The Knowledge Diffusion Paths of Corporate Social Responsibility – From 1970 to 2011

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ABSTRACT
This paper presents a unique approach to translating a complex citation network into simple main paths. We apply this approach to explore the knowledge diffusion paths of corporate social responsibility (CSR) literature over the past 40 years. ISI Web of Science (WOS) is used as the data source for retrieving the CSR papers and their citation data. We then apply main path analysis to identify and visualize the local, global, and key-route main paths. The local and global main paths identify those papers that play a key role in the knowledge diffusion of CSR. The key-route main path clearly exhibits the divergence-convergence pattern of CSR development. Although the divergence-convergence pattern of a theory’s development has been hinted at in previous literature, we propose the key-route main path to systematically identify and exhibit it. This approach provides a useful method for researchers to figure out the development cycles of a target field. Copyright © 2013 John Wiley & Sons, Ltd and ERP Environment.

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Introduction

THE CONCEPT OF CORPORATE SOCIAL RESPONSIBILITY (CSR) WAS PROMOTED IN THE 1950S (BOWEN, 1953), ITS NOTIONS AND definitions expanded and proliferated over the 1960s and 1970s (Davis and Blomstrom, 1966; Sethi, 1975; Frederick, 1978; Carroll, 1979); and it matured in the 1980s (Carroll, 1999). In the 1990s, many scholars linked CSR with other theories to enhance the concept of CSR (Wood, 1991a; 1991b; Clarkson, 1995; Jones, 1995), and by the late 1990s, the ideas of CSR had become universally promoted (Lee, 2008). After 2000, numerous researchers put forth efforts on the empirical studies and/or theorization of CSR, with the result that ten times as many CSR articles have been published over the past decade versus the sum total of all CSR articles beforehand.

Sethi (1975) proposed a three-stage path for adapting CSR behavior: social obligation, social responsibility, and social responsiveness. Beyond social responsibility, Frederick (1978) articulated social responsiveness as the capacity of a corporate to respond to social pressure. The concept of CSR was not generally accepted until Carroll (1979) suggested a three-dimensional conceptual model of corporate social performance. Several researchers later further modified, developed, and strengthened Carroll’s model (Ullmann, 1985; Wartick and Cochran, 1985; Wood, 1991a).

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Over the past few decades CSR has triggered vast interest and publicity from practitioners to scholars (Melo and Garrido-Morgado, 2012), who have devoted much effort to CSR via theorizing or conducting empirical studies. In fact, more than 2,000 articles have been published over the past 40 years. Some researchers investigated CSR activities in developed countries (Maignan and Ferrell, 2000; Matten and Crane, 2005; Lehmann et al., 2010; Carnevale et al., 2012); some extended their studies to developing countries (Waldman et al., 2006; Dobers and Halme, 2009; Sobhani et al., 2009); some examined the relationship between CSR and corporate financial performance (Bowman and Haire, 1975; Spencer and Taylor, 1987; Waddock and Graves, 1997; McWilliams and Siegel, 2000; Callan and Thomas, 2009); and some investigated CSR from a stakeholder’s perspective (Clarkson, 1995; Jones and Wicks, 1999; Prado-Lorenzo et al., 2009; Shah, 2011). We believe it is now time to take up a systematic review on the knowledge diffusion trajectories of the CSR literature.

Several researchers have recently reviewed the CSR literature from different angles (Margolis and Walsh, 2003; Orlitzky et al., 2003; Auld et al., 2008; Lee, 2008; Wood, 2010). Most of these review papers use tens or hundreds of papers in order to analyze and summarize the theoretical development of CSR. This kind of approach can intensively examine the selected papers, but it is almost impossible apply to a huge dataset, say thousands of papers.

Orlitzky et al. (2003) conducted a meta-analysis on 52 studies to rigorously review the relationship between corporate social performance (CSP) and corporate financial performance (CFP). They found that CSP is more correlated with accounting-based measures of CFP than with market-based indicators. Margolis and Walsh (2003) reviewed 127 studies published over 1972 to 2002 and reconfirmed that there is a positive association between CSP and CFP. They argued that studies of the relationship between CSP and CFP reveal little evidence that CSP destroys value, injures stakeholders in a significant way, or damages the wealth-creating capacity of firms. They further proposed an alternative approach to investigate the tension between economic and broader social objectives.

Lee (2008) traced the conceptual evolutionary path of theories on CSR and argued that researchers have moved their focus from the macro-social effects of CSR to CSR’s effects on organization profit, and from explicitly normative and ethics-oriented arguments to implicitly normative and performance-oriented managerial studies. Auld et al. (2008) identified seven ideal types of CSR innovations and suggested that firms should assess how and whether CSR initiatives can transform a win-lose situation into a win-win situation. Wood (2010) reviewed the literature of CSP measurement and offered some conclusions about existing CSP research. She recommended that CSP researchers should refocus on stakeholders and society and also need to cross the disciplinary barriers of CSP.

These review papers provide comprehensive knowledge of the selected topic for readers, but the conclusions based on expert opinions are embedded with problems of subjectivity (Acedo et al., 2006). Moreover, they only handle a small volume of articles. When the volume is large, the review work becomes challenging via using traditional approaches. This current study presents a unique way of identifying the major papers that play an important role in the knowledge diffusion flow of 2,447 CSR articles published over the past 40 years. This approach is new to the CSR literature, and we demonstrate its effectiveness and efficiency in identifying the major papers of a targeted discipline.

Methodology

Main path analysis is the focal method of identifying those papers that play a major role in CSR knowledge diffusion. The analysis uses the citation data to trace the main flow of knowledge diffusion. Citation data of CSR papers generate the citation network, and main path analysis is applied to identify various main paths accordingly.

Citation data in academic publications are commonly used to indicate an academic publication’s acceptance and contain rich information on how knowledge disseminates. The citation relation network can be used to track the documented flow and evolution of research over time (Kostoff, 1998). Garfield et al. (1964) drew and analyzed the ‘topological network diagrams’ of a set of 40 DNA publications to demonstrate the usefulness of citation relationships. Main path analysis is found to be a method that is able to extract crucial knowledge flow information from citation relationships.

Hummon and Doreian (1989) suggested that citations are the explicit linkages among papers that share some important common content in a specific field. Based on the citation information from academic papers, they introduced the main path analysis to trace the main flow of ideas in DNA development. Main path analysis begins
with building a citation network and assigning a significance index to each citation link. After the significance index is decided, a ‘priority first search’ is conducted to select the significant followers of an earlier publication. The path thus generated is the most significant path of the target academic field. Hummon and Doreian (1989) applied the method on the same DNA citation network used in Garfield et al. (1964) and demonstrated that the outcome is very convincing. Hummon and his colleagues further successfully applied the method to different applications (Hummon et al., 1990; Hummon and Carley, 1993; Carley et al., 1993).

Batagelj and Mrvar later implemented the social network analysis in the freeware Pajek (Batagelj and Mrvar, 1998) and offered different algorithms for determining various versions of the significance index to enhance the main path analysis (Batagelj, 2003). There are several approaches to count the significance index of a citation link: the search path link count (SPLC), the node pair projection count (NPPC), the search path node pair (SPNP), and the search path count (SPC). Batagelj (2003) concluded that SPC provides better properties than others and is the most appropriate index for analyzing a larger social network.

Figure 1 exhibits a sample of a citation network in which each link is labeled with the SPC significance index. Each node represents a paper and the link between two nodes represents the citation relationship. For example, node C cites nodes A and B, whereas it itself is cited by nodes E and J. A ‘source’ is defined as a node that is cited, but cites no other nodes; and a ‘sink’ is a node that cites other nodes, but is not cited. In other words, sources are the origins of knowledge, while sinks are the end points of knowledge diffusion flow. In Figure 1, the network contains two sources, A and B, and four sinks, F, H, I, and J. Assuming that one exhausts all efforts in searching out all paths from all the sources to all the sinks, each link’s SPC is defined as the total number of times the link is traversed. For example, link A-C has SPC value of 3, because paths A-C-E-H, A-C-E-J, and A-C-J pass through it. The larger the SPC is, the more important the link’s role is in knowledge diffusion. We explain how to explore the local, global, and key-route main paths from Figure 1 in turn.

Hummon and Doreian (1989) proposed a ‘priority first search’ algorithm to identify the one and only one path to represent the main path of a citation network, which we name as the ‘local main path’. The local main path is constructed by beginning the search from all source nodes and selecting the link(s) with the largest SPC value as the start link(s). Take the end node(s) of the link(s) as the start point(s) for the next step until a sink node is hit. If there are ties at each start point, then take all the tied links into consideration. In Figure 1, link B-D is selected from the source node B, and then D is taken as the start point for the next step. Afterward, D-G, G-I, and G-J are picked sequentially. The local main paths of the sample citation network are A-D-G-I and A-D-G-J as shown in Figure 2.

One can find that the accumulated SPC value of the local main path is 7, but the accumulated SPC values of paths A-C-E-H, A-C-E-J, B-C-E-H and B-C-E-J are 9, which is larger than 7. This means that the local main path may not be the path with the largest accumulated SPC value among all paths in the whole network. Liu and Lu (2012) proposed the concept of ‘global main path’ to identify the path with the largest accumulated SPC value. The global main path emphasizes the ‘overall importance’ while the local main path highlights the progressing significance. Figure 3 shows the global main path of the sample citation network.
Although the global main path can complement the local main path via offering a feature of overall importance, one may find that the link(s) with the largest SPC value may not always be included in the global main path (for example, link B-D). Liu and Lu (2012) suggested the concept of ‘key-route main path’ to overcome this issue. The key-route main path is constructed as follows: select the link(s) with the largest SPC value as the key-route(s); search forward from the end node of the key-route(s) until a sink is hit; search backward from the start node of the key-route(s) until a source is hit; combine the paths searching forward and backward, and the key-route main path is formed.

Figure 4 represents the key-route main paths with the largest two SPC value links, 4 and 3. The largest SPC value is 4, and links B-D and C-E are identified accordingly. The second largest SPC value is 3, and links A-C and B-C are selected. Searching forward and backward from these links, the key-route main paths A-C-E-H, A-C-E-J, B-C-E-H, B-C-E-J, B-D-G-I, and B-D-G-J are then traced. These key-route main paths include all the links with the largest two SPC values. Multiple key-route main path approaches allow us to cover as many important links as we want. The key-route main paths usually contain both the local and global main paths. They are very useful in identifying the structural pattern, especially for the divergence-convergence pattern of knowledge diffusion flows.

The main path analysis provides several merits for a large citation network. First, it reduces a complicated citation network to one or several simple path(s), with a small number of crucial nodes and links. Second, it provides a sequence of historical events that significantly contribute to the development of a particular field. This simplification is very helpful for scholars who are considering entering into a new research domain. Third, the main path analysis takes both the direct influence and indirect influence into account. Traditional citation count analysis considers direct influence only.
Data

The ISI Web of Science (WOS) is the data source used to retrieve the CSR-related publications. WOS contains the Science Citation Index Expanded (SCIE), Social Sciences Citation Index (SSCI), Arts & Humanities Citation Index (A&HCI), and Conference Proceedings Citation Index (CPCI). WOS includes the citation data of articles and is a popular data source for bibliometric analysis. The data time span ranges from 1970 to 2011 in order to explore the evolutionary development of CSR over the past 40 years.

Keyword definitions are very critical in extracting an appropriate dataset from the huge database. We referred to several review papers (Margolis and Walsh, 2003; Orlitzky et al., 2003; Lee, 2008; Wood, 2010) for collecting appropriate keywords. The final keywords for the query consist of corporate social responsibility, corporate citizenship, corporate environmental responsibility, corporate environmental performance, corporate social involvement, corporate social initiatives, corporate public policy, stakeholder management and sustainability, corporate social issue, corporate social responsiveness, and corporate conscience. Table 1 shows the details of the query. Based on these keywords, the total number of papers retrieved is 2496. To assure the correctness of the dataset, we carefully reviewed and screened out those papers that are actually not our target, and 2437 papers remain.

Although the ISI database is one of the most complete databases with citation data for academic research studies, in order to not miss important papers in the CSR field, we strengthened our dataset by supplementing it with some highly cited papers in Google Scholar. The process begins with paralleling the WOS and Google citation counts, because, Google Scholar in general has a larger citation count (‘cited by’ count). First, we ranked the 2437 papers

<table>
<thead>
<tr>
<th>Keywords</th>
<th>No. of papers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate social responsibility</td>
<td>2158</td>
</tr>
<tr>
<td>Corporate citizenship</td>
<td>181</td>
</tr>
<tr>
<td>Corporate environmental responsibility</td>
<td>22</td>
</tr>
<tr>
<td>Corporate environmental performance</td>
<td>41</td>
</tr>
<tr>
<td>Corporate social involvement</td>
<td>3</td>
</tr>
<tr>
<td>Corporate social initiatives</td>
<td>5</td>
</tr>
<tr>
<td>Corporate public policy</td>
<td>2</td>
</tr>
<tr>
<td>Stakeholder management and sustainability</td>
<td>2</td>
</tr>
<tr>
<td>Corporate social issue</td>
<td>2</td>
</tr>
<tr>
<td>Corporate social responsiveness</td>
<td>19</td>
</tr>
<tr>
<td>Corporate conscience</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>2496</td>
</tr>
</tbody>
</table>

*Table 1. Keywords and search results*
by citation count and found that the 100th paper has been cited by 55 papers in the dataset. We searched this paper from Google Scholar and found that the equivalent citation count there is 400. Second, we used the same keywords to search CSR-related papers from Google Scholar and identified those papers with more than 400 citation counts, but which are not included in our dataset. We got 10 papers and supplemented them to our dataset. Finally, the dataset for further analysis consists of 2447 papers.

**Basic Statistics**

We summarized the statistics of the yearly number of CSR papers, the total number of CSR papers written by each author, and the total number of CSR papers published by each journal.

Figure 5 shows the accumulated number of CSR publications each year. One can observe that the CSR literature is in the emerging stage before 2000 and enters the growth stage after 2000. Table 2 presents some milestones of the growth in papers. The accumulation of the first 100 papers takes 15 years (from 1972 to 1986); the second 100 and the third 100 papers take 11 and 4 years, respectively. In contrast, 109 papers were published in a single year (2005), and since 2009 over 400 papers were published each year. This exhibits that CSR has become a popular research subject over recent years.

Table 3 summarizes some statistics of journals that have published CSR articles, including total number of papers published, the number of papers published after 2000, the g-index, the h-index, and active years that published CSR papers. Hirsch (2005) and Egghe (2006), respectively, proposed the h-index and g-index to evaluate research performance. Normally, the higher the h-index or g-index is, the higher the impact of the research paper.

When ranking journals according to the total number of CSR papers published, the top five journals are *Journal of Business Ethics*, *Corporate Social Responsibility and Environmental Management*, *Business & Society*, *Public Relations Review*, and *Business Ethics – A European Review*. The top one, *Journal of Business Ethics*, has published more than 700 CSR papers over the past 30 years. *Corporate Social Responsibility and Environmental Management* has only been

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**Figure 5.** Growth curve of the accumulated number of CSR papers

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of papers</th>
<th>Accumulated number of papers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>9</td>
<td>101</td>
</tr>
<tr>
<td>1997</td>
<td>23</td>
<td>212</td>
</tr>
<tr>
<td>2001</td>
<td>38</td>
<td>315</td>
</tr>
<tr>
<td>2005</td>
<td>109</td>
<td>600</td>
</tr>
<tr>
<td>2009</td>
<td>410</td>
<td>1619</td>
</tr>
<tr>
<td>2010</td>
<td>425</td>
<td>2044</td>
</tr>
<tr>
<td>2011</td>
<td>403</td>
<td>2447</td>
</tr>
</tbody>
</table>

**Table 2.** Some milestones of the growth in papers

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included in WOS since 2008, but it has published the second highest volume of CSR papers over the past four years. If we rank journal by the \( g \)-index, the top five journals are *Journal of Business Ethics*, *Academy of Management Review*, *California Management Review*, *Harvard Business Review*, and *Business Ethics Quarterly*. When ranking with the \( h \)-index, the top five journals are *Journal of Business Ethics*, *Academy of Management Review*, *Academy of Management Journal*, *California Management Review*, and *Strategic Management Journal*. Some journals published less paper but own a higher \( g \)-index or \( h \)-index.

One may question why several familiar journals in the CSR field are not included in the top journal list. The reason is that some journals are included in the WOS database late and not all of their publications are covered. For example, the journal *Business Strategy and the Environment* published its first issue in 1992, but WOS only includes its papers from 2009. Twelve papers are included in our dataset, and the number is not enough to be ranked in the top journal list. However, we have supplemented the highly cited CSR papers from Google Scholar, and we believe that the issue of missing important CSR papers has been minimized.

Table 4 presents the statistics of individual authors. Their rankings in total papers, \( g \)-index, and \( h \)-index are more consistent than those of the journals. According to the data we collected from WOS, Moon, Siegel, Perrini, Brammer, and Matten are the top five productive authors of CSR papers. When examining co-authorship in the dataset, we find that there are many co-author teams. The following teams are those authors who have a co-authorship of more than three times in CSR research: Moon, J. and Matten, D.; Perrini, F. and Tencati, A.; Bhattacharya, C. B. and Sen, S.; Crane, A. and Matten, D.; Lindgreen, A. and Maon, F.; Lindgreen, A. and Swaen, V.; Brammer, S. and Millington, A.; Brammer, S. and Pavelin, S.; Husted, B. W. and Allen, D. B.; Siegel, D. S. and McWilliams, A.; Palazzo, G. and Scherer, A. G.; Swaen, V. and Maon, F.; Maigian, I. and Ferrell, O. C. At least one member of the co-author teams is in the top 20 author list. The results show that co-authoring is an important factor to the productivity of publications.

### Main Paths of CSR

The citation network (Figure 6) generated from the citation data of 2447 papers is very complex and does not offer any clear meanings. We adopt main path analysis to reduce the complex citation network into simple paths, yet still keep the
important articles over the past 40 years. We analyze the knowledge diffusion trajectories as follows: First, we conduct the local, global, and key-route main path analyses over two different time periods and then compare them to check if there is any significant difference between them. Second, we analyze the global 20 key-route (global key-route with the top 20 SPC links) main paths to examine the divergence-convergence pattern of CSR development.

Paths’ Evolution
According to the growth curve of the accumulated CSR papers (Figure 5), we know that the development of the CSR literature is still in the growth stage. The development of CSR was in the emerging stage before 2000, but has

<table>
<thead>
<tr>
<th>Total papers</th>
<th>As 1st author</th>
<th>g-index</th>
<th>h-index</th>
<th>Active years</th>
<th>Author name</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>6</td>
<td>15</td>
<td>9</td>
<td>1995 ~ 2011</td>
<td>Moon, J</td>
</tr>
<tr>
<td>15</td>
<td>3</td>
<td>15</td>
<td>8</td>
<td>2000 ~ 2011</td>
<td>Siegel, DS</td>
</tr>
<tr>
<td>15</td>
<td>8</td>
<td>11</td>
<td>7</td>
<td>2004 ~ 2010</td>
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</tr>
<tr>
<td>14</td>
<td>11</td>
<td>14</td>
<td>10</td>
<td>2003 ~ 2010</td>
<td>Brammer, S</td>
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<td>13</td>
<td>5</td>
<td>13</td>
<td>9</td>
<td>2003 ~ 2010</td>
<td>Matten, D</td>
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<td>13</td>
<td>4</td>
<td>13</td>
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<td>2001 ~ 2011</td>
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<td>7</td>
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<td>8</td>
<td>5</td>
<td>4</td>
<td>2004 ~ 2010</td>
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<tr>
<td>11</td>
<td>5</td>
<td>11</td>
<td>9</td>
<td>1974 ~ 2010</td>
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<td>11</td>
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<td>9</td>
<td>5</td>
<td>2007 ~ 2011</td>
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</tr>
<tr>
<td>10</td>
<td>2</td>
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<td>7</td>
<td>2001 ~ 2011</td>
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<tr>
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<td>9</td>
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<td>6</td>
<td>2000 ~ 2010</td>
<td>Husted, BW</td>
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<td>9</td>
<td>2</td>
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<td>6</td>
<td>2005 ~ 2011</td>
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<td>0</td>
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<td>6</td>
<td>2003 ~ 2008</td>
<td>Millington, A</td>
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<tr>
<td>8</td>
<td>4</td>
<td>8</td>
<td>6</td>
<td>1991 ~ 2010</td>
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<tr>
<td>8</td>
<td>0</td>
<td>5</td>
<td>4</td>
<td>2008 ~ 2010</td>
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<tr>
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<td>4</td>
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<td>3</td>
<td>2008 ~ 2010</td>
<td>Maon, F</td>
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<tr>
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<td>7</td>
<td>6</td>
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<td>Waldman, DA</td>
</tr>
<tr>
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<td>1</td>
<td>7</td>
<td>6</td>
<td>2004 ~ 2010</td>
<td>Tencati, A</td>
</tr>
</tbody>
</table>

Table 4. Author statistics

Figure 6. Citation network of the 2447 papers
entered the growth stage since 2001. We conducted the main path analyses over two different periods, from 1970 to 2000 (hereafter the first period) and from 1970 to 2011 (hereafter the second period), and compared them. If there is any significant difference between these two periods, then it means that the development path of CSR in the growth stage is different from that of the emerging stage.

Figure 7 shows the local main paths over two periods. In the figure, the label for each paper begins with the last name of the first author, continues with the first initials of any co-authors (in capital letter), and ends with its publishing year. The local main path of the first period consists of Friedman1970 (Friedman, 1970), BowmanH1975 (Bowman and Haire, 1975), AbbotM1979 (Abbott and Monsen, 1979), AupperleCH1985 (Aupperle et al., 1985), Wood1991b (Wood, 1991b), Clarkson1995 (Clarkson, 1995), and TurbanG1997 (Turban and Greening, 1997). In the second period, Wood1991a (Wood, 1991a) replace Wood1991b, and MitchellAW1997 (Mitchell et al., 1997) replace TurbanG1997. It means that more papers cited TurbanG1997 before 2000, but MitchellAW1997 overwhelmed TurbanG1997 after 2000. Turban and Greening (1997) is an empirical study that examines the relationship between CSP and a firm’s reputation and attractiveness to applicants. Mitchell et al. (1997) is a theoretical article about conceptualizing CSR from the stakeholder perspective. This replacement represents that the stakeholder perspective became a popular topic in CSR after 2000. Wood (1991a) reformulated the Wartick and Cochran (1985) CSP model via linking CSP with organizational institutionalism, stakeholder management, and social issues management, so as to better frame the principles, processes, and outcomes. Wood (1991b) reviewed the conceptual developments and empirical research of the CSP theory and certainly included a summary of Wood1991a. Wood1991b has gained a long-term advantage in citation count due to the nature of it being a review article.

In Figure 8 we see that the global main path of the first period is organized by Friedman1970, BowmanH1975, AbbotM1979, AupperleCH1985, SpencerT1987, Wood1991a, Jones 1995, MitchellAW1997, and JonesW1999. The global main path of the second period has the same components as that of the first period except that Wood1991b replace Wood1991a. This represents that the development of the CSR literature is more consistent from global main path perspective.

Figure 9 shows the global 10 key-route main paths of the two periods. When comparing them, we observe that the branch organized by ZahraL1987, CoffeyF1991, GravesW1994, and TurbanG1997 disappears in the second period. Zahra and LaTour (1987) found that there is a positive relationship between CSP and organizational effectiveness. Turban and Greening (1997) suggested that CSP provides a competitive advantage in attracting applicants. The other two papers examined the relationship between CSP and institutional ownership and concluded with a positive support. Coffey and Fryxell (1991) explored that a firm’s social responsiveness positively affects the amount of institutional ownership of corporate stock. Graves and Waddock (1994) found a positive relationship between CSP and the number of institutions holding shares of a company. The vanishment of this branch represents that less papers cite these papers after 2000 due to researchers shifting their more focus to the conceptualization of stakeholder engagement and global governance.
Global 20 Key-route Main Path

The theoretical development for a specific field typically begins with a conceptual innovation, and then the innovation encourages a set of new ideas that expand and advance it. The knowledge of the original concept thus disseminates divergently to new varieties through different knowledge paths. In the process of knowledge evolution, the pace of knowledge divergence gradually slows down, and the multiple knowledge paths gradually unite to a point where a dominant concept is proposed. The aforementioned process forms a divergence-convergence cycle. As a theory evolves, the repetitive divergence-convergence pattern in knowledge diffusion paths can be clearly observed. Previous literature has hinted at the concept of a divergence-convergence pattern in knowledge diffusion (Bhupatiraju et al., 2012), but no systematic methodology is proposed. The unique approach used in this present study provides a feasible solution to uncover the divergence-convergence pattern.

Figure 10 shows the global 20 key-route main paths, and from them we clearly observe two full cycles of the divergence-convergence pattern in the knowledge diffusion paths of CSR development. The third cycle is still progressing. We brief the articles that are in these three stages of the global 20 key-route main paths.

The First Stage – 1970 to 1990

The first stage starts from Friedman’s (1970) article. Friedman is the most enthusiastic supporter of corporations’ economic responsibility. He argued that corporations cannot be socially responsible, as only people can have...
responsibilities. He suggested that corporate executives have a primary responsibility to manage the business to maximize profit while following the ‘basic rules of society’. Since then, many researchers investigated the relationship between CSR and corporate profitability, but no definitive consensus is reached. Some research studies found a positive relationship (Bowman and Haire, 1975; Spencer and Taylor, 1987), while others indicated an inconclusive relationship (Abbott and Monsen, 1979; Aupperle et al., 1985).

Based on the contradictory results of the relationship between CSP and CFP, some researchers have tried to figure out the root cause of the controversy from conceptual, operational, and methodological differences in the definitions of CSP and CFP. Carroll (1979) proposed a three-dimensional model to clarify and integrate various definitions of CSR. The three dimensions are social responsibility categories, social issues involved, and philosophy of social responsiveness. Social responsibility includes the economic, legal, ethical, and discretionary categories of business performance. The social issues of CSR have changed over time and are industry-dependent. Philosophy of responsiveness addresses the philosophy, mode, or strategy behind managerial response to social responsibility and social issues. Cochran and Wood (1984) re-examined the relationship by applying the logit analysis on an enhanced industry-specific sample. They found that the key factor correlated to CSR is asset age. Firms with older assets have lower CSR ratings. After controlling for asset age, the relation between CSR and CFP turns weak. Wartick and Cochran (1985) later proposed a landmark article, based on Carroll’s (1979) conceptual framework, on corporate social performance. They defined CSP as the integration of the principles of social responsibility, the processes of social responsiveness, and the policies developed to address social issues. This concept integrates well the relationships between business and society.

Some researchers devoted their efforts to the question of whether corporations have an obligation to groups other than shareholders. Walters (1977) found that both conservative (opposing government intervention in the economy) and liberal (favoring substantial government intervention) arguments are used in favor of or against corporations assuming social responsibility. He reasoned this paradox from a political ideology perspective. Jones (1980) argued that corporate behavior should not be judged by the decisions actually reached, but by the process by which they are

Figure 10. The global 20 key-route main paths of CSR
reached. Corporations need to analyze the social consequences before they make decisions and try to minimize the social costs of their decisions.

The Second Stage – 1991 to 2006
The second stage begins with Wood’s two articles published in 1991 (Wood, 1991a; 1991b). Wood linked CSP with various related organizational theories, such as organizational institutionalism, stakeholder management, and social issues management. She reformulated Wartick and Cochran’s (1985) CSP model to better frame the principles, processes, and outcomes. Following up on Wood’s framework, some scholars tried to enhance the theory of CSP (Swanson, 1995; Husted and Salazar, 2006), whereas others continued to test the relationship between CSP and CFP and attempted to identify other factors that affect this relationship (Waddock and Graves, 1997; McWilliams and Siegel, 2000; 2001; Piga, 2002). More researchers further investigated the CSP from stakeholders’ perspective (Clarkson, 1995; Jones, 1995; Mitchell et al., 1997; Turban and Greening, 1997; Jones and Wicks, 1999; Sen and Bhattacharya, 2001; Smith, 2003; Vachani and Smith, 2004; Doh and Guay, 2006).

Swanson (1995) argued that the economic and duty-aligned perspectives of previous CSP models are not integrated and proposed a framework to link across principles of corporate social responsibility, processes of corporate social responsiveness, and outcomes of corporate behavior. The reoriented CSP model formulates decision making in terms of ethical and value processes, suggesting an interaction across principles, processes, and outcomes. Husted and Salazar (2006) used the tools of microeconomics to explore the conditions under which CSP is consistent with shareholder value maximization. They suggested that greater overall corporate social performance is achieved by the strategic approach than by the altruistic approach.

The following research studies investigated the relationship between CSP and CFP. Waddock and Graves (1997) found that CSP is positively related with prior financial performance. Their results support the theory that slack resource availability is positively related with CSP. They also presented that CSP is positively associated with future financial performance. McWilliams and Siegel (2000) argued that previous studies do not control the factor of R&D investment, therefore generating controversial results (positive, negative, and neutral) on the relationship between CSP and CFP. When investment in R&D is considered, they found that CSR has a neutral impact on financial performance. McWilliams and Siegel (2001) further adopted a demand-supply approach to examine firms’ CSR behavior and argued that a firm’s level of CSR depends on many factors, such as its size, level of diversification, R&D, advertising, government sales, consumer income, labor market conditions, and stage in the industry life cycle. Although customers are willing to pay a premium for products with social characteristics, the benefits to a firm are offset by the increase in the costs of the products. Piga (2002) presented that McWilliams and Siegel’s (2000) neutrality results may be due to the free-entry assumption, which is only applicable for a perfect market. Moreover, they did not consider that CSR has the effects of raising rivals’ costs and promoting brand image, and these effects are beneficial for gaining a competitive advantage.

Various stakeholder theories were applied to the field of CSR over this stage. Clarkson (1995) argued that Carroll’s model (1979) is complex and difficult to test. He tied the CSP concept to stakeholder management models and proposed a stakeholder framework. Based on the analysis of more than 70 field studies of CSP from 1983 to 1993, Clarkson concluded that corporations manage relationships with stakeholder groups rather than with society as a whole. He also argued that it is important to distinguish between social issues and stakeholder issues and to identify the appropriate levels of analysis for evaluating CSP. After identifying them, CSP can be effectively analyzed and evaluated. The three levels of analysis are institutional, organizational, and individual. Jones (1995) linked CSR with economic theories and provided an instrumental stakeholder theory that has stronger predictive capacities. He made a clearer link between actions and outcomes and showed that the stakeholder model has a greater potential to be the central paradigm of CSR. Mitchell et al. (1997) argued that stakeholders possess attributes of power, legitimacy, and urgency. They combined these attributes to build a theory of stakeholder identification and salience. Jones and Wicks (1999) disclosed a convergent stakeholder theory from social science and normative ethics approaches. They integrated strategic and intrinsic perspectives into this theoretical framework.

Aside from introducing the aforementioned stakeholder concepts to CSR theory, some researchers conducted empirical studies from stakeholders’ perspectives. Based on the propositions from the social identity theory and signaling theory, Turban and Greening (1997) examined the effects of firms’ CSP upon their reputations and attractiveness to employees. They found that a firm’s CSP may improve its reputation and provide a competitive advantage in
attracting applicants. Sen and Bhattacharya (2001) investigated the consumer reactions to CSR and noted a moderating and mediating role of consumers’ perceptions on CSR. The CSR issues that a firm focuses on, the quality of its products, consumers’ support, and beliefs about the CSR are key moderators of consumers’ responses to CSR. When potential customers believe that CSR initiatives are realized at the expense of the company’s ability to make better products, then CSR efforts may hurt buyers’ intention. Marketers need to convince consumers that the CSR activities do not decrease the ability to make or deliver high quality products.

The Third Stage – from 2006

The third stage commences with McwilliamsSW2006 (McWilliams et al., 2006), which develops a framework for the consideration of the strategic implications of CSR and proposes a direction for future theoretical and empirical research on CSR. The first two cycles of the divergence-convergence pattern are completed, but the third cycle is still under development. The articles in the third stage discuss the globalization issues of CSR.

Scherer and colleagues put forth much effort to promote the concept of global governance. Scherer et al. (2006) argued that the instrumental stakeholder theory and business & society research can only partially solve global governance issues. Corporate citizenship and republican business ethics deliver helpful insights, but need to be further developed. In particular, the legitimation issues of corporate political behavior have to be resolved. Scherer and Palazzo (2007) categorized the theory of business and society into two schools: positivist and post-positivist. The former was criticized due to its instrumentalism and normative vacuity; the latter because of its relativism, foundationalism, and utopianism. They argued that a business firm must play as a political actor in a global society. Scherer et al. (2009) edited a special issue ‘globalization as a challenge for business responsibilities’ in Business Ethics Quarterly to discuss the trend of a shifting corporate role towards a sphere of societal governance that has been dominated by traditional political actors. This special issue discusses the consequences of the social and political mandates of a corporation and examines the implications for the theory and practice of firms operating in a global environment.

Some scholars have also conducted research studies to enrich the literature of global governance. Gond et al. (2009) examined the Italian Mafia to evaluate the instrumental perspective on CSR. The Mafia study delivers three insights for both CSR analysis and organization research: clarifying the boundaries of instrumental CSR, recognizing CSR as arising out of social and normative embeddedness, and identifying instrumental CSR’s limitations in regulating corporate behavior in the global economy. Michaelson (2010) revisited the global business ethics question, ‘when business moral conduct standards conflict across borders, whose standards should prevail?’ As emerging economies are burgeoning from all corners of the globe, the economic and political power relations have gradually shifted from Western economies to emerging economies. When MNCs encounter tension in moral standards across borders, they need to re-examine their political roles in global governance and maintain the moral authority of global ethical norms so that they do not merely reflect the dominant ideologies of the most economically powerful market actors. Banerjee (2010) argued that previous papers in global governance focus on the political role of corporations and lack a sophisticated analysis of power across institutional and actor networks. He suggested that a radical revision of democratic governance of global corporations is needed in order to overcome the limits posed by sovereignty, and new forms of multi-actor and multi-level translocal governance arrangements are required to create forms of power that are more compatible with the principles of economic democracy.

Conclusions

This study adopts a unique approach that exhibits the divergence-convergence pattern of CSR literature over the past 40 years. The main path analysis is an objective and powerful way to identify the major knowledge diffusion flow from a large number of papers. We believe that this approach can complement traditional qualitative methods on a literature review and is feasible for handling a large dataset of a target field.

CSR was merely a theoretical and ethical concept 40 years ago, yet it has increasingly attracted the interest of researchers from various disciplines. The statistics of journals and authors show that CSR issues have become a hot topic since 2000. Moreover, since 2005, hundreds of authors worldwide have published hundreds of CSR papers every year.
Various main paths identify those papers that play a key role in the knowledge diffusion of CSR. The key-route main path analysis figures out the divergence-convergence phenomenon of the CSR evolution. We identify two full cycles of knowledge divergence and convergence over 1970 to 1990 and 1991 to 2006. By integrating these different main paths, a researcher can quickly grasp the evolutionary structure of the CSR literature. Previous researchers have indicated a similar concept of the divergence-convergence pattern in the knowledge flow. For example, Bhupatiraju et al. (2012) observed that multiple knowledge flows converge on each other and suggested the concept of a convergence-divergence dynamic of main paths. We provide a further systematic approach to clearly explore and visualize the divergence-convergence phenomena of a theoretical or technological development.

Some scholars have doubted the accuracy and research quality of citation analysis (Lindsey, 1989; MacRoberts and MacRoberts, 1996), but citation analysis remains important in bibliometric research and is very reliable when data are aggregated (Phelan, 1999; Cronin, 2001). Many research studies show that citation analysis offers insightful information about research performance and scientific influence (Hummon and Doreian, 1989; Mina et al. 2007; Verspagen, 2007; Kajikawa and Takeda, 2009; Liu and Lu, 2012). This present study reconfirms the usefulness of citation analysis.

Our results’ interpretations should nevertheless take the following limitations into consideration. First, the dataset is from the WOS database and does not include all CSR papers published in journals. Although WOS includes the majority of important journals, not all issues of some CSR-specialist journals are completely included in WOS. We have eliminated this imperfection by supplementing our data with highly cited papers from Google Scholar. Second, the results of the main path analysis are subject to citation noise, which is a general limitation of the citation analysis.

In summary, this paper combines the citation information of CSR and applies the main path analysis to identify various major knowledge flow paths in the evolution of the CSR literature. We demonstrate the efficiency and effectiveness of a new approach for examining the knowledge dissemination structure of an academic discipline. We believe this approach is very helpful to those disciplines that have no review papers for reference.

References


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