

THE PUBLICATION LANDSCAPE OF GERMAN CORPORATE GOVERNANCE RESEARCH: A BIBLIOMETRIC ANALYSIS

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Abstract

Although the importance and urgency of the corporate governance debate has increased in media, public and scientific literature after the financial crisis, there is no systematic and holistic approach to the phenomenon of corporate governance and the associated economic research in the German-speaking countries. Due to this, the literature on corporate governance research in the German-speaking area is examined by means of bibliometric methods and social network analysis in order to identify thematic clusters and the most influential documents and authors. Based on a co-citation analysis of over 10,000 references cited in 267 source documents, a map is constructed that depicts the landscape of corporate governance research in German-speaking countries. The analysis identifies a large body of accumulated corporate governance research, which is mostly based on the theoretical work from English-speaking scholars. Our findings and interpretations allow a new view on the German corporate governance research and on the particular understanding of corporate governance in the German-speaking research community. Today, around 10 years after the introduction of the German Corporate Governance Code, corporate governance research is a well-established segment of German business administration research characterized by diverse research focuses.

Keywords: Bibliometric Methods, Social Network Analysis, Corporate Governance Research, German-speaking Countries

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1. INTRODUCTION

Although the importance and urgency of the corporate governance debate has increased in media, public and scientific literature after the financial crisis, there is no systematic and holistic approach to the phenomenon of corporate governance and the associated economic research in the German-speaking countries. Hence, and despite its relevance, corporate governance research has not become the subject of a bibliometric analysis, yet. Means of bibliometric

analyses and methods of social network analysis enable to represent the quantity of academic communication. Forms and structures of the research landscape can thus be illustrated. Although a few bibliometric studies exist focusing on German business administration, such as the extensive works of Schäffer et al. (2006), Schäffer et al. (2011), Binder & Schäffer (2005) and Wagenhofer (2006) on controllership, so far only a few authors consider it relevant. This study applies bibliometric methods and social network analysis to the area of corporate

governance research in the German-speaking countries in order to evaluate the impact of publications and clusters representing thematic sub-fields.

The few publication and citation analyses on corporate governance research that exist are limited to English-language journals, which are covered by the Social Science Citation Index (SSCI) of the Web of Knowledge¹ (Huang & Ho, 2011; Durisin & Puzone, 2009). However, these publications cannot directly be transferred to the corporate governance research in German-speaking countries due to the different governance system and the distinct understanding of corporate governance. A detailed examination of the research development reveals different facets of the corporate governance debate and thereby creates not only a better understanding of the issues discussed, but also reflects the current research landscape. Since only 20% of journals relevant to German business research are covered by the Web of Knowledge, a citation database based on corporate governance research in the German-speaking countries was constructed manually (Schrader & Hennig-Thurau, 2009).

Thereby, the objective of this paper is both, to analyze the development of corporate governance research in German-language publications and to identify the structure and development of corporate governance research by means of citation and co-citation analysis. Additionally, the combination of individual analyses supports the identification of connections between different authors or subjects because single analyses cannot reveal these relations.

The use of citation and co-citation analyses intends to holistically reflect the structure and the development of corporate governance research in Germany and therefore aims at elaborating on the following four questions:

- Which publications were cited most frequently during the relevant period and how strong is the influence of the most frequently cited publications within the field of German corporate governance research?
- Which authors were cited most frequently during the relevant period and how do they influence the corporate governance research in the German-speaking countries?
- Which thematic clusters can be identified in corporate governance research by means of co-citation analysis? Where are thematic emphases and which authors and publications are central to these clusters?
- What other scientific areas are connected to corporate governance and to what extent have these connections evolved over time?

In order to examine these issues, different analytical methods were applied to documents published from 1995 to 2011. Given the first English

publication in the mid-1970's, the analysis on German publications begins in 1995, although there was no fundamental corporate governance discussion noticeable in Germany at that time, yet. German publications focusing on corporate governance topics can rather be observed since 2000.

In order to put the approach used by the citation, co-citation and cluster analysis into concrete terms, the following section illustrates the methodology of bibliometric methods in general and presents the methodology of this paper. The bibliometric methods applied to identify and map the publication landscape of corporate governance research in the German-speaking countries are explained below.

2. BIBLIOMETRIC METHODS

Citation analyses are based on quantitative methods and used for the evaluation of scientific communication structures. The following analysis of publications and citations aims at quantitatively recording developments in the scientific communication system and identifying lines of research within a region or between different areas (Winterhager, 1994, p. 14). This approach is based on the assumption that through a publication and subsequent citations, an information exchange can be observed in the scientific communication system, which allows reliable and valid conclusions about the trends and interdependencies in the overall system (Small, 1978; Garfield, 1979). A citation is therefore a reliable and applicable indicator for the exchange of information of the scientific community (Schäffer et al., 2006).

First bibliometric surveys, which mainly referred to the evaluation of references, were cited by publications of a discipline or sub-discipline in order to identify core journals for the management of library holdings by means of objective and quantitative methods (Gross & Gross, 1927; Archambault & Larivière, 2009). With the development of the SSCI by Eugene Garfield at the Institute for Scientific Information (nowadays Thomson Reuters) in the 1960s, which was the first database that recorded scientific literature on the basis of indexing citations, bibliometric analyses globally gained importance in scientific evaluation. By the systematic and regular collection of citations and references from scientific journal articles in the field of natural sciences, engineering, and medicine, a data basis was created that illustrated publication output, perception and communication structures. Today, the Thomson Reuters citation indices cover more than 12,000 scientific journals under the surface of the Web of Knowledge. In 2008 conference proceedings were added.

For the investigation of the relationship between citing and cited publications, it is relevant to initially define the concept of a citation. A reference corresponds to a document listed in the bibliography

¹ <http://wokinfo.com>

of a publication. From the perspective of the cited document, the reference is a citation (Stock, 2001). A citation analysis evaluates the influence of a distinct source or an author by the number of citations received (Gmür, 2003). Although the number of citations is commonly interpreted as an indicator for the performance and the acceptance of a publication, conclusions should not be deducted inconsiderately (Winterhager, 1994; Goldfinch et al., 2003; Jokic & Ball, 2006). The frequency of citations is therefore rather a measure of "visibility" than of its "quality", as citations are counted regardless of an affirmative or criticizing use of the reference. Therefore, the quality of a highly cited source is not necessarily high. The investigation of the bibliometric analysis is expanded using co-citation analysis. A co-citation can be conceived as a measure, which portrays the contextual similarity of several publications related to a theory, a topic, a methodology, or an empirical field (Price, 1965; Crane, 1972; Leivrouw, 1989; Small, 1980; Gmür, 2003). A co-citation exists, when two references of the same author are listed in one bibliography of a publication. Similar to bibliographic coupling, co-citation analysis is based on the assumption that two documents, which appear together in the reference list of a third document, have similar contents (Kessler, 1963; Marshakova, 1973; Small, 1973).

"In measuring co-citation strength, we measure the degree of relationship or association between papers as perceived by the population of citing authors." (Small, 1963, p. 265)

The more frequently two documents are cited together by a third party, the greater the similarity of the contents of the co-cited documents. The inherent structure of a research area can be disclosed and examined by the analysis of co-citation. The results of co-citation analysis enable us to distinguish individual fields of research, schools, researchers' networks, or adjacent research areas and enable the identification of so-called "invisible colleges" in a network or cluster representation (Small, 1980; Gmür, 2003). Invisible colleges represent research networks, which despite a lack of formal organizational connection shape the research direction and focus through constant interaction (Crane, 1972; Lievrouw, 1989; Schäffer et al, 2006). Schäffer et al. note, "that the ascertained networks do not represent any actor-structures in the field of research" (Schäffer et al., 2006, p. 398). Co-citation networks rather represent the central connections as perceived in the context of an exogenous observation of a research field.

Co-citations are frequently analyzed in the medical and natural sciences where formal scholarly communication is covered by large citation databases such as Web of Knowledge and Scopus². For the German publication output of business research, these databases are not suitable, since they only cover a

fraction of the relevant sources. Due to this, the collection of citation and co-citation data for this paper is conducted manually based on the approach by Schäffer et al. (2006; 2011), Gmür (2007) and Roth & Gmür (2003).

2.1 Identifying the Citing Source Documents

To construct a network of co-cited documents within corporate governance research in the German-speaking countries, 267 relevant source documents are identified. The reference lists of these documents contain the required citation relations. No German journal is specialized in corporate governance research exclusively but articles are rather published in various journals. Therefore, relevant documents are retrieved from general business research journals, which were identified with the help of the 2008 "Jourqual" ranking.

Jourqual is a journal ranking by the German Academic Association for Business Research (Verband der Hochschullehrer für Betriebswirtschaftslehre – VHB)³, which, in its 2008 edition, considers and rates 1,633 national and international journals relevant in business research on the basis of the judgment of over 1,000 experts in Germany, Austria and Switzerland (Schrader & Hennig-Thurau, 2009). Jourqual was initiated in 2003 in order to provide an alternative to the ISI Journal Citation Reports. The journal rankings based on the Web of Knowledge databasis limit journal quality to a mean citation rate, i.e. the impact factor, and cover only 20% of journals identified as relevant sources in business research in German-speaking countries (Schrader & Henning-Thurau, 2009).

The search for corporate governance publications was limited to the Jourqual categories "ABWL" (*general management*), "Organisation und Personal" (*organization and human resources*), "Rechnungswesen und Controlling" (*accounting and controllership*) and "Wirtschaftsethik" (*business ethics*). Among the journals in these four categories, the following are considered as German high-quality journals indicated by the quality index (JQI) of the Jourqual ranking, ranging from 1 (very low) to 10 (very high):

- „Schmalenbachs Zeitschrift für betriebswirtschaftliche Forschung“ (zfbf) (JQI=7.21) including its English version „Schmalenbachs Business Review“ (sbr) (JQI=7.20)
- „Zeitschrift für Betriebswirtschaft“ (ZfB) (JQI=7.01)
- „Die Betriebswirtschaft“ (DBW) (JQI=6.70)
- „Journal für Betriebswirtschaft“ (JfB) (JQI=6.09)
- „Industrielle Beziehungen“ (JQI=6.09)

² <http://www.scopus.com>

³ <http://vhbonline.org>

- „Zeitschrift für Planung und Unternehmenssteuerung“ (JQI=5.90)
- „Zeitschrift für Wirtschafts- und Unternehmensethik“ (ZFWU) (JQI=5.89)

Due to their importance for the development of the discipline and their high prestige in the scholarly community, the following two journals were searched for relevant documents as well:

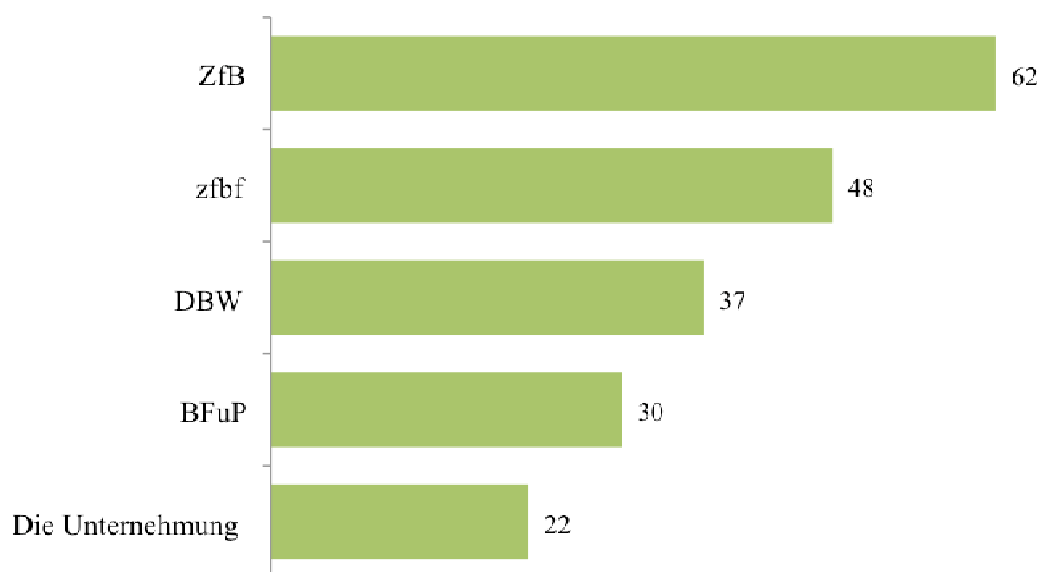
- „Die Unternehmung – Schweizerische Zeitschrift für betriebswirtschaftliche Forschung und Praxis“ (JQI=5.78)
- „Betriebswirtschaftliche Forschung und Praxis“ (BFuP) (JQI=5.57)

For the period from 1995 to 2011, 267 documents are considered relevant for the analyzed sub-discipline of corporate governance research. Overall, these 267 documents were published in 19 different journals, the five most frequent of which are shown in figure 1. Since corporate governance research is most frequently published in “ZfB”,

“zfbf”, “DBW”, “BFuP” and “Die Unternehmung”, these sources can be described as the core journals of the sub-discipline.

Since the co-citation network analysis is based on the sources cited by the 267 source documents, the required citation data need to be extracted from the reference lists of the 267 articles. In total, 10,026 different references were cited 13,527 times. An asymmetric 267 by 10,026 matrix is constructed containing the directed citation links from the 267 source documents to the 10,026 cited documents. The cited references contain not only journal articles but all kinds of cited documents, such as books, proceedings papers and reports. By including all document types, it is assured that the research landscape is depicted completely and important publications are not excluded by a limitation to a certain document type as it is often the case in co-citation studies.

Figure 1. The five most frequently publishing journals with number of documents relevant to corporate governance research



2.2 Analysis of Direct Citations on the Document Level

Before document similarity and network structures are examined based on the co-citation data, direct citations are analyzed. As shown in table 1, the 267 source articles cite the following publications most frequently: Jensen & Meckling (1976), Shleifer & Vishny (1997), Murphy (1999), Jensen (1986), Hart (1995), Witt (2003), Berle & Means (1932) and Jensen & Murphy (1990). Citations are distributed among documents typically according to the Pareto principle stating that a few documents are cited commonly, while the majority of documents is cited less frequently. 80.8 percent of the 10,026 documents are only cited once.

It should be noted that a certain bias exists in terms of the number of citations and age of the documents. Since document age is not corrected, older documents have a longer period and thus a higher chance of being cited than younger ones. However, most documents are most frequently cited two to three years after publication and become obsolete afterwards. As it is the purpose of this study to reflect formal communication structures in corporate governance research in German-speaking countries during the period from 1995 to 2011, publication age is not normalized. The ranking in table 1 shows that 62, i.e. 23.2 percent, of the 267 source documents cited Jensen & Meckling (1976), indicating that it is still the most visible work, although it has been published over 35 years ago,

whereas Witt (2003) is among the most influential documents in corporate governance research even though it was only published in 2003. Although this citation analysis is based on corporate governance research in the German-speaking countries, the most

influential publications are written in English. Witt (2003), which is the author's professorial dissertation, is the only German publication among the eight most frequently cited sources.

Table 1. Documents cited most frequently by the 267 source documents

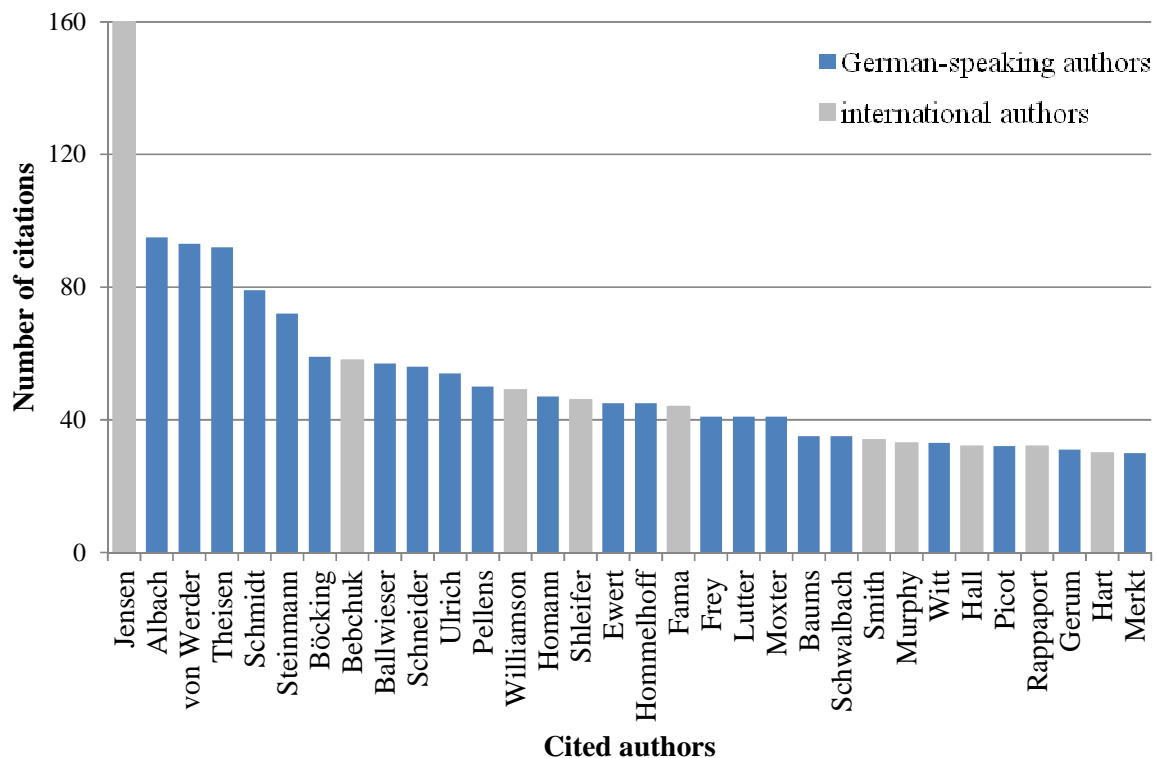
Cited document	Number of direct citations	Percentage of sources citing document
Jensen & Meckling (1976)	62	23.2%
Shleifer & Vishny (1997)	30	11.2%
Murphy (1999)	17	6.4%
Jensen (1986)	17	6.4%
Hart (1995)	17	6.4%
Witt (2003)	15	5.6%
Berle & Means (1932)	15	5.6%
Jensen & Murphy (1990)	15	5.6%

Overall, the eight documents represent a wide thematic range of corporate governance research. Known to be the 'intellectual fathers' of the corporate governance debate, Berle & Means (1932), laid the foundation with their well-known work „The Modern Corporation and Private Property”, while Jensen & Meckling (1976) and Jensen (1986) focus on the principal-agent theory and identify resulting agency costs in general corporate governance research and various sub-disciplines. With their reviews of the corporate governance discussion from a theoretical and practical perspective, Hart (1995) and Shleifer & Vishny (1997) essentially contribute to the general understanding of the topic. Jensen & Murphy (1990) and Murphy (1999) focus on executive compensation, which has become increasingly important in international corporate governance research as well as in the German-speaking community as presented below. The debate about executive incentive compensation can be seen as a further development of the agency theory and examines the interests of principal and agent in terms of performance-based compensation. Witt (2003), who represents an innovative approach comparing the corporate governance systems of Germany, Japan and the USA,

has become a central piece in the German-speaking community.

2.3 Analysis of Direct Citations on the Author Level

Direct citations cannot only be examined on the level of cited documents but can also be aggregated on the author level. Based on the first authors of the 10,026 references cited by the 267 source documents, 4,683 unique cited authors can be identified. Those authors cited at least 30 times are presented in figure 2. The most frequently cited and thus central authors in corporate governance research in the German-speaking countries are Michael C. Jensen, Horst Albach, Axel von Werder and Manuel R. Theisen. Again, a certain citation bias can be observed in favor of authors with a longer publication history as well as of those with a greater number of publications. Authors, who have been publishing a great number of documents for a long period of time are able to attract a greater number of citations compared to those who are at the beginning of their research careers. Since it is this study's aim to observe the overall influence of authors in corporate governance research in German-language journal articles from 1995 to 2011, this bias is not corrected for.

Figure 2. Number of citations per author for the 32 most frequently cited first authors, who were cited at least 30 times

As is shown in figure 2, the US-American Jensen is by far the author with the highest impact in the German corporate governance community. However, German-speaking researchers (indicated by the blue coloring in figure 2) dominate the list of most frequently cited authors. Overall, the 32 authors, who were cited at least 30 times, accumulate a total of 1,681 citations. Of those 69.2 percent (1,163) are German-speaking authors and 30.8 percent international authors.

2.4 Extracting Co-citation Data

The 267 by 10,026 matrix containing the direct citations by the source documents to their cited references is transformed into a co-citation matrix. A co-citation matrix is a special form of a co-occurrence matrix, which contains the number of co-citations for each pair of documents. Co-occurrence matrices are symmetric square matrices, meaning that the rows and columns are the same (in this case cited documents) and the matrix elements c_{ij} and c_{ji} are identical (in this case number of co-citations of documents i and j). The co-citation matrix based on the references of the 267 source documents consists of 10,015 cited publications⁴ in rows and columns and the number of

co-citations for each of the document pairs. This 10,015 by 10,015 co-citation matrix forms the database of the following cluster and network analysis.

2.5 Cluster and Network Analysis of Co-cited Documents

On the document level, co-citation data are supported by methods of social network analysis in order to analyze similarities and recurring structures, and to visualize the research landscape. As mentioned earlier, the greater the number of co-citations, the more the two documents are supposed to be related. In order to eliminate random co-citations, the co-citation matrix is diminished such that only co-citation values of 3 and above are considered. Since the majority of documents is co-cited only once or twice with each other, the co-citation matrix is reduced to a 463 by 463 matrix containing all documents, which have been co-cited at least three times with at least one other document. The density of the resulting co-citation network consisting of 463 vertices (co-cited documents) and 2,238 edges is 0.021. This indicates that of all 106,953 indirect connections possible between two vertices, 2.1% are realized. Counting the absolute number of co-citations, the strongest links exist between Jensen & Meckling (1976) and Shleifer & Vishny (1997), Berle & Means (1932) and Jensen (1986), respectively, and Shleifer & Vishny (1997) and Berle & Means (1932).

⁴ 11 of the 10,026 cited publications were not co-cited together with another document, because they were the only document cited in the reference list. They were hence not included in the co-citation matrix.

As shown in table 2, these combinations of documents are most frequently co-cited, i.e. they occur together in the reference lists of 21, 13, 12 and 12 of the source documents, respectively. The high number of co-

occurrences can be explained by the general thematic orientation of these publications. They are often cited together to describe the theoretical background of corporate governance research.

Table 2. Most frequently co-cited document pairs

Document pair	Number of co-citations
Jensen & Meckling (1976) - Shleifer & Vishny (1997)	21
Jensen & Meckling (1976) - Berle & Means (1932)	13
Jensen & Meckling (1976) - Jensen (1986)	12
Shleifer & Vishny (1997) - Berle & Means (1932)	12

Since the number of co-citations of two publications depends on how often these two are cited in total, similarities should not be computed on the absolute number of co-citations but on a relative value in relation to the absolute number of citations perceived by the two documents. Several similarity measures, such as the cosine or the Jaccard index, can be applied to compute normalized values reflecting the relative co-citation strength between two documents (van Eck & Waltman, 2009). This kind of normalization is especially important if documents are clustered, i.e. grouped, based on similarity values. Thus, absolute values inhibit that single clusters can be separated accurately. Documents with a small absolute number of co-citations and a small number of total co-citations will not be assigned to a cluster. Appropriate normalization solves this problem as the number of co-citations is put into relation to the total number of co-citation. This study applies the so-called ‘association strength’ to determine relative similarity values. Association strength is defined as

$$\text{Association Strength} = \frac{c_{ij}}{s_i s_j}$$

where c_{ij} represents the number of times the documents i and j were co-cited and s_i and s_j stand for the sum of all co-citation relations of i and j in the entire network. In contrast to other well-known similarity measures such as the cosine of Jaccard index, the association strength represents a probabilistic instead of a set-theoretic approach. The association strength proved to be particularly suitable for co-citation analysis (van Eck & Waltman, 2009).

While clustering groups of documents based on their similarities, social network graphs visualize complex network structures. Both methods clustering and mapping are combined in VOSviewer⁵ providing a visualization of relations between and similarities of the co-cited documents. Based on the association strength and an adjustable parameter clusters can be

computed and integrated into the network graph, which is presented in figure 3. The vertices reveal the 463 co-cited documents; the edges represent the 1,800 strongest of all 2,238 connections in terms of normalized co-citation values. Cluster allocations are indicated by color. Altogether, 32 clusters are identified, which comprise between 156 (cluster #01) and 2 (clusters #15 to #32) documents each.

The number of documents per cluster is shown in figure 4. The six largest clusters (#01 to #06) cover in conjunction 82.3% (381) of the 469 documents. The smaller clusters in the periphery of the co-citation network are not connected to the main component as connections are reduced to the 1,800 strongest co-citation values after normalization. These documents are only peripheral to corporate governance research in the German-speaking countries and are irrelevant to the field of research.

The following interpretation is focused on the three main clusters. Figure 4 pictures the six largest clusters and includes different sizes of vertices. The size of the vertices depends on the so-called degree, the number of the connections within the whole network. The more connections a vertex has in the network, the larger its size in the network graph as depicted in figure 5. Jensen & Meckling (1976) have the most connections. The authors were co-cited 479 times together with 208 of the 469 documents. Due to the high centrality degree the document occupies the central position in the network and has connections to all of the main clusters (#1 to #6). This structure certifies the impact and importance of this work for the entire corporate governance research.

⁵ VOSviewer is a software for the visualization of clusters and network structures, which was especially developed for bibliometric co-occurrence data. The software is available for download free of charge at <http://www.vosviewer.com>.

Figure 3. Co-citation Network with 463 Documents and 32 different clusters. Cluster allocation is indicated by color. The six largest clusters (#01 to #06) are highlighted together with the most important document

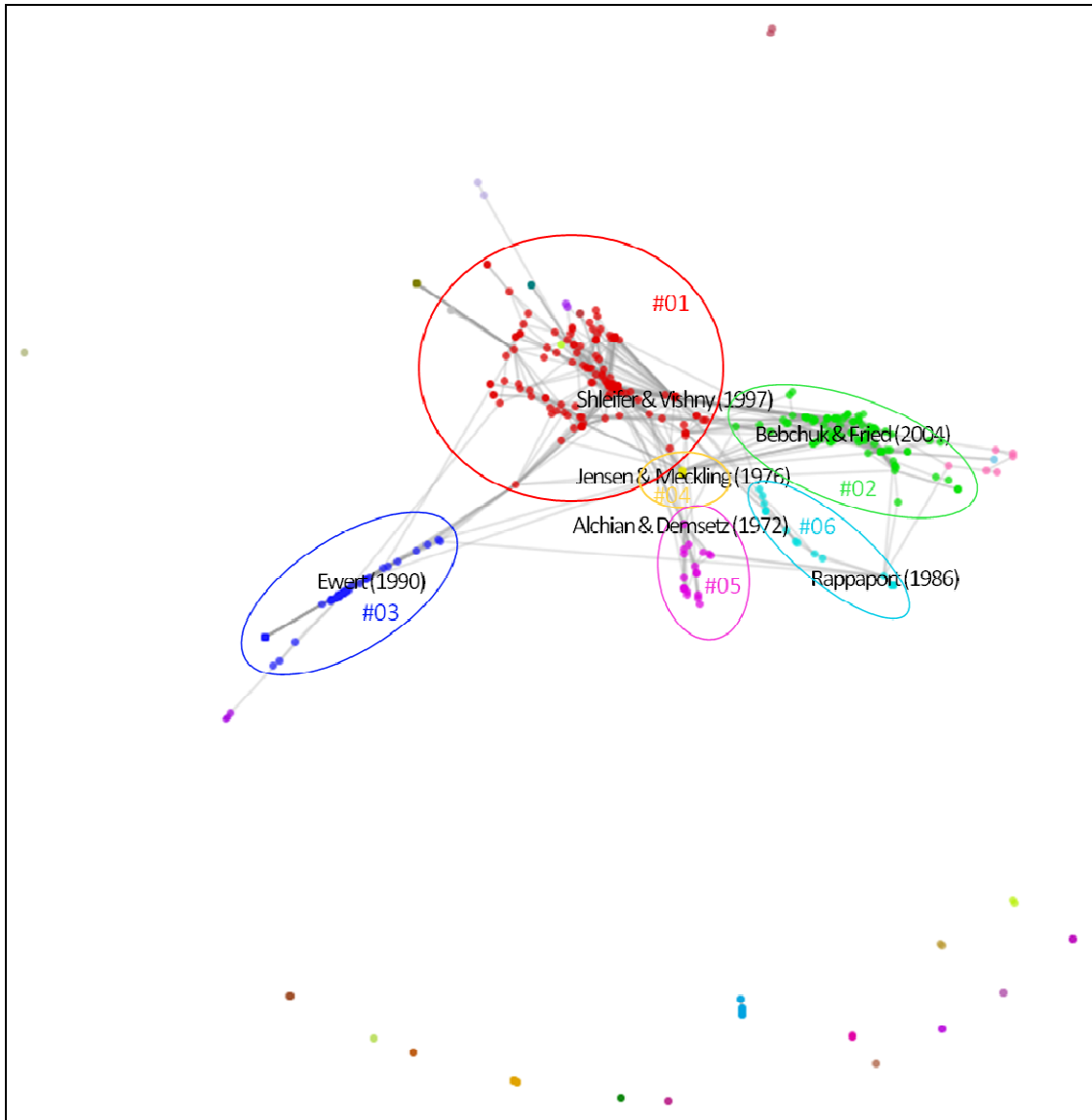


Figure 4. 32 clusters identified based on co-citation similarities with number of documents per cluster

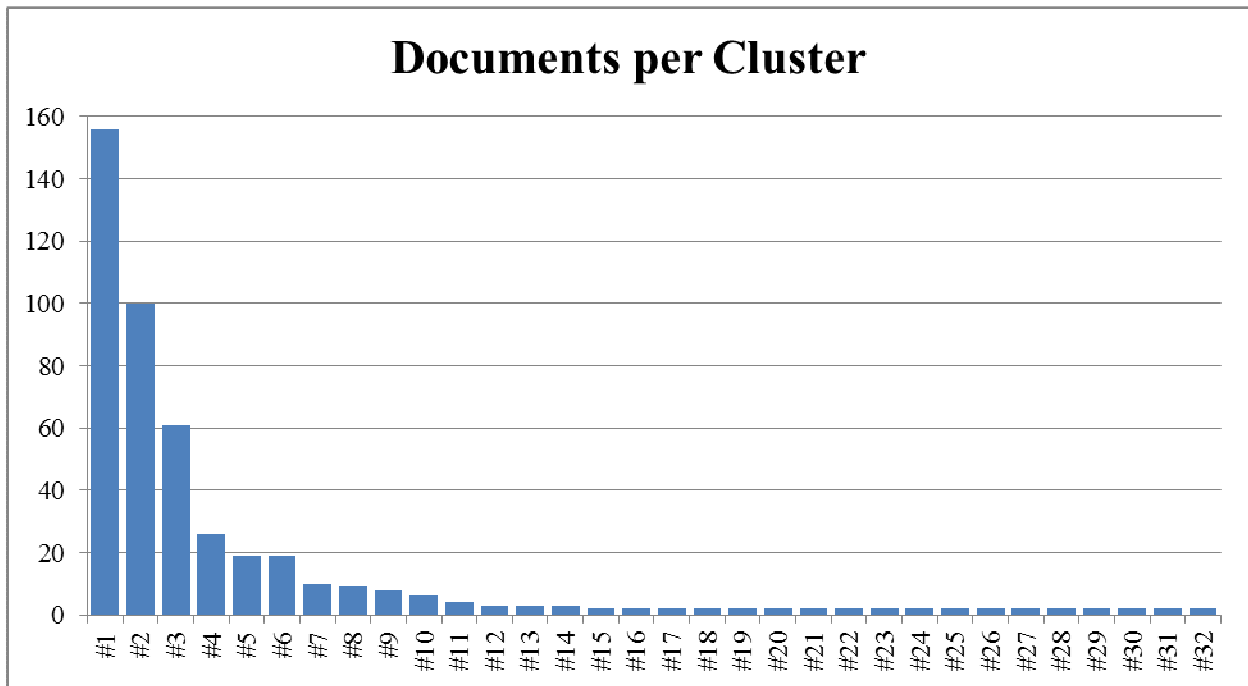


Figure 5. Largest component of the co-citation network including the six largest. Cluster allocation is indicated by color, size of vertices represents degree

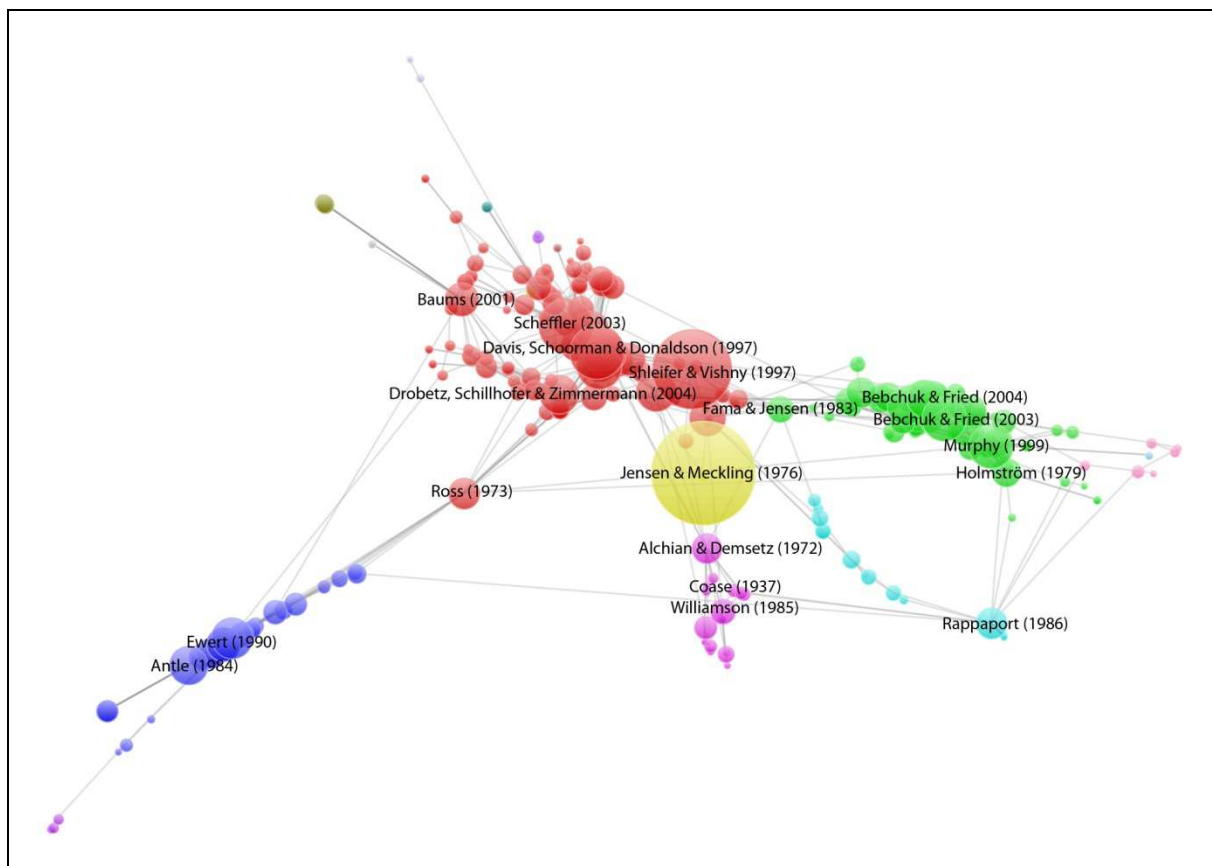


Figure 6 demonstrates a detailed representation of the whole network, which denotes cluster #01. The

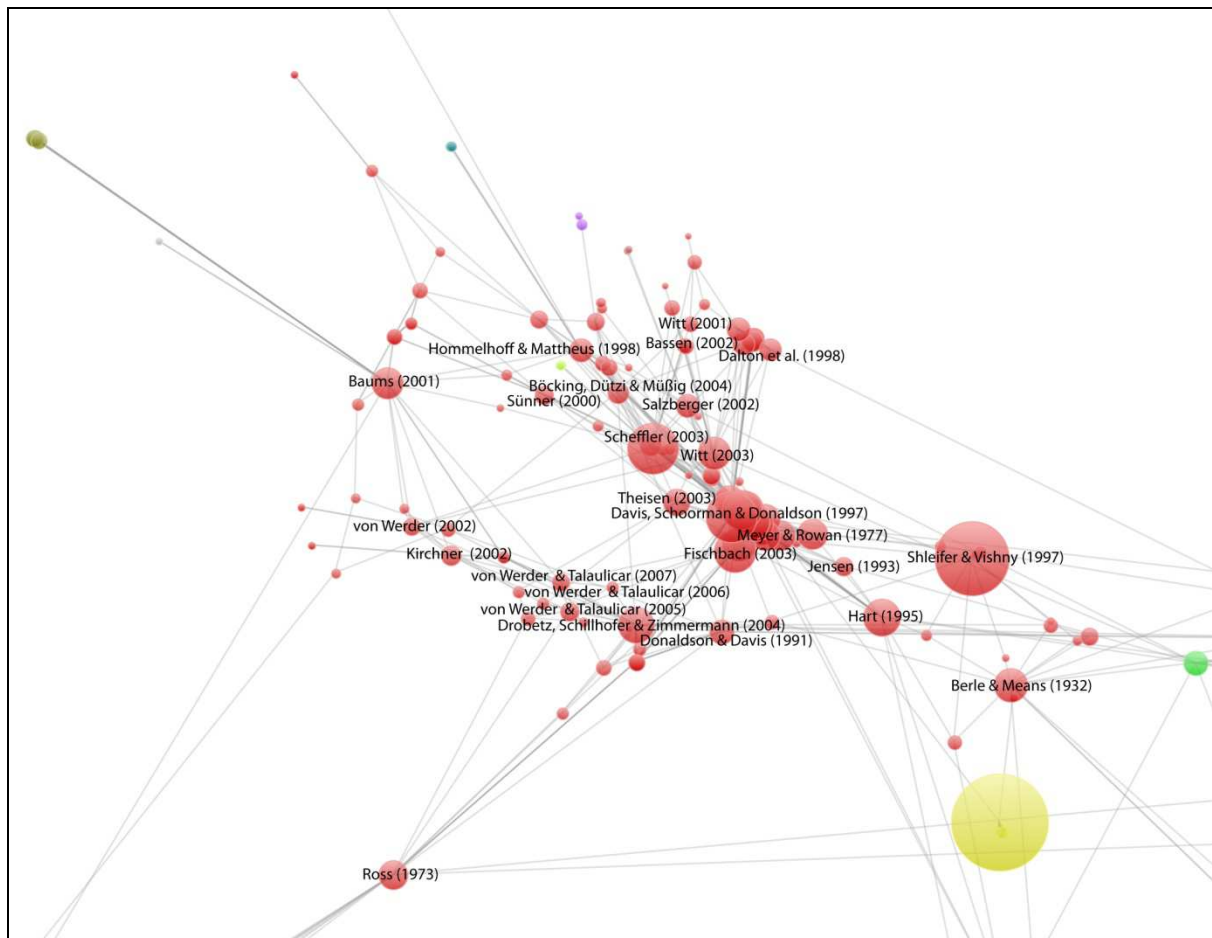
first cluster (#01) mainly visualizes the German-speaking community of corporate governance

research and is illustrated in a separate figure due to its complexity and size (figure 6). Besides some fundamental papers from English-speaking countries numerous German authors are represented in this cluster, where the papers of Berle & Means (1932), Ross (1973), Shleifer & Vishny (1997) and Hart (1995) are the connecting points between German studies and the international discussion on corporate governance. The importance of these papers can be characterized as fundamental theoretical work for the entire field of corporate governance research. Additionally, the studies by Jensen (1993) and Meyer & Rowan (1977) are also two fundamental theoretic papers in the cluster, which explore the corporate organization and its impact on the governance structure.

The theoretical part includes furthermore the work of Davis et al. (1997) and Donaldson & Davis (1991) regarding the stewardship-theory as an opposite position to the classic principal-agent theory. Finally Dalton et al. (1998) and Baghat & Black (1999) analyze the board structure and the independence of the board members, which represents a connection of the different theoretical studies, on the one hand, and the origin for some German researches and their work, on the other hand.

The main German papers should not be analyzed singularly, but in a more holistic approach. Besides the habilitation (post-doctoral lecturing qualification) of Witt (2003) there are various papers, which elaborate on general as well as specific questions of the corporate governance discussion as a central theme, for example, Bassen (2002), Fischbach (2003) and Scheffler (2003) or Böcking et al. (2004). In addition to these mostly scientific approaches the studies by Baums (2001), Cromme (2002), von Werder (2002) and Theisen (2003) are the reference work for the implementation of the German Corporate Governance Code (GCGC), which was introduced in the years 2001 and finalized in 2002. Thereby, the position of the different papers by von Werder & Talaulicar (2007,2008,2009) should be explained. Their annual publications represent a periodic analysis of the compliance with the GCGC for the public listed companies in Germany and are often used as a reference for acceptance of the code. The work of Theisen (2003) and Hommelhoff & Mattheus (1998), all legal academics, show the close connection between the legal and business discussion within the field of corporate governance research. In summary, these fundamental papers form the German basic understanding of corporate governance.

Figure 6. Detailed view of cluster #01



The second largest cluster (#02) concentrates on executive compensation and incentives, which has started to develop in the early 1990s. The theoretical framework is based on the works of Holmström (1979) and Fama & Jensen (1983), and can be understood as a further development of the principal-agent theory and the work of Jensen & Meckling (1976). While Holmström (1979) focuses on the appearance and meaning of the moral hazard, Fama & Jensen (1983) review the importance of the board of directors and its function for efficient and effective corporate governance and the possibilities of useful controls. Murphy (1999) presents a general evaluation of the executive compensation as an agency problem, which was further determined as an integral part of corporate performance by Bebchuk & Fried (2003, 2004). Overall, the structure of this cluster could be described as homogenous, with few but strong vertices.

The third cluster (#03) covers subjects concerning auditing and accounting and is driven by the work of Antle (1984) „Auditor Independence“ and Ewert (1990) „Auditing and asymmetric Information“. These two studies integrate the principal-agent theory into accounting and auditing research and are the source for most of the German researches within these fields of interest. The external auditor acts as an additional control mechanism for the principal and shareholders, respectively, and supports the reduction of asymmetric information. Although the regulatory accounting, auditing and governance frameworks in the US or UK differ from that in Germany, the non-German papers are crucial sources for the German research community.

3. CONCLUSION AND FURTHER RESEARCH

Summarizing, the findings and interpretations allow a new view on the German corporate governance research and on the particular understanding of corporate governance in the German-speaking research community. Today, around 10 years after the introduction of the GCGC, corporate governance research is an established segment of German business administration research with many different specific topics. However the focus still lies on the new inventions from the US or UK, which are still the starting point for German scholars to explore the phenomena of corporate governance in Germany. Based on the fundamental theoretical and empirical Anglo-American work of different authors, the German studies are well connected. The chronological upstream of the English papers could be interpreted as an outcome of the long established capital markets and therefore an understanding of the separation of ownership and control. Although the separation of ownership and control could also be identified in Germany in general, most of the German research adopts the scientific problems, methods and

approaches from the one-tier-system and adjusts them to the German two-tier-system. A detailed analysis allows the identification of non-German research topics and a transfer of these to the German system after a period of time. Especially the English studies with conceptual or theory-building contents are standard references for the German scholars. Only the publications of the Government Commission “German Corporate Governance Code” have a direct impact on the German research environment.

Some limitations of our paper are worth noting. Although the presented analyses allow a first overview of the German corporate governance research structure, some potential issues and dimensions are excluded. A country-specific view of the used references could be possible. This international perspective could be important to identify research networks of different scholars or institutions. Analyzing the keywords or the document types (e.g. journal article, book and dissertation) of the cited references could also be a possibility to reach another point of view. Additionally, a periodic analysis can be an interesting chance to identify a changing or non-changing research structure.

The aim of this paper was to identify and understand the German corporate governance research with the help of bibliometric methods. The applied citation and co-citation analyses were useful steps to characterize and structure the research field. Although English literature is still the dominant and important “anchor” of German researchers, some kind of “German school”, basically due to the different regulatory framework, can be identified.

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