them as potential avenues for future scholarly research.

In bibliometric analysis, a link represents a co-occurrence, exemplified in this case by the connection between two keywords [25]. The Vosviewer manual indicates that strength is denoted by a positive numerical value, with higher values reflecting a greater number of publications in which the two words co-occur. Table 1 indicates that the areas of research with significant link strength, characterized by high numerical values and frequent occurrence in various studies, encompass adult issues, corruption, female gender politics, and socioeconomic factors, among others. The link strength indicates areas for researchers to focus on due to existing gaps and limited literature. These individuals exhibit reduced link strength.

#### 4. Themes

The findings from the 125 papers that were retrieved from Scopus suggested the presence of several themes, including women and their status, women and ethics, women and elections, women and innovation, and finally, women and gender. According to the findings of the survey, the topics that were discussed were classified into the following five categories: corruption and gender, female, politics, employment, and economic growth.

#### 5. Conclusion

This bibliometric study offers significant insights into the research landscape concerning women and corruption levels from 2009 to 2023. Significant findings have emerged from a rigorous analysis of publication volume, citation patterns, country contributions, funding sources, intellectual structure, and key concepts.

The study indicated a rising interest in the relationship between women and corruption, as demonstrated by the increasing number of publications over time. The United States and United Kingdom lead in publications, underscoring the significance of gender dynamics in comprehending and addressing corruption.

Secondly, the research identified countries that have significantly contributed to the knowledge base regarding women and corruption levels. Analyzing the geographical distribution of research can enhance collaborative initiatives and focused interventions in areas where corruption disproportionately impacts women. Africa has been excluded from these efforts; therefore, additional studies should originate from the region.

Thirdly, the examination of funding sources revealed the organizations and institutions that are advancing research in this field. Identifying these stakeholders can enhance ongoing support and investment in future research. The primary organizations that provide funding for research in this field are the American Political Science Association and the Deutscher Akademischer Austauschdienst.

The analysis of the intellectual structure of the knowledge base revealed the interconnectedness of various concepts and themes concerning women and corruption levels. This comprehensive perspective revealed gaps, trends, and emerging research areas concerning women and corruption in relation to gender disparity, economic growth, organizational management, government, and education.

The identification and exploration of key concepts highlighted the multidimensionality of the topic, encompassing gender disparities in corruption experiences and the influence of institutional factors on women's involvement in corrupt practices. Grasping these nuances is crucial for formulating effective policies and interventions.

This bibliometric study establishes a basis for subsequent research and initiatives focused on the intricate relationship between women and corruption. This analysis elucidates trends, identifies gaps, and emphasizes key focus areas, thereby enhancing the understanding of this critical issue and informing evidence-based strategies for advancing gender equality and integrity in governance.

#### 6. Limitations of the Study and Future Research

This research focused exclusively on journal articles indexed in Scopus from the last ten years. Future bibliometric studies ought to utilize multiple databases to encompass a broader scope, as this study was limited to Scopus. Furthermore, it is essential to conduct additional methodologies, such as systematic reviews and empirical studies, on the topic to guide policy and practice.

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