

Corporate Governance: A scientometric analysis

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ABSTRACT

This research includes an extensive review of the studies associated with Corporate Governance. The study uses Scopus database as a primary search engine to collect the necessary data and collects 333 records over the period 2010-2018. The purpose of this research is to investigate the structured study of research activities carried out around the subject of corporate governance which have been published in international, well-known and credible magazines, books and sites. For this purpose, the study searches the phrase corporate governance on Scopus site and detects around 7200 documents and 2000 of highly cited documents are selected for the purpose of the investigation accomplished by a bibliometrics tool. The study limits the survey on published articles over the period 1993-2009 and detects 806 documents among 2000 documents from Scopus. The results indicate that papers published by researchers in United States have received the highest citations (8669), followed by United Kingdom (2094) and Australia with 1557 citations.

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1. Introduction

Corporate governance is associated with the collection of processes, mechanisms, and relationships by which most corporations are controlled and managed (Arora & Dharwadkar, 2011). Governance structures and principles normally determine the distribution of rights and responsibilities among the board of directors, managers, shareholders, creditors, auditors, regulators, and other stakeholders and include the rules and procedures for making decisions in corporate affairs (Ben-Amar et al., 2017). Corporate governance plays essential role for the success of any organizations to prevent any conflicts of interests among stakeholders (Barnea & Rubin, 2010). Corporate governance aims to develop the company's strategic targets, leadership skills, monitoring the management of the business and reporting to shareholders about dividend policy. Corporate governance incorporates various processes where corporations' goals are adjusted and followed through the context of the social, regulatory and market environment (Yermack, 1996). These include continuous supervision of the decisions of firms, their subsidiaries, and influenced stakeholders. Corporate governance practices are observed as efforts to align the stakeholders' interests. The necessity for corporate governance has come to resolve possible conflicts of interests among stakeholders in firms (Wade et al., 2006). The conflicts of interests happen as a results of diversify wishes between both shareholders and upper management and among shareholders, although other stakeholder relationships are influenced and coordinated through such policy making (Mahoney et al., 1993; Gibbs, 1993; Yermack, 1996; Shleifer et al., 2000).

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This research includes an extensive review of the studies associated with Corporate Governance. The study uses Scopus database as a primary search engine to collect the necessary data and collects 333 records over the period 2010-2018. The purpose of this research is to investigate the structured study of research activities carried out around the subject of corporate governance which have been published in international, well-known and credible magazines, books and sites. For this purpose, the study searches the phrase corporate governance on Scopus site and detects around 7200 documents and 2000 of highly cited documents are selected for the purpose of the investigation accomplished by a bibliometrics tool. The study limits the survey on published articles over the period 1993-2009 and detects 806 documents among 2000 documents from Scopus

2. Literature review

During the past few years, there have been tremendous efforts on evaluation of the effects of corporate governance on firm performance. Wintoki et al. (2012) implemented a well-developed dynamic panel generalized method of moments (GMM) estimator to reduce endogeneity concerns in two perspectives of corporate governance research; namely the impact of board structure on corporate performance and the component of board structure. The estimator includes the dynamic nature of internal governance applications to give valid and powerful features which describe unobserved heterogeneity and simultaneity. They investigated the relationship between board structure and performance based on the GMM estimator in a panel of 6,000 companies using the historical data from 1991 to 2003, and detected no causal relationship between the two components. They described why other estimators ignoring the dynamic relationship between the current governance and the past firm performance yield bias results.

Barnea and Rubin (2010) studied the relationship between firms' corporate social responsibility (CSR) ratings and their ownership and capital structures. They reported that on average, insiders' ownership and leverage were negatively associated with the firm's social rating, while institutional ownership was uncorrelated with it. Assuming that higher CSR ratings was related to higher CSR cost level, the results indicated that insiders induce firms to over-invest in CSR when they spend some cost for doing so. Carter et al. (2010) investigated "the relationship between the number of women directors and the number of ethnic minority directors on the board and important board committees and financial performance measured as return on assets and Tobin's Q". They did not detect a substantial association between the gender or ethnic diversity of the board and financial performance in some US firms. Aggarwal et al. (2011) investigated whether institutional investors could possibly influence on corporate governance by studying portfolio holdings of institutions from 23 different countries over the period 2003–2008 and discovered that firm-level governance was positively related to international institutional investment. They also found that changes in institutional ownership could positively influence on the changes in firm-level governance, but the opposite did not necessarily hold. Firms with higher institutional ownership were more likely to end poorly performing managers and demonstrated some improvements in valuation. The results recommended that international portfolio investment by institutional investors could suggest good corporate governance practices around the world.

Erkens et al. (2012) studied the effect of corporate governance on financial firms' performance from 2007 to 2008 where the financial crisis occurred. They determined that companies with more independent boards and higher institutional ownership faced with more challenges during the crisis period. The reasons were because (1) companies with higher institutional ownership stepped for more risk prior to the crisis, which resulted in larger shareholder losses during the crisis period, and (2) corporations with more independent boards were able to have more equity capital during the crisis, which led to a wealth transfer from existing shareholders to debtholders. Armstrong et al. (2010) reviewed some literature on the role of financial reporting transparency in reducing governance-related agency conflicts among managers and reported on the importance of the role of a commitment to financial reporting transparency in facilitating informal multi-period contracts among managers, directors, etc.

3. The most common Keywords

Table 1 demonstrates some of the most popular keywords associated with corporate governance. As we can observe from the results of Table 1, “Corporate Governance”, “Corporate social responsibility”, and “Board of directors ”are three well recognized keywords used in the literature.

Table 1

The most popular keywords used in studies associated with Corporate Governance.

Words	Occurrences	Words	Occurrences
Corporate Governance	834	Firm Performance	20
Firms	764	Reporting	18
Board	530	Boards	17
Performance	400	Agency Theory	16
Corporate Governance	396	Ownership Structure	14
Firm	327	Industrial Management	14
CSR	311	Boards Of Directors	12
Find	291	Agency Costs	11
Directors	238	Executive Compensation	10
Ownership	222	Governance Approach	10
Financial	219	Firm Value	10
Social	212	Industry	10
Study	195	Corporate Strategy	9
Paper	189	Institutions	9
Companies	177	Board Composition	8
Disclosure	175	Shareholder Activism	8
Institutional	160	Regulation	8
CEO	149	Institutional Theory	8
Implications	149	Family Firms	7
Findings	129	Earnings Management	7
Evidence	126	Investments	6
Corporate Social Responsibility	62	Shareholders	5
Board Of Directors	46	Institutional Framework	5
Responsibility	39	Research	4
China	35	Financial System	4
Management	34	Data Envelopment Analysis	4
	23	Industrial Performance	3

As shown in Fig. 1. “governance approach”, “industry”, “corporate strategy”, “board of directors”, “investments”, “institutional framework”, “data envelopment analyses”, “firm performance”, “shareholders” and “financial system” are the research hotspots with a high frequency of the keywords used in different research studies. The board and audit committee activity and their members' financial sophistication may be some important factors in constraining the propensity of managers to engage in earnings management (Xie et al., 2003).

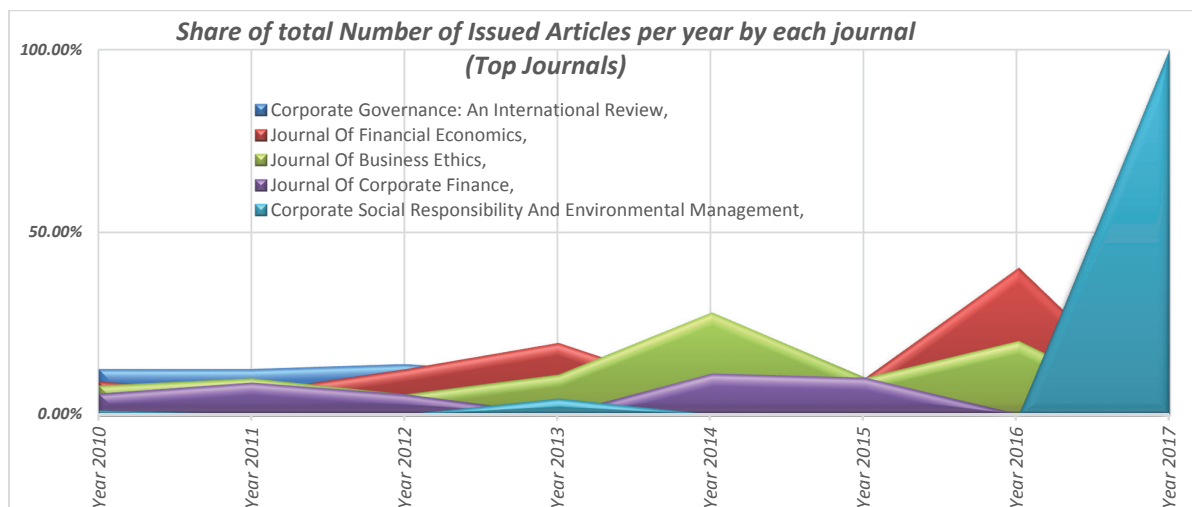


Fig. 3. Share of total Number of Issued Articles per year by each journal

4. Contributions of countries

Our survey demonstrates that United States, United Kingdom, Australia and Canada have maintained the most contribution in the field of corporate governance. From 2000 to 2017, in terms of Average Article Citations; which indicate the number of reference to the articles, the following countries are ranked as the highest Average Article Citations, respectively: Denmark (211), ranked first, Bangladesh (120) and Germany (108.8) are ranked the second and third. With this classification, the United States will be ranked as tenth despite having the highest number of citations. Table 3 shows details of our survey.

Table 3

The summary of the contributions of different countries

Country	Total Citations	Average Article Citations	Country	Total Citations	Average Article Citations
USA	8669	78.1	Greece	118	59
United kingdom	2094	67.5	Switzerland	115	57.5
Australia	1557	64.9	Finland	87	43.5
Canada	1418	101.3	New Zealand	87	43.5
Spain	897	59.8	Mauritius	83	83
Italy	708	78.7	Israel	79	79
Germany	653	108.8	Mexico	78	39
Netherlands	530	48.2	Poland	70	70
France	525	75	Costa Rica	60	60
China	490	70	Iran	52	52
Hong Kong	402	67	Ireland	51	51
Taiwan	296	42.3	Nigeria	40	40
Singapore	282	94	Sweden	40	40
Belgium	281	56.2	Pakistan	39	39
Korea	214	107	Ghana	37	37
Denmark	211	211	Egypt	36	36
Norway	146	48.7	Portugal	36	36
Malaysia	140	46.7	Colombia	35	35
Bangladesh	120	120			

According to Table 3, researchers from United States have published 8669 papers followed by United Kingdom with 2094 papers and Australia with 1557 and Canada with 1418 papers. In terms of the average citation, papers published by researchers in Germany and Canada have maintained the highest citations. Fig. 4 shows the results of the collaborations among various countries.

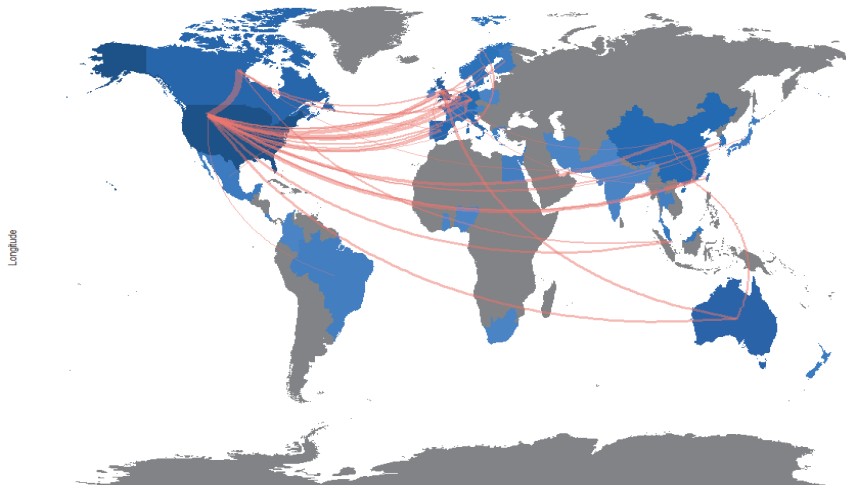


Fig. 4. Country collaboration map

As we can observe from the results of Fig. 4, there were strong collaboration among the researchers in United States from one side and other countries.

5. Highly cited papers

Table 4 shows the summary of the most cited articles. As we can observe from the results of Table 4, the study by Wintoki et al. (2012) has received the highest citations.

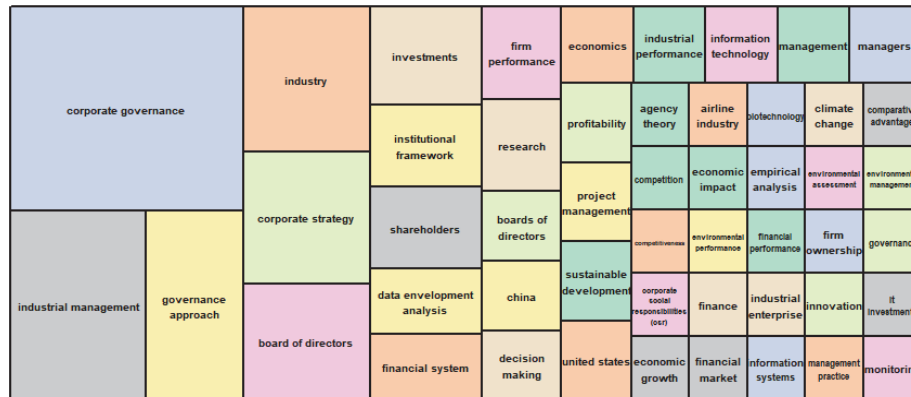


Fig. 5. The word Tree map

Corporate Governance (CG) is one of today’s controversial discussions, as it was mentioned earlier. Table 4 presents the order of articles that have received the highest citation in this area.

According to key words used in articles presented in Fig. 5 and what is mentioned above with the most cited articles, we analyze all of the pointed items. The focus of these papers is on the discussion of the impact of CG on firm performance, especially their financial performance. This research suggests that endogeneity concerns of CG are affecting the performance of the company directly or indirectly (Wintoki et al., 2012; Barnea et al., 2010; Carter et al., 2010; Erkens et al., 2012; Armstrong et al., 2010).

This result supports the hypothesis that there is a dynamic link between CG and firm performance, but this matter is overlooked in many cases. In this regard, we need to consider inner involvements in CG and it has to be dealt with. The effect of CG on CSR is one of the most important issues today. Changes in institutional makeup of the circumstance that companies act in it, lead to changes in CSR. Another set of internal factors that can be pointed out are higher institutional ownership and more independent boards, which affect the performance of firms. In explaining this, we can add that firms with higher institutional ownership take more risks under crisis conditions. The role of independent directors and influential stakeholders were specifically analyzed b Erkens et al. (2012). Transparency of the financial information as one of the CG elements satisfies the interests of both shareholders and other stakeholders in having access to information.

Table 4
The summary of the most cited articles (Top 60 Articles in total citation)

Paper	Total Citations	TC per Year
Wintoki Mb, 2012, J Finance Econ (Wintoki et al., 2012)	420	60.00
Barnea A, 2010, J Bus Ethics (Barnea et al., 2010)	316	35.11
Carter DA, 2010, Corp Governance (Carter et al., 2010)	302	33.56
AGGARWAL R, 2011, J Finance Econ (Aggarwal et al., 2011)	270	33.75
Erkens DH, 2012, J Corp Finance (Erkens et al., 2012)	269	38.43
Armstrong CS, 2010, J account Econ (Armstrong et al., 2010)	266	29.56
Brammer S, 2012, Socio-Econ Rev (Brammer et al., 2012)	262	37.43
Jackson G, 2010, J Bus Ethics (Jackson et al., 2010)	235	26.11
Duchin R, 2010, J Finance Econ (Duchin et al., 2010)	230	25.56
Jo H, 2011, J Bus Ethics (Jo et al., 2011)	219	27.38
Torchia M, 2011, J Bus Ethics (Torchia et al., 2011)	218	27.25

Nielsen S, 2010, Corp Governance (Nielsen et al., 2010)	211	23.44
Giroud X, 2010, J Finance Econ (Giroud et al., 2010)	206	22.89
Jian M, 2010, Rev Account Stud (Jian et al., 2010)	205	22.78
Roe Mj, 2011, Polit Determ Of Corp Governance : Polit Context, Corp Impact	203	25.38
Claessens S, 2013, Emerge Mark Rev (Claessens et al., 2013)	195	32.50
Aebi V, 2012, J Bank Finance (Aebi et al., 2012)	190	27.14
Brown P, 2011, Account Finance (Brown et al., 2011)	184	23.00
Walls JL, 2012, Strategic Manage J (Walls et al., 2012)	181	25.86
Bebchuk La, 2011, J Finance Econ (Bebchuk et al., 2011)	176	22.00
Khan A, 2013, J Bus Ethics (Khan et al., 2013)	168	28.00
Harjoto Ma, 2011, J Bus Ethics (Harjoto et al., 2011)	164	20.50
Gedajlovic E, 2012, J Manage (Gedajlovic et al., 2012)	162	23.14
Jo H, 2012, J Bus Ethics (Jo et al., 2012)	162	23.14
Song Cj, 2010, Account Rev (Song et al., 2010)	154	17.11
Le Breton-Miller I, 2011, Organ Science (Le Breton-Miller et al., 2011)	153	19.12
Schrand Cm, 2012, J Account Econ (Schrand et al., 2012)	152	21.71
Li W, 2010, J Bus Ethics (Li et al., 2010)	144	16.00
Cohen J, 2010, Contempt Account Res (Cohen et al., 2010)	142	15.78
Masulis Rw, 2012, J Account Econ (Masulis et al., 2012)	135	19.29
Frydman C, 2010, Annul Rev Finance Econ (Frydman et al., 2010)	133	14.78
Kim JB, 2011, J Finance Econ (J.-B. Kim et al., 2011)	127	15.88
Tuggle Cs, 2010, Strategic Manage J (Tuggle et al., 2010)	127	14.11
Frias-Aceituno JV, 2013, Corp Social Responsibly Environ Manage (Frias-Aceituno et al., 2013)	125	20.83
Cumming D, 2010, J Bus Venturing (Cumming et al., 2010)	124	13.78
Dalton DR, 2011, J Manage (Dalton et al., 2011)	120	15.00
Khan HUZ, 2010, Int J Law Manage (H.-U.-Z. Khan et al., 2010)	120	13.33
Arora P, 2011, Corp Governance (Arora et al., 2011)	119	14.88
Munari F, 2010, Res Policy (Munari et al., 2010)	113	12.56
Estrin S, 2011, Asia Pac J Manage (Estrin et al., 2011)	112	14.00
Boubakri N, 2012, J Corp Finance (Boubakri et al., 2012)	111	15.86
Hoechle D, 2012, J Finance Econ (Hoechle et al., 2012)	107	15.29
Chau G, 2010, J Int Account Audit Tax (Chau et al., 2010)	106	11.78
Carcello JV, 2011, Auditing (Carcello et al., 2011)	105	13.12
Adams RB, 2012, J Finance Intermediation (Adams et al., 2012)	102	14.57
Levy DI, 2010, Bus Social (Levy et al., 2010)	102	11.33
Francis Jr, 2010, J Account Econ (Francis et al., 2010)	102	11.33
Hayes Rm, 2012, J Finance Econ (Hayes et al., 2012)	101	14.43
Talke K, 2010, Res Policy (Talke et al., 2011)	101	11.22
Choi Sb, 2011, Res Policy (Choi et al., 2011)	99	12.38
Murphy KJ, 2013, Handbook Econ Finance (Murphy, 2013)	98	16.33
Ertimur Y, 2010, J Corp Finance (Ertimur et al., 2010)	97	10.78
Jizi MI, 2013, J Bus Ethics (Jizi et al., 2014)	95	15.83
Miller D, 2013, Organ Science (Miller et al., 2013)	94	15.67
Black B, 2012, J Finance Econ (Black et al., 2012)	93	13.29
Aoki M, 2010, Corp In Evol Divers : Cogn , Governance, And Institutional Rules (Aoki, 2010)	93	10.33
Coles JL, 2012, J Finance Econ (Coles et al., 2012)	92	13.14
Lennox C, 2010, Contempt Account Res (Lennox et al., 2010)	92	10.22
Allegrini M, 2013, J Manage Governance (Allegrini et al., 2013)	91	15.17
Kim Y, 2014, J Bank Finance (Y. Kim et al., 2014)	90	18.00

6. Contribution of the countries

One of the interesting areas of the interest is to learn more about the contribution of different countries in corporate governance. As we can observe from the results of Fig. 6, researchers from USA (305 papers), UK (71 papers), Australia (45 papers) and Canada (34 papers) have contributed the most on corporate governance.

Country Scientific Production

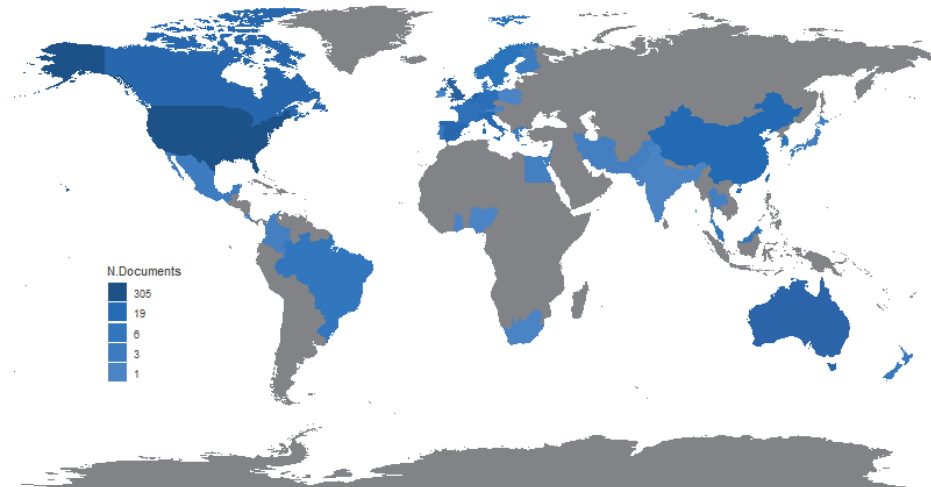


Fig. 6 The frequency of the keywords used in different corporate governance studies

7. Highest impact sources

Table 5 demonstrates the highest source h-index associated with corporate governance. As we can observe from the results of Table 5, Corporate Governance: An International Review, Journal of Financial Economics, And Journal of Business Ethics are three well recognized keywords used in the literature. Fig. 7 shows the highest h-index Sources.



Fig. 7. The frequency of the keywords used in different corporate governance studies

8. Conceptual structure map, Correspondence analysis

Co-word analysis aims at representing the conceptual structure of a framework using co-occurrence of words. The words can be replaced by authors' keywords, keywords plus, and terms extracted from titles or abstracts. The conceptual structure function produces three kinds of mapping as listed: conceptual structure map, factorial map of the documents with the highest contributes and factorial map of the most cited documents. Conceptual structure map is shown in Fig. 2 where the gray cluster has the most keywords, which means the attention of the researchers to the subject matter of the study.

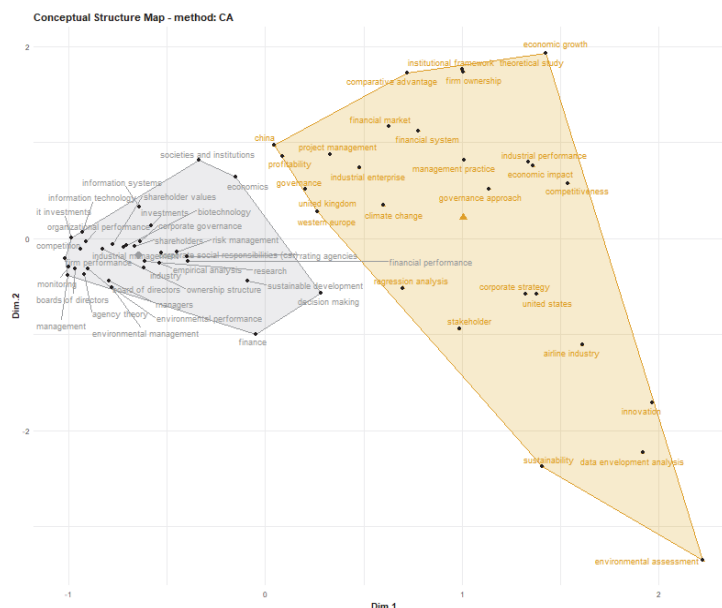


Fig. 8. Conceptual structure Map, method: CA

Mahadeo et al. (2012) and Xie et al. (2003) studied the key elements of the board diversity in the companies which act in the field of economy in Mauritius and analyzed their impacts on financial performance and focused on “Ownership Structure”, when ownership is non-centralized, board autonomy and audit services are complementary. But this is not true when ownership is centralized. Their analysis also show that the controlling shareholder type affects the relationship between board composition and external audit costs (Desender et al., 2013).

9. The most relevant sources

Table 2 demonstrates some of the mostly relevant sources associated with corporate governance. As we can observe from the results of Table 2, “Corporate Governance: An International Review”, “Journal of Financial Economics” and “Journal of Business Ethics” are three well recognized keywords used in the literature.

Table 2

The summary of the most relevant sources

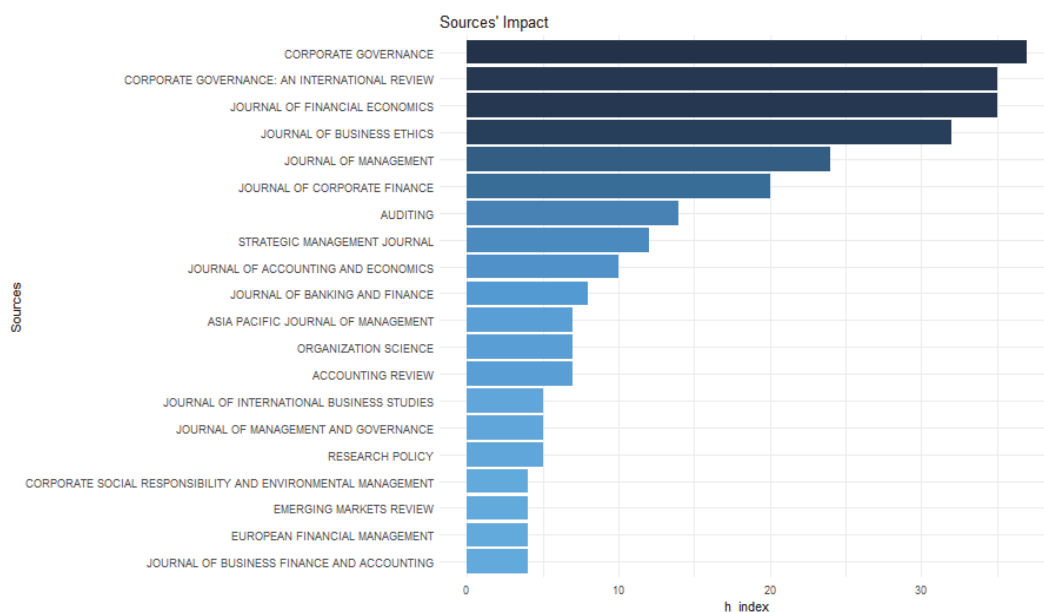
Sources	Articles
Corporate Governance: An International Review	38
Journal of Financial Economics	36
Journal of Business Ethics	32
Journal of Corporate Finance	20
Strategic Management Journal	12
Journal of Accounting and Economics	10
Journal of Banking and Finance	8
Asia Pacific Journal of Management	7
Organization Science	7
Accounting Review	6
Journal of International Business Studies	5
Journal of Management	5
Journal of Management and Governance	5
Research Policy	5
Corporate Social Responsibility and Environmental Management	4
Emerging Markets Review	4
European Financial Management	4
Journal of Business Finance and Accounting	4
Journal of Business Research	4
Managerial Auditing Journal	4

As it shows in Fig. 3 between 2010 up to 2016 all top related journals have approximately similar shares in issuing the number of article related to corporate governance in each year. But in 2017, this subject was only reflected in social responsibility and environment management journal. Maybe this is originated from the fact that CG issue has entered into social and environmental responsibility area, so these magazines have worked more about it. Also as seen in Fig. 3 in 2017, with the focus of the global community on corporate social responsibility and the acceptance of the culture of corporate social acceptance, the attention was unprecedentedly paid to the corporate governance aspect of social responsibility.

Table 5

The summary of the highest h-index sources

Sources	h-index	g-index	m-index	TC	NP
Corporate Governance	37	45	3.7	2942	45
Corporate Governance: An International Review	35	38	3.5	2431	38
Journal Of Financial Economics	35	36	3.5	3364	36
Journal Of Business Ethics	32	32	3.2	2923	32
Journal Of Management	24	24	2.4	1540	24
Journal Of Corporate Finance	20	20	2.0	1377	20
Auditing	14	14	1.4	778	14
Strategic Management Journal	12	12	1.2	801	12
Journal Of Accounting And Economics	10	10	1.0	989	10
Journal Of Banking And Finance	8	8	1.0	568	8
Asia Pacific Journal Of Management	7	7	0.7	475	7
Organization Science	7	7	0.8	491	7
Accounting Review	7	7	0.7	491	7
Journal Of International Business Studies	5	5	0.5	219	5
Journal Of Management And Governance	5	5	0.5	255	5
Research Policy	5	5	0.5	432	5
Corporate Social Responsibility And Environmental Management	4	4	0.4	326	4
Emerging Markets Review	4	4	0.4	359	4
European Financial Management	4	4	0.4	224	4
Journal Of Business Finance And Accounting	4	4	0.4	222	4
Journal Of Business Research	4	4	0.4	182	4
Managerial Auditing Journal	4	4	0.4	195	4

**Fig. 7.** The highest h-index sources associated with corporate governance

10. Authors

Table 6 demonstrates highest Author's h-index associated with corporate governance. As we can observe from the results of Table 6, RENNEBOOG L, ARMSTRONG CS, and BOUBAKRI N are three highest h-index authors.

Fig. 8 shows Corresponding Author's Country in single country publications (SCP) & multiple country publications (MCP) together.

Table 6

The summary of the highest Author's h-index

Sources	h-index	g-index	m-index	TC	NP
RENNEBOOG L	6	6	0.6	255	6
ARMSTRONG CS	4	4	0.4	444	4
BOUBAKRI N	4	4	0.4	267	4
HUSE M	4	4	0.4	530	4
NTIM CG	4	4	0.5	242	4
AGUILERA RV	3	3	0.4	200	3
BLACK BS	3	3	0.3	151	3
FASSIN Y	3	3	0.3	161	3
GARCÍA-MECA E	3	3	0.3	139	3
HARJOTO MA	3	3	0.3	545	3
JACKSON G	3	3	0.3	558	3
JO H	3	3	0.3	545	3
LARCKER DF	3	3	0.3	226	3
LI S	3	3	0.3	232	3
LI Y	3	3	0.3	252	3
MULLER-KAHLE MI	3	3	0.3	145	3
SAFFAR W	3	3	0.37	229	3
WESTPHAL JD	3	3	0.3	151	3

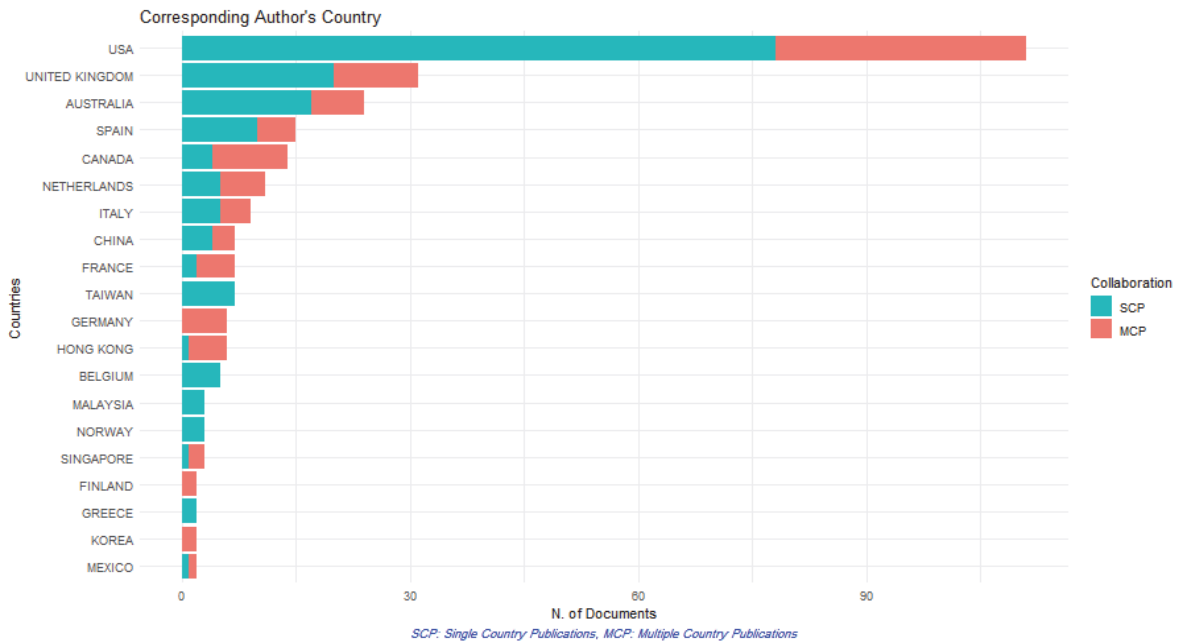


Fig. 8. Corresponding Author's Country

11. Conclusion

One of the requirements of stock market is that investors should have access to financial information about a company such as price levels, market depth and audited financial reports. Information transparency improves the performance of companies in terms of their stock's performance. This matter has motivated companies' tendency to get more involved to provide disclosure. Corporate Governance and firms' clarity of information environment helps over time alleviate agency conflicts. Reducing information asymmetries between contracting parties will evolve to certain business environments (Armstrong et al., 2010). Recent research has recorded a significant difference between countries in the concentration of ownership, breadth and depth of capital markets, dividend policies and the access to external finance. The common element of these items is Corporate Governance. The effects of owner identity and external corporate governance systems on R&D investments represents that countries like the United Kingdom invest less in R & D than European countries. This leads to the pressure to decrease the R & D in Corporate Governance (Munari et al., 2010).

In order to analyze the process of scientific works carried out in the field of CG from 2010 to 2018, we have performed a comparison between the documents released between from 1993 to 2009 and from 2010 to 2018. First, it is interesting to note the following several interesting items:

- As was mentioned before in this study, 2000 documents were selected from Scopus. The oldest articles in this period of time were related to 1993
- The highest cited article is 2349 which was published in 1996.
- During the 2010-2017, the highest cited article was 420.
- During the 2000-2009, the highest cited article was 2152.

The following items are based on a random selection of articles related to the topic of CG, from 1993 to 2009:

- Small boards are more effective for companies and make more pleasant values on financial ratios and stronger CEO performance encouragement (Yermack, 1996).
- The study of the effect of chief executive officer compensation on Firm Performance pointed out that the standard economic determinants of pay, after measures of board and ownership structure, affect the change of CEO compensation.
- Firms which have weaker governance structures, have greater agency problems. Firms with greater agency problems perform worse, although they pay greater compensation to CEOs. (Core et al., 1999)
- The role of the board and the audit committee in connection with the earnings management and Corporate Governance suggests that the composition of a board and audit committee members, is associated with the probability of being involved in earnings management. The measures and financial sophistication of the board and the audit committee may be an important factor to encourage them to participate in earnings management (Xie et al., 2003).
- The decisions of the companies regarding the structure of capital are affected by the environment they operate in it. The 1997 financial crisis had a significant impact on it (Deesomsak et al., 2004).
- In the context of Fairness and Executive Compensation, the effect of fairness on top decision-makers has been discussed.
- Managers use their power to increase their salaries and their subordinates. Employees perceive their situation as fair or not in comparison with the managers and thus react to their own compensation (Wade et al., 2006).
- By comparison of CG with Costs, Contingencies, and Complementarities, the effectiveness of CG and the implications on policy was analyzed. Most studies do not consider the interdependence between the organization and the environment while this leads to changes in the actions related to CG. Costs, Contingencies, and Complementarities are helpful in analyzing CG (Aguilera et al., 2013).

- The ownership structure affects stakeholder engagement and corporate social responsibility reporting.
- Shareholder power and dispersed ownership structure influence on information disclosure of firms pertinent to corporate social responsibility (CSR) (Prado-Lorenz et al., 2006)/

Fig. 9 shows the number of articles published annually from 1993 to 2018.

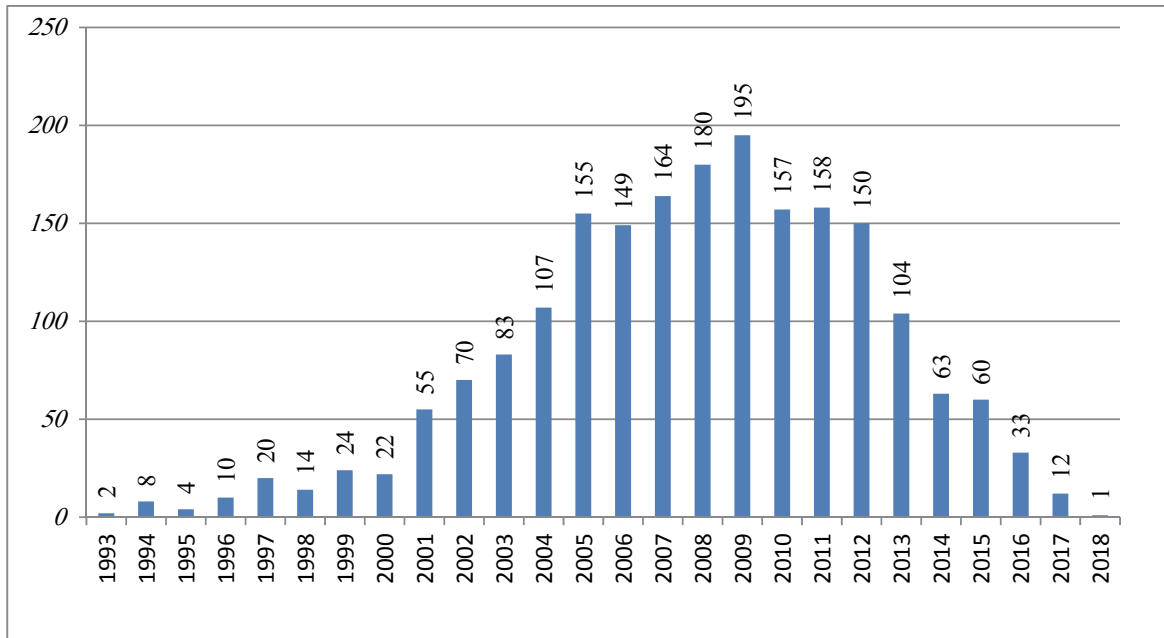


Fig. 9.The Scopus publication on Corporate Governance from 1993 to 2018

By comparing the charts and graphs of 2010 to 2017 with 1993 to 2009, we have noted that the trend of scientific production in the case of corporate governance, from 1993 to 2009, has had a growing policy. Investigation into the factors involved in the emergence of this trend is suggested as *future study*. From 2010 to 2017 on the contrary, we see a descending trend of the process of scientific production of countries, which requires an independent investigation as *future study*.

Considering the competitive advantage of business in today's life and the more instability of environmental conditions, choosing the appropriate strategy related to the topic of CG plays a more important role.

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