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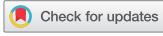
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ARTICLE

Corruption in economics: a bibliometric analysis and research agenda

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ABSTRACT

We conducted a bibliometric analysis of the literature on corruption in the discipline of economics (4,488 articles) over the past 51 years between 1968–2019. Through this methodology, we identified seven research streams: (1) the economic framework of crime and corruption, (2) the legal institutions and corruption, (3) the effect of corruption on aspects of national economics, (4) the combating and monitoring of corruption, (5) the determinants of corruption, (6) political institutions and corruption, and (7) the effect of corruption on firms. In addition to these research clusters, we also identified the key journals, articles, countries, institutions, authors, data sources, measurements, theoretical frameworks, and networks dealing with this issue. Finally, we suggested 20 future research questions.

I. Introduction

Economists traditionally view corruption as a misuse of power for private gain (Shleifer and Vishny 1993; Treisman 2000). Corruption has been blamed for the failure of policy in some developing countries (Treisman 2000) and found to reduce investment, economic growth, and development (Mauro 1995; Bardhan 2017). As a result, academic researchers, controlling bodies (e.g., the IMF,[1] OECD,[2] and World Bank) and nations (e.g., America's FCPA of 1977[3] and the OECD committee on bribery 1989[4]) started reviewing and analysing the pathology of corruption and crime in the economy and society. Consequently, a substantial but scattered body of literature on corruption in economics has developed. We synthesized 51 years of research (between 1968 and 2019) (see Figure 1) to provide more clarity on the research clusters and research directions in the field.

To explore the literature, we conducted a bibliometric citation analysis of 4,488 articles on corruption in economics (Yuret 2014, 2018; Rath and Wohlrabe 2015a; Zupic and Čater 2015; Sommer and Wohlrabe 2016; Meyer and Wohlrabe 2017; Bahoo, Alon, and Paltrinieri 2019; Bahoo 2020). Our analysis contributes to the literature by answering the following questions: (1) What are the leading research streams in the literature on corruption in economics? (2) What are the key journals, articles, countries, institutions, authors, data sources, measurements, theoretical frameworks, and networks in this field? (3) What are the future research directions?

II. Method

Our method consists of two techniques. The first is bibliometric analysis (Broadus 1987; Mingers and Leydesdorff 2015; Zupic and Čater 2015; Bahoo, Alon, and Paltrinieri 2020). The second is content analysis (Gaur and Kumar 2018; Ahmed, Bahoo, and Ayub 2019; Ahmed, Bahoo, Aslam, and Qureshi2020). We utilized these techniques to conduct five analyses: (1) citation analysis, (2) co-citation analysis, (3) cartography analysis, (4) citation network analysis, and (5) content analysis. Our software tools consisted of the HistCite and VOSviewer software programmes.

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[1]IMF: International Monetary Fund.
[2]OECD: Organization of Economic Co-operation and Development.
[3]America's FCPA of 1977: The Foreign Corrupt Practice Act of 1977. Retrieved from https://www.justice.gov/criminal-fraud/foreign-corrupt-practices-act.
[4]OECD Committee on Bribery 1989: Retrieved from https://www.oecd.org/daf/anti-bribery/38865251.pdf.
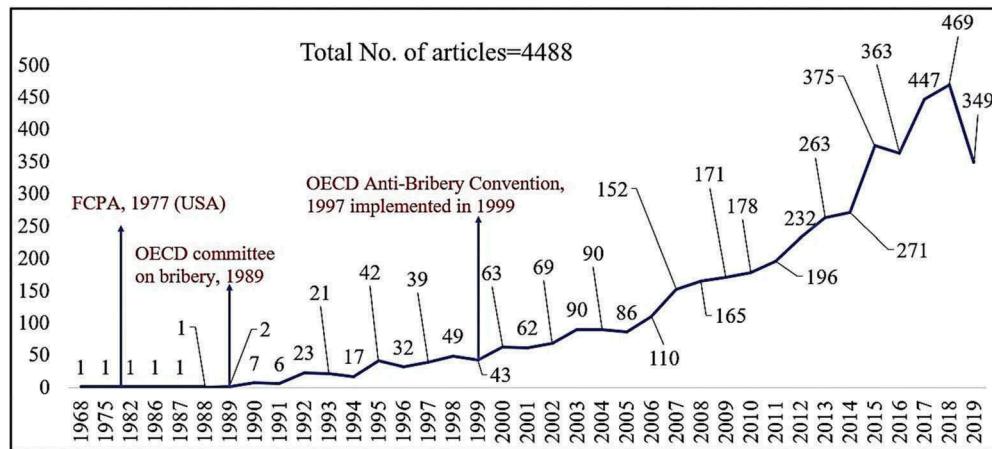
Figure 1. Publications growth between 1968 (1ˢᵗ paper) to 2019 of topic: Corruption in Economics.

Using 18 keywords for corruption that included combinations of the words 'economics,' 'economy,' and 'economic,' we searched the ISI Web of Knowledge (WOK) database for articles on the topic. We selected these words using a systematic, three-step process outlined in Table A1. Our first search resulted in 5,671 articles. In the next step, we excluded irrelevant articles by reviewing titles and abstracts. Our final set included 4,488 articles published between 1968 and 2019 dealing with corruption in economics. Figure 1, which illustrates the growth in articles per year on the topic, shows

a sharp growth trend beginning in the 1990 s after the Western world passed anti-corruption laws and formed an OECD committee on bribery.

III. Results

Influential aspects of the literature

Key journals and networks

Three hundred seventy-two journals published the 4,488 articles in our sample. Using HistCite, we ranked the top 11 journals that had the largest
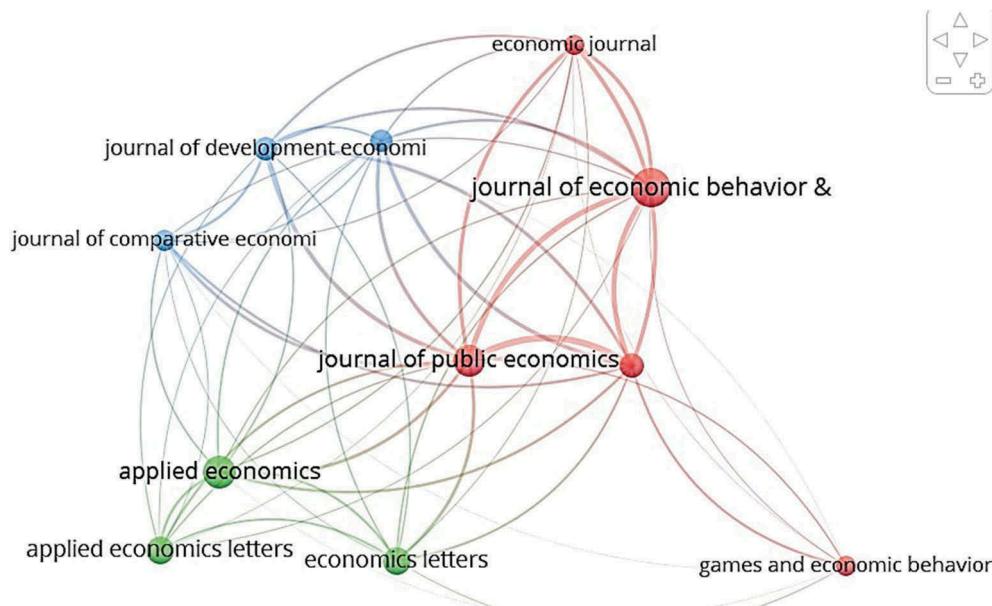
Figure 2. Citation network among journals generated by VOSviewer.

number of citation references and articles published on the topic (see Table A2). In both rankings, the journals *Applied Economics* and *Applied Economics Letters* emerged as the most influential and provided quality research on corruption in economics. Furthermore, using VOSviwer we determined that *Applied Economics Letters* was also among the top-cited journal networks (see Figure 2).

Influential countries, institutions, authors, articles, and networks

Using these two software programs, we ranked the most influential countries, institutions, authors, and networks in the field (see Table A2). With regard to authors, 6,828 authors wrote the 4,488 articles in our sample. Figure 3 illustrates the top 11 authors and networks among them, which is useful for policy-makers and prospective researchers for future projects. With regard to countries and institutions, most studies came from Western countries such as the US and Europe, reflecting the serious desire to overcome the problem of corruption and crime. China is also emerging as a major contributor.

Our sample of 4,488 articles had 10,629 total local citations (TLC) and 97319 total global citations (TGC). We also divided the top 11 trending articles from 1968 to 2019 into two categories based on TLC/t (total local citations per year) and TGC/t (total global citations per year) (see Table A2).

Keyword networks to identify research areas

The keywords assigned by authors or the ISI WOK database to a research article represent the field of study and directions of the literature. Therefore, using VOSviwer we created keyword networks based on the repetition of words, which is called cartography analysis. Figure 4 depicts the resulting networks and identifies the associated research areas. As the figure indicates, the most repeated keywords in the literature are *corruption, crime, economy, economic growth, deterrence, punishment, law, institutions, models, determinants, causes*, and *consequences*. On the other hand, the keywords that appeared least frequently are *firm performance, firm, earning management, political institutions, politics*. The findings from Figure 4 confirm that two critical areas of research–*political institutions and corruption*, and the *effect of corruption on firms*–are underdeveloped and neglected. These two areas of research contain knowledge gaps that suggest the need for further investigation.

Citation mapping: identification of research streams, trends, and synthesis

We used bibliometric co-citation analysis (Cainelli et al. 2012; Rath and Wohlrabe 2015b; Aria and Cuccurullo 2017; Paltrinieri et al. 2019) and content analysis (Bahoo et al. 2018; Gaur and Kumar 2018) to identify the research streams in the literature on corruption in economics. In the first step, bibliometrics co-citation analysis identified the 70 top-cited papers, resulting in the citation map depicted in Figure 5. Second, we applied traditional content analysis to these 70 articles to understand the content (Bahoo, Hassan, Paltrinieri, and Khan 2019). This quantitative and qualitative process resulted in the following seven research streams in the literature: (1) the economic framework of crime and corruption, (2) the legal institutions and corruption, (3) the effect of corruption on aspects of national economics, (4) the combating and monitoring of corruption, (5) the determinants of corruption, (6) political institutions and corruption,
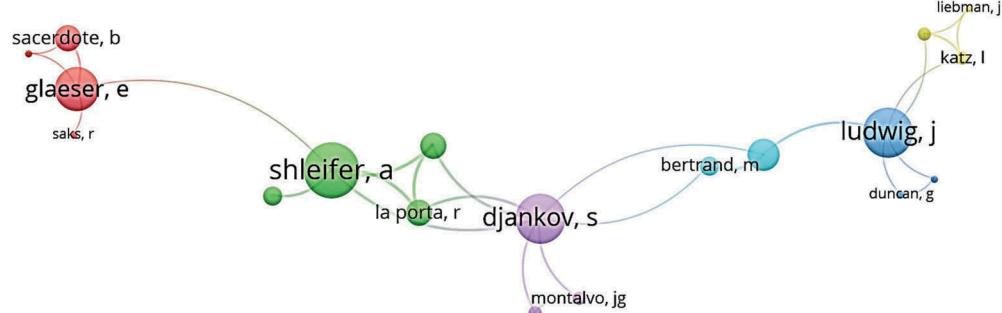

Figure 3. Citation network among authors generated by VOSviwer.
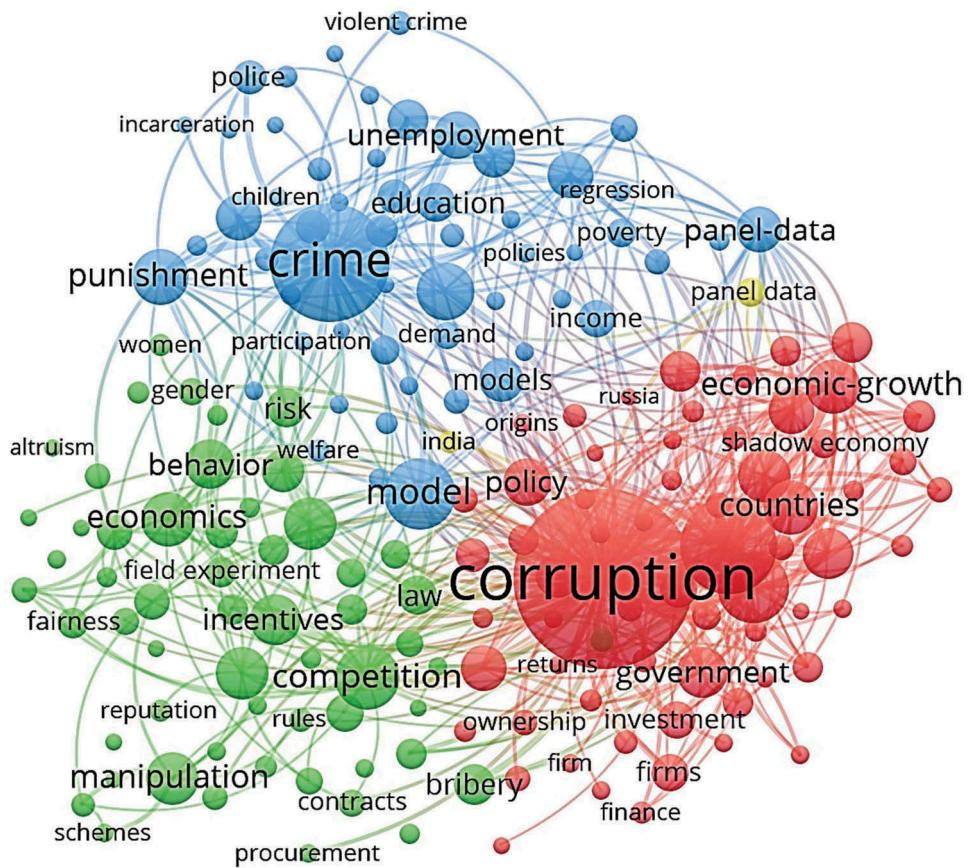
Figure 4. Keyword analysis to identify research areas in the literature through cartography analysis using VOSviwer.

and (7) the effect of corruption on firms. The 70 key papers are listed under each stream in Table A3.

These seven research streams are interconnected. The key frameworks of corruption and crime (Becker 1968; Rose-Ackerman 1975; Olken 2009) are helpful in explaining the effect of corruption on the economy (Macrae 1982; Mauro 1995; Fisman and Svensson 2007), businesses and firms (Shleifer and Vishny 1994; Dove 2017). Nations and controlling bodies have established laws and legal institutions (Tirole 1996; Devaraj and Patel 2017) to combat financial and political corruption (Alam 1989; Goel and Saunoris 2017) by identifying the key determinants of corruption (Dey 1989; Shleifer and Vishny 1993; Lee and Holoviak 2006).

We also reviewed the titles and abstracts of our sample to create a publication trend in each research stream during the last 51 years. Figure 6 shows that the first (the economic framework of crime and corruption) and third (the effect of corruption on aspects of national economics) research streams, which economists have been exploring extensively since 1990, peaked in 2015. The research on the second stream (legal institutions and corruption) has remained constant because researchers are concerned about the implementation of laws and regulations. The fourth (the combating and monitoring of corruption) and fifth (the determinants of corruption) streams are at the regeneration stage, as researchers are revisiting and exploring the measures and determinants of corruption and crime in this era of globalization and internationalization. However, the research on the sixth (political institutions and corruption) and seventh (the effect of corruption on firms) streams is underdeveloped and comparatively negelected. The keyword analysis in Figure 4 also confirmed the underdevelopment of the sixth and seventh research streams. Therefore, in Section 4, we recommend future research directions in these two areas.

Finally, we also summarized the data sources, measurements, and theoretical frameworks used in the 70 most influential papers in Table A4. This listing and summary of the critical aspects of

these 70 papers should be helpful to researchers in producing additional quality research on the topic.

IV. Future research agenda

We used bibliometric citation and content analyses to identify future agendas (Bahoo 2020). First, we created a citation map (Figure 5) using the top 70 papers. Second, through HistCite we determined the trending (between 2009–2019) and most influential articles and reviewed them. Third, we analysed recent articles published in 2017, 2018, and 2019 to avoid citation bias. Fourth, we used the idea of putting 'old wine in new bottles' (Dunning, Kim, and Park 2008, 158) to re-explore past frameworks, theories, models, and inferences concerning corruption and crime in developing, emerging, and developed countries. Finally, we converted these research
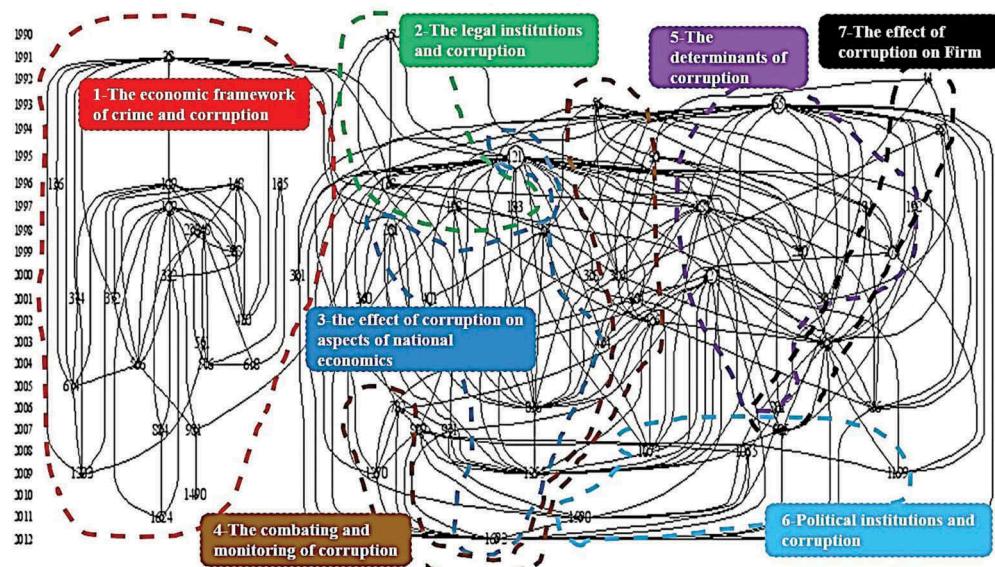
Figure 5. Research streams in the literature created by HistCite. *Top 70 influential articles with a minimum of 20 TLCs, resulting in the seven research streams listed in Table A3.
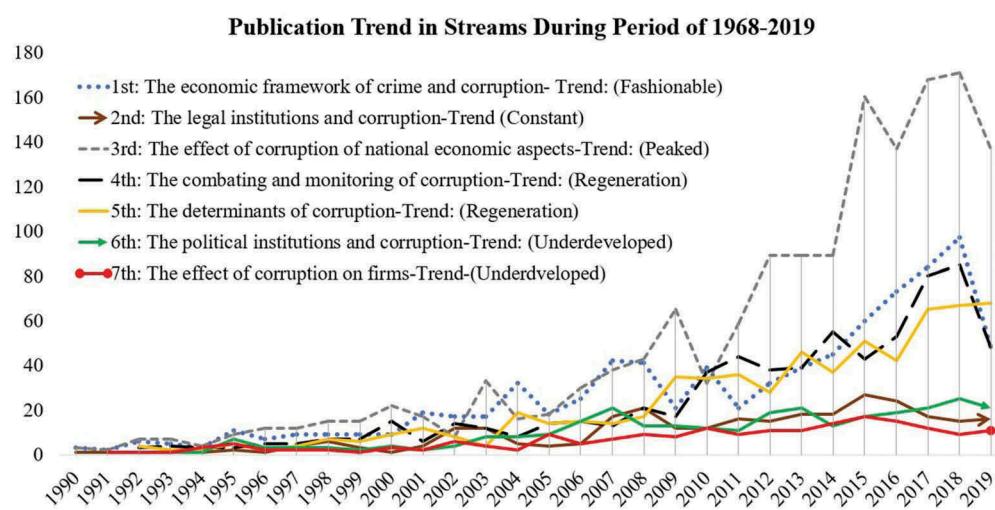
Figure 6. Publication trends in the seven research streams between 1968 and 2019. *However, more extensive research started on the topic in the 1990 s.

gaps into future research questions under each research stream. The results appear in Table A5.

V. Conclusion

Corruption is a significant challenge for all societies and has a negative effect on their economic growth and development. It is one of the main reasons for the slow growth of developing countries. It exists in several forms: financial, non-financial, public, private, petty, and grand. It also occurs at the upper, middle, and lower levels of society in developed as well as underdeveloped countries. Due to globalization and the digitalization of the world economy, it has become an even more complex phenomenon. Thus, we must establish anti-corruption systems and revisit economic frameworks and models of corruption and crime. In addition, political corruption is a critical challenge for countries at all levels of development. Hence, it is essential to understand and explore the economic model of crime and corruption and its relationship to legal institutions, political institutions, and firms. These goals motivated our desire to summarize the literature on corruption in economics. While we used the full ISI WOK database, we recommend that future bibliometric studies on the topic use Scopus and Google Scholar database to validate our findings.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Table A1. Key methodological concepts and sample section process.

(i)–Key bibliometric terms used in the method (Kim and McMillan 2008)

Terms	Explanation/Details
Co-Citation Analysis	This term means that the same content and topics in articles are citing each other.
Cartography Analysis	Also called keyword analysis, it is based on the repetition of keywords in articles.
HistCite Software	This programme is built to deal with the bibliometric data of ISI WOK. It accepts citation data as inputs and provides multiple outputs.
VOSviewer Software	Another program that accepts ISI WOK bibliometric data and gives multiple outputs.

(ii)–HistCite software key output patterns (HistCite Glossary 2018)

Pattern	Explanation/Details
P_{CREC}	It shows the number of articles published on the topic: Corruption in Economics.
TLC	Total Local Citations: Denotes the number of times an article is cited by others in the sample literature.
TGC	Total Global Citations: Denotes the citations of an article based on the full ISI WOK count. An example is Becker (1968) in Table A3, which has the largest number of global citations in the ISI WOK).
TLC/t	Total Local Citations Per Year: Calculated as the TLC divided by time (i.e., Mauro 1995).
TGC/t	Total Global Citations Per Year: Represents the average citations per year (i.e., Becker 1968).
TLCe	Total Local Citations indicate the number of citations an article received during the last three years at the end of the period of the study. In our case, that was between January 2016 and December 2019.
TLCR	The total local cited references indicate how many times the references of the article or journal were cited by other articles in our sample of 4,488 articles.

(iii)– Sample selection process for bibliometric analysis (Bahoo, Alon, and Paltrinieri 2019)

Steps	Explanations/Details
Database for citation data	i. ISI Web of Knowledge (ISI WOK) ii. Available from 1945 and containing high-quality journals.
Keyword selection for literature in the database	i.18 keywords for corruption: 'Corruption, Bribery, Bribe, Fraud, Crime, Criminal, Abuse, Manipulation, Extortion, Misconduct, Misrepresentation, Wrongdoing, Falsification, Criminal, Manipulating, Graft, Degradation, and Rent-Seeking.' ii. Corruption keywords are searched in the database in combination with the words 'Economics, Economic, and Economy.'
Keyword selection criteria	i. First step: Content analysis of several papers on corruption in economics to identify keywords. ii. Second step: Create synonyms for corruption. iii. Third step: Search ISI WOK using these synonyms combined with 'Economics, Economic, and Economy.'
Key filters applied	(i) Article category: Economics. (ii) Search filters: Topic (Search keywords in title, abstract, or authors' keywords). (iii) Paper type and language: Articles and English. (iv) Period of search: 1945 to December 2019 (1st paper published in 1968).
Initial Sample	*5,671*
Final Sample for Bibliometric Analysis (Screening of irrelevant and overlapping articles by reading titles and abstracts).	*4,488*

Note: The table shows information about key bibliometric terms, HistCite software output patterns, and sample selection process for analysis.

Table A2. Influential aspects of the literature.

Rank	Influential Journals				Influential Countries		Influential Institutions		Influential and Trending Articles				Influential Authors	
	Name of Journal[1]	P_CREC	Name of Journal[2]	TLCR	Country[3]	P_CREC	Institution[4]	P_CREC	Articles[5]	TLC/t	Articles[6]	TGC/t	Authors[7]	TGC
1	Journal of Economic Behaviour & Organization	233	Journal of Economic Behaviour & Organization	638	USA	1626	NBER[8]	175	(Mauro 1995)	17.92	(Becker 1968)	191.46	Gary S Becker[a]	18,748
2	Applied Economics	171	Journal of Public Economics	565	UK	492	Harvard Univ	105	(Shleifer and Vishny 1993)	12.41	(Acemoglu, Johnson, and Robinson 2012)	171.95	Susan Rose-Ackerman[b]	8,032
3	Journal of Public Economics	169	Applied Economics	405	Germany	376	World Bank	85	(Treisman 2000)	10.7	(Mauro 1995)	100.8	Andrei Shleifer[c]	5,296
4	Applied Economics Letters	134	Journal of Development Economics	367	Italy	334	University of Chicago	83	(Bardhan, 1997)	8.83	(Bertrand and Mullainathan 2004)	100.8	Simon Johnson[d]	4,153
5	Economics Letters	131	Journal of Comparative Economics	320	Australia	204	MIT[9]	65	(Acemoglu, Johnson, and Robinson 2012)	7.79	(Faccio 2006)	68.14	Daron Acemoglu[e]	4,024
6	American Economic Review	113	Economic Inquiry	316	Peoples R China	203	University of Pennsylvania	53	(Olken 2007)	6.31	(Djankov et al. 2003)	66.72	James. A Robinson[f]	3,289
7	Journal of Development Economics	100	Economic Modelling	285	Canada	198	University of California Berkeley	52	(Ades & Tella)	6.1	(Treisman 2000)	62.65	Paolo Mauro[g]	2,930
8	Economic Inquiry	95	American Economic Review	258	France	193	IZA-institute of labour Eco	51	(Olken and Pande 2012)	5.63	(Shleifer and Vishny 1993)	57.7	Robert W. Vishny[h]	2,548
9	Journal of Comparative Economics	90	European Economic Review	258	Spain	187	Stanford University	48	(Svensson 2003)	5.29	(Van der Ploeg 2011)	52.89	Simeon Djankov[i]	2,233
10	Economic Journal	83	Economic Journal	233	Netherland	150	CEPR[10]	47	(SimeonDjankov et al. 2003)	5	(Engel 2011)	48.33	Steven D. Levitt[j]	2,227
11	Games and Economic Behaviour	83	Applied Economics Letters	204	Ukraine	110	University of Michigan	45	(Ferraz and Finan 2008)	4.83	(Mian and Khwaja 2004)	41.27	Edward L. Glaeser[k]	2,023

Note: The table identifies the most influential journals, countries, institutions, key articles/topics, and authors. *1,3 and 4 = sorted based on TLC/t and TGL/t. 2 = sorted based on TLCR = Total local cited references denote the number of cited references of a journal in our sample of study 4488). 5 &6 are sorted based on TGC; 7 sorted based P_{CREC}; [8]NBER = National Bureau of Economic Research, [9]CEPR = Centre of Economic Policy Research, [10]MIT = Massachusetts Institute of Technology. *Influential authors affiliations: a = Colombia University, b = Yale University, c = Harvard University, d = MIT, e = MIT, f = University of Chicago, g = IMF, h = University of Chicago, i = World Bank Group, j = University of Chicago, k = Harvard University

Table A3. Key papers that create a citation map of the literature.

Stream	Stream title	Key articles in each stream
1st	The economic framework of crime and corruption	(Becker 1968), (Rose-Ackerman 1975), (Andvig and Moene 1990), (Sah 1991), (Basu, Bhattacharya, and Mishra 1992), (Levitt 1995a), (Levitt 1995b), (Ehrlich 1996), (Saha and Poole 2000), (Machin and Meghir 2004), (Imai, Katayama, and Krishna 2006), (Baltagi 2006), (Fisman and Miguel 2007), (Olken 2009), (Barr and Serra 2010), (Xu and Veld 2019), (Shleifer and Vishny 1993).
2nd	The legal institutions and corruption	(Andvig and Moene 1990), (Grogger 1995), (Tirole 1996), (Keefer and Knack 1997) (Banerjee 1997), (Polinsky and Shavell 2001), (Devaraj and Patel 2017), (Li and Long 2017), (Li, Alon, and Wu 2017).
3rd	The effect of corruption of aspects of national economics	(Macrae 1982), (Mauro 1995), (Mauro 1998), (Acemoglu and Verdier 1998), (Witt, Clarke, and Fielding 1998), (Friedman et al. 1999), (Mo 2001), (Lambsdorff 2003), (Pellegrini and Gerlagh 2004), (Olken 2006), (Fisman and Svensson 2007), (Olken and Pande 2012), (Franses and Groot 2015), (Alon, Li, and Wu 2016),
4th	The combating and monitoring of corruption	(Lui 1986), (Besley and Mclaren 1993), (Mookherjee and Png 1995), (Harel and Segal 1999), (Rauch and Evans 2000), (May, Pyle, and Sommers 2002), (Olken 2007), (Ferraz and Finan 2008), (Olken 2009), (Meghir, Palme, and Schnabel 2012), (Bardhan 2017).
5th	The determinants of corruption	(Cadot 1987), (Dey 1989), (Des and Tella 1997), (Hindriks, Keen, and Muthoo 1999), (Ades and Di Tella 1999), (Treisman 2000), (Svensson, 2000), (Polinsky and Shavell 2001), (Swamy et al. 2001), (Knack 2001), (Donohue and Levitt 2001), (Duggan 2001), (Levitt 2004), (Trawick and Howsen 2006), (Lee and Holoviak 2006), (Glaeser and Saks 2006).
6th	Political institutions and corruption	(Alam 1989), (Aidt, Dutta, and Sena 2008), (Fan, Lin, and Treisman 2009), (Ferraz and Finan 2011), (Goel and Saunoris 2017), (Jiménez and Alon 2018), (Alon and Herbert 2009), (Jimenez et al. 2017).
7th	The effect of corruption on firms	(Shleifer and Vishny 1994), (Acemoglu & Verdier, 2000), (SimeonDjankov et al. 2003), (Svensson 2003), (Faccio 2006), (Goel, Budak, and Rajh 2014), (Beltrán 2015), (Dove 2017).

Note: The table shows the 70 top-cited papers that create the citation map in Figure 5. *Complete reference details of cited papers are provided in Appendix B.

Table A4. Summary of data sources, methods, and theoretical frameworks.

Measurement of Corruption	Date Source	References
(i)-Data Sources		
Corruption index	Business International (BI)-The Economist Intelligence Unit	(Mauro 1995), (Ades and Di Tella 1999), (Rauch and Evans 2000), (Treisman 2000).
Corruption index	Peter Neumann Collections in 1994.	Des and Tella 1997
Corruption Perception Index	Transparency International (TI)	(Treisman 2000), (Swamy et al., 2001), (Mo 2001), (SimeonDjankov et al. 2003), (Lambsdorff 2003), (Pellegrini and Gerlagh 2004), (Aidt, Dutta, and Sena 2008).
Corruption Index	International Country Risk Guide	(Mauro 1998), (Rauch and Evans 2000), (Friedman et al. 1999), (Swamy et al., 2001), (Faccio 2006), (Knack 2001).
Red Tape Index	Business and Environmental Risk Intelligence	(Rauch and Evans 2000)
Corruption Index	From Country Risk	(Keefer and Knack 1997)
Corruption Index	World Competitiveness Report	(Des and Tella 1997), (Ades and Di Tella 1999)
Corruption Index	World Bank Governance Indices	(Swamy et al., 2001), (Faccio 2006)
German Survey of Corruption	Survey	(Faccio 2006)
Bribe Payment survey of Firms	Ugandan Industrial Enterprise Survey	(Fisman and Svensson 2007)
Bribe Payment by Firms	World Business Environment Survey (WBES)	(Fan, Lin, and Treisman 2009)
ii-Methods		
Method		References
Qualitative Analysis		(Andvig and Moene 1990), (Basu, Bhattacharya, and Mishra 1992), (Besley and Mclaren 1993), (Shleifer and Vishny 1993), (Shleifer and Vishny 1994), (Mookherjee and Png 1995), (Ehrlich 1996), (Tirole 1996), (Bliss and Tella 1997), (Banerjee 1997), (Acemoglu and Verdier 1998), (Acemoglu and Verdier 1998), (Acemoglu & Verdier, 2000), (Polinsky and Shavell 2001), (Glaeser and Saks 2006), (Sah 1991), (Saha and Poole 2000), (Xu and Veld 2019), (Harel and Segal 1999), (Horovitz and Segal 2007).
Ordinary Least Square-Regression		(Mauro 1995), (Keefer and Knack 1997), (Mauro 1998), (Ades and Di Tella 1999), (Des and Di Tella 1997), (Rauch and Evans 2000), (Treisman 2000), (Friedman et al. 1999), (Swamy et al. 2001), (Mo 2001), (SimeonDjankov et al. 2003), (Lambsdorff 2003), (Svensson 2003), (Pellegrini and Gerlagh 2004), (Olken 2006), (Fisman and Svensson 2007), (Fisman and Miguel 2007), (Ferraz and Finan 2008), (Fan, Lin, and Treisman 2009), (Olken 2009), (Ferraz and Finan 2011), (Machin and Meghir 2004), (Imai, Katayama, and Krishna 2006), (Grogger 1995), (Knack 2001), (Donohue and Levitt 2001).
Randomized Field Experiment		(Olken 2007)
Literature Review		(Bardhan 2017)
Panel Regression		(Ades and Di Tella 1999), (Baltagi 2006), (Li and Long 2017), (Aidt, Dutta, and Sena 2008).
Jarque-Bera Measure		(Lambsdorff 2003)
Probit Regression		(Svensson 2003)
Economic Experiment		(Barr and Serra 2010)
iii-Theoretical Frameworks		
Theory		References
Theory of Collective Reputations		(Tirole 1996)
Theory of Misgovernance		(Banerjee 1997)
Principal-Agent Theory		(Hindriks, Keen, and Muthoo 1999)
Schumpeter's Theory of Economic Development		(Mo 2001)
Theory of Optimal Law Enforcement		(Polinsky and Shavell 2001)
Public Interest Theories of Regulation		(SimeonDjankov et al. 2003)
Public Choice View Theory		(SimeonDjankov et al. 2003)
Corporate Governance Theory		(Aidt, Dutta, and Sena 2008), (Knack 2001)
Political Agency Framework of Besley		(Ferraz and Finan 2011)
Economic Theory of Corruption		(Glaeser and Saks 2006)
Standard Economic Incentive Theory		(Olken and Pande 2012)

Note: The table shows the data sources, methods, and theoretical frameworks applied in the 70 papers that create the citation map (Figure 5).

Table A5. Future research questions.

Stream	Sr. No	Reference	Research Questions/Explanation
1st. The economic framework of crime and corruption	1	(Ehrlich 1996)	Is there any need to extend the market model of crime by analysing the hypothesis of positive and negative incentives empirically and the effect of punishment on the offenders in developing, emerging and developed economies in this era of digitalization?
2nd The legal institutions and corruption	2	(Horovitz and Segal 2007)	How does ambiguity affect a person's decision to commit a crime, and what is the role of ambiguity in the legal framework to combat crime?
	3	(Harel and Segal 1999)	How does the public perceive the certainty in criminal law and the efficiency of the criminal legal system in developing, emerging, and developed countries in the 21st century?
3rd the effect of corruption on aspects of national economics	4	(Bliss and Tella 1997)	Is corruption having any effect on the welfare of the economy and society in developing and emerging countries?
	5	(Acemoglu & Verdier, 2000)	What forms of corruption are most harmful and cost the most for the economy – bureaucratic corruption or private corruption?
4th the combating and monitoring of corruption	6	(Fan, Lin, and Treisman 2009)	Are decentralization, centralization, and the appointment of honest officials useful measures to combat corruption?
	7	(Imai, Katayama, and Krishna 2006)	Is there a racial bias in arrests and convictions? Are habitual criminals indeed able to better evade arrest?
5th the determinants of corruption	8	(Zhong 2016)	How can we measure corruption in China? What is the relationship between corruption and the shadow economy in China?
	9	(Acemoglu and Verdier 1998)	Does the concept of a free lunch exist in developing and emerging countries such as China? Are developing and emerging countries tolerant of corruption, and what are the costs and benefits of corruption and the enforcement of property rights?
	10	(Treisman 2000)	Do the cultural and religious traditions of countries cause high-level corruption?
	11	(Berdiev, Kim, and Chang 2013)	What is the effect of foreign remittances on the level of corruption, and what types of remittances have the most impact?
6th the political institutions and corruption	12	(Ferraz and Finan 2008)	What is the effect of the public dissemination of audits about the corruption activities of politicians on the improvement of corporate governance and the reduction of corruption?
	13	(Ferraz and Finan 2011)	What is the impact of electoral accountability on governance and the voters' welfare?
	14	(Strimbu and González 2017).	What is the effect of transparency (the monitoring of public officials) on political corruption?
7th the effect of corruption on firms	15	(Okunlola 2018)	How do political regimes moderate the relationship between corruption and economic development?
	16	(Tirole 1996)	Does the theory of collective reputations work as the aggregate of an individual's (firm's) reputation (level of corruption) in developing, emerging, and developed countries?
	17	(Bai et al. 2017)	Do firm growth and mobility help reduce the level of corruption at the country level internationally?
	18	(Thanh 2017)	What is the effect of country-level corruption on the firm's capital structure?
	19	(Yu et al. 2019)	What is the effect of the political connections of a firm's leadership on the level of corruption at the country level?
	20	(Yu et al. 2019)	Do anti-corruption efforts moderate the relationship between a firm's political connections and R&D investments?

Note: The table shows 20 thought-provoking future research questions on the topics