**Network Arrangements Underlying Strategic Corporate Social Responsibility:
Findings from Globalized Cyberspace and Lessons for Asian Regions**

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The purpose of this study is to introduce a synergetic configuration of stakeholders, especially government and university, into the corporate social responsibility strategy. The alignment of a company's CSR efforts with its business practices and values must be communicated strategically for effective and successful business outcomes. Therefore, the proposed process of CSR evaluation takes into account the three helices of the Triple-Helix perspective, university, industry, and government (UIG), and investigates how involvement in the Triple Helix actors influence corporations with CSR initiatives. Specifically, whether the public's awareness of a corporation's CSR activities is heightened by the concurrent support of the three helixes will be examined. We propose a methodology that enables corporations to determine effective levels of integration with government and educational institutions. The intensity of Triple-Helix indicators will be examined.

Keywords: Triple-Helix, CSR, Information Management, Network Analysis

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1. Introduction

Corporate social responsibility (CSR) can generally be defined as "actions that appear to further some social good, beyond the interests of the firm and that which is required by law" (McWilliams & Siegel, 2001, p.117). Benefits are granted to socially responsible firms as corporate social performance has a positive association with financial performance (Carroll, 1979). Firms with commitment to ethical behavior may achieve a competitive advantage economically (Jones, 1995) and especially in high-growth industries (Russo & Fouts, 1997). A company's CSR agenda generates positive attitudes and behaviors (e.g. purchase, investment) from consumers (Du, Bhattacharya & Sen, 2010). However, CSR initiatives must be consistent with stakeholder needs (Freeman & Reed, 1983). Firms must look beyond maintaining mutually beneficial relationships with their customers. Corporations are increasingly facing pressure to answer demands from various stakeholder groups such as employees, communities, government, stockholders, etc. (Freeman & Reed, 1983; Park & Park, 2020). Therefore, a growing number of corporations engage in various CSR activities with the goal of mitigating risks, improving reputation and improving business outcomes (Rangan, Chase, & Karim, 2015).

Previous research show that consumers are only influenced by CSR initiatives if they are made aware of them (Du, Bhattacharya & Sen, 2010; Pomering & Dolnicar, 2009). Therefore, the alignment of a company's CSR efforts with its business purposes and values must be communicated strategically for effective and successful business outcomes (Du, Bhattacharya & Sen, 2010; Park, Li & Park, 2017). Therefore, preceding anticipation of positive outcomes, such as positive economic and financial performance, firms must put considerations of awareness at the forefront of any CSR efforts. In order to enhance consumers' awareness of a company's CSR initiatives, Pomering & Dolnicar (2009) suggest focusing on consumers with distinct interests (e.g health, sports, etc.). How else can firms communicate their CSR efforts to the public?

Corporations are constantly under scrutiny from various organizations and the government, yet the impact of these stakeholders on CSR activities has yet to be studied. The purpose of our study is to introduce a synergetic configuration of stakeholders, especially government and university, into the CSR strategy. The proposed process of CSR evaluation takes into account the three helices of the Triple-Helix perspective, university, industry, and government (UIG), and investigates how involvement in the Triple Helix actors influence corporations with CSR initiatives. Specifically, whether the public's awareness of a corporation's CSR activities is heightened by the concurrent support of the three helixes will be examined. Furthermore, the presence of the three helices may also aid to legitimize and build competitive advantage. We propose a methodology that enables corporations to determine effective levels of integration with government and educational institutions. This study will examine UIG websites for mentions of official company websites from Forbe's list of one hundred "Most Socially Reputable Companies." The intensity of indicators signaling relationships with UIG will be used as a measurement of a firm's engagement in Triple Helix communication.

2.1. Corporate social responsibility communication

Growing ethical concerns and consumer expectations regarding corporate citizenship have driven corporations to strategically embrace the notion of CSR. CSR refers to the incorporation of social accountability and economic sustainability into business practices (Dauvergne & Lister, 2012). The flipside of CSR is to benefit society and enhance firms' values at the same time. An increasing number of corporations have strategically engaged in CSR activities to strengthen business legitimacy and reputation (Dawkins & Ngunjiri, 2008; Handelman & Arnold, 1999; Lu & Li, 2009; Sen & Bhattacharya, 2001). CSR covers a wide range of issues such as labor conditions, plant closures, employee relations, community relations, human rights, and environmental protection (Porter & Kramer, 2006; Moir, 2001).

Business scholars have documented the concept of CSR by exploring firms' leadership, ethical standards, communication strategies, and management practices for increasing social benefits and firms' value (Lubin & Esty, 2010; Porter & Kramer, 2006). Firms' successful engagement in CSR is the key instrument to building dialogues with relevant stakeholders such employees, customers, investors, suppliers and communities (Deegan, Rankin & Voght, 2000; Dawkins & Ngunjiri, 2008; Hooghiemstra, 2000). Impression management theory informs that CSR does not only allow firms to represent its legitimacy to stakeholders, but it also affects their perceptions about firms' social performance (Deegan, Rankin & Voght, 2000; Dawkins & Ngunjiri, 2008; Hooghiemstra, 2000). Moreover, successful CSR activities increase firms' business values and reputation as private authorities for shaping global environmental governance (Dauvergne & Lister, 2012). An increasing number of corporations strategically engage in CSR communication to establish dialogue with key stakeholders by disclosing their values, ethical standards, and CSR-related informational and educational campaigns (Signitzer & Prexl, 2007). In the last two decades, there has been a paradigm shift in CSR from a narrow focus toward reactive and integrated business strategies (Bansal & Hoffman, 2011; Dunphy, Griffiths & Benn, 2007; Hoffman, 2001).

2.2. Corporate relations with stakeholders for CSR

Corporate relationships with organizations are growing as an important aspect of business strategy and practice. In line with this, the corporate relationship stakeholder theory has been broadly adopted as a framework for promoting corporate relations with various stakeholders throughout society (Kim & Nam, 2012). The main premise underpinning the stakeholder theory is that because a business exists through the support of stakeholders, it relates to the stakeholders in creating value as a strategic way to achieve its objectives and mission (Donaldson & Preston, 1995; Freeman & Reed, 1983; Galbreath, 2006; Kim & Nam, 2012). The stakeholder theory focuses on identifying and evaluating the stakeholders and their relationships in formulating and implementing business strategies (Cummings & Doh, 2000). Notably, the stakeholder approach to strategic management has become one of the key research topics in business and management literature given that the external pressure of stakeholders on corporate social responsibility activities has been increasing (Kim & Nam, 2012). Companies are seeking to respond to these social needs by establishing dialogues with various stakeholders since they also demand

responsible corporate practice (Nam et al., 2014; Nam, 2015). Given the foregoing, some issues have emerged in the stakeholder management approach, such as identifying the best practice in corporate stakeholder relations (Bendheim et al., 1998), the stakeholders in the business (Agle & Mitchell, 1999; Mitchell et al., 1997), the significance of stakeholder management on financial performance (Berman et al., 1999), the influence of stakeholder relationships (Rowley, 1997; Kim & Nam, 2012; Nam, 2012), and the appropriate balance in addressing the demands of various stakeholders (Ogden & Watson, 1999).

Therefore, the communication of a corporation with its stakeholders can be one of the core CSR activities. According to Kim et al. (2011), large global corporations use their homepage to facilitate corporate environmental responsibility by employing dialogic principles that explain the capacity and utilization of interactive features on their online sites for establishing positive stakeholder relationships. Kim and Nam (2012) studied corporate online relationships by examining the companies' hyperlinks with stakeholders, assuming that the hyperlinked organizations represent their current institutional level of cooperation. Nam et al. (2014) attempted to provide an overview of corporate relationships through CSR undertakings by examining hyperlink network analysis, and thereafter confirmed that the higher-performing companies are more active in terms of their CSR practices.

2.3. CSR and corporate business performances

With growing interest in the ethical behavior of firms, the topic of CSR activities and stakeholders has received significant academic research attention. However, most companies are still concerned with embracing contemporary principles of CSR through traditional philanthropy (Ferus-Comelo, 2014; Serra-Cantallops, Peña-Miranda, Ramón-Cardona, & Martorell-Cunill, 2018).

Many studies have examined the relationship between CSR activities and their business performances in terms of stakeholder relations. For example, Martínez and del Bosque (2013) suggested that one of the perspectives more appropriate to effectively managing CSR policies is precisely through the stakeholder theory. Alrousan, Bader and Abuamoud (2015) suggested that hospitality companies have been encouraging new methods to implement both external and internal aspects of CSR by exemplifying the power of stakeholder theory integration into various CSR practices by employing particular stakeholder groups.

However, most CSR literature have mainly focused on CSR and firm value, employees and consumer reactions to CSR, and consumers' awareness of CSR. Still, there have only been a few studies about the relationships among various stakeholders, including other triple helix sectors such as governments and academia and their relationships' impacts on their business performances. For the purposes of our research, the links among the three helices, industry, government and university, should be emphasized to enhance consumers' awareness and subsequent business outcomes.

2.4. Triple-Helix conceptual/analytical framework

Driven by the regime of boundarylessness knowledge production and innovation systems, the Triple Helix (TH) model posits that university, industry, and government (UIG) increasingly form a multilateral relationship in which one's performance can enhance the other's performance (Kim, 2018; Leydesdorff & Etzkowitz, 1996; Phillips, 2014). Analogous to a double stranded DNA structure, the three institutional spheres (e.g. academic, industrial, and government actors) are closely interconnected to each other and their roles become more hybrid and integrated (Etzkowitz & Viale, 2010). Figure 1, the Triple Helix model (TH model), presents the tri-lateral network formed as a result of the interactions among the UIG actors.
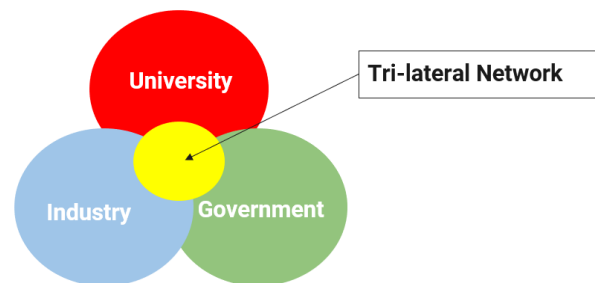

Figure 1. The Triple Helix model

The TH model offers both conceptual and analytical framework for assessing "the systemness of an innovation system" (Yoon & Park, 2017). It is useful to examine the configuration of a UIG network and the pattern of interactions among the UIG actors. Studies analyzing innovation systems applied the TH model to explore the dynamics of the pattern of collaboration and how the system constrain or influence the relations among the entities. For example, the TH model has been used to explain how knowledge networks were formed and operated and the role of UIG actors in developing innovation systems, knowledge flow, and the evolution of social relations among the UIG actors (Lu, 2008; Razak & Saad, 2007; Worasinchai, Ribière & Arntzen, 2009).

Given that knowledge production activities and dissemination across different institutions have increasingly become interrelated and interdependent, the TH model has been extended to the Quadruple helix, Quintuple helix, and the "N-Tuple" helices that complement the TH rubric. In other words, in addition to UIG, different institutions and actors who can intervene the processes of the knowledge economy are added in the model. The Quadruple helix added "the media-based and culture-based public" as a fourth helix, which is useful to understand the function of civil society such as grassroot activities in advancing the operation of a trilateral network (Park, 2014; van Geenhuizen, 2016).
The Quintuple helix integrated the environments or the natural environment of society as a fifth helix to the Quadruple helix (Park, 2014). The environmental dimension serves as a driver in developing the sustainable innovation system and knowledge production process (Carayannis & Campbell, 2011).

The cooperation of TH agents influenced firms' various types of innovation such as process innovation, product innovation, or a combination thereof (Hernández-Trasobares & Murillo-Luna, 2020; Yang & Jung, 2016). Interestingly, cooperation of competing corporations can result in mutually beneficial relationships by acquiring more access to or creation of knowledge, technological skills, and resources (Estrada, Faems & de Faria, 2016; Porto-Gomez, Aguirre-Larracoechea & Zabala-Iturriagagoitia, 2018; Romero, Gómez & Zabala-Iturriagagoitia, 2019).

3. Method

The CSR index was derived from Forbe's 2017 list of the most socially reputable companies. The representative websites of the hundred companies were compiled and reviewed multiple times to verify errors. Outlink data were crawled from Bing.com via its applications programming interface using Webometric Analyst 2.0 on March 5, 2019. Web-based Triple Helix indicators were computed by tracking the presence of outlinks to each site. As search engines may not report all matching outlinks for a query and do not index all webpages, their returned domains were sometimes substantially fewer. It is desirable not to include results of the returned domains that are less than 100 in the statistical analysis. Furthermore, the exclusion of the bottom 25 percent is useful for achieving reliable results. Thus, the final sample of companies in this current research is 69 out of 100.

Several descriptive statistics were calculated to examine the online networked structure of the most socially reputable companies and their apparent success in achieving academic, business, consumer, and government awareness. From a n-tuple helix perspective, a total of six spheres having outlinks to the 69 companies are identified: academy (.edu and .ac.ccTLD), business (.com and .com/.co.ccTLD), government (.gov and .gov/.go.ccTLD), non-profit (.org and .org/.or.ccTLD), public (.net), and others. The number of outlinks belonging to each helix is divided by the total number of links. For example, FedEx's connectedness with the business sphere is based on industry sites that refer to fedex.com, divided by external websites that mention it once. A 2-mode matrix, composed of 69 companies' websites and TLDs that sent links to the companies' sites, was generated, and the network centrality measures were computed with UCInet. The network was visualized by using Netdraw.

4. Results
4.1. The relations between CSR values and public awareness of corporate web sites

The web presence of companies with the highest CSR performance is investigated and the relations with diverse stakeholders are explored. As shown in Table 1, the results of network centralities as Triple Helix indicators suggest that the most socially reputable companies have stronger connections with business, non-profit, and public sectors across all degree centralities.

Table 1
Network Centralities as Triple Helix Indicators

TLDs	Degree	2-Local	Eigenvector	Closeness	Betweenness
Com	1.000	1.000	0.452	1.000	0.191
Org	1.000	1.000	0.452	1.000	0.191
Net	1.000	1.000	0.452	1.000	0.191
Gov	0.618	0.381	0.299	0.600	0.060
Edu	0.632	0.400	0.305	0.609	0.063
Others	1.000	1.000	0.452	1.000	0.191

Their seemingly strong relations with these sectors may be attributed to the popularity of using generic top-level domains (.com, .org, and .net) on the web. Academic and government sectors have weaker relations with the companies than the other sectors.

Next, we investigate whether the companies' CSR performance is related to the awareness of their web sites in the six spheres. Table 2 summarizes the results of a Pearson correlation test between the CSR values and Triple Helix indicators.

Table 2
Pearson Correlation Test between the CSR Values and Triple Helix Indicators

	CSR	Com	Org	Net	Gov	Edu	Others
CSR	1						
Com	-0.092	1					
Org	0.143	-0.702**	1				
Net	0.115	-0.221	0.352**	1			
Gov	0.001	-0.181	0.394**	0.245*	1		
Edu	0.245*	-0.145	0.429**	0.146	0.210	1	
Others	0.006	-0.883**	0.412**	0.063	-0.029	-0.096	1

Note. $*p < .05$, $**p < .01$

The findings show that the companies' CSR values and their awareness in the academic sector is significantly correlated (Pearson r = .245, $p < 0.05$, N = 68) while there are no correlations with other sectors. It is noteworthy that the awareness in the profit sector is negatively associated with the awareness in non-profit sector (Pearson r = -0.702, $p < 0.01$, N = 69) and others (Pearson r = -.883, $p < 0.01$, N = 69). The awareness in the non-profit sector is positively associated with the awareness in public (Pearson r = 0.352, $p < 0.01$, N = 69), government (Pearson r = 0.394, $p < 0.01$, N = 69), education (Pearson r = 0.429, $p < 0.01$, N = 69), and others (Pearson r = 0.412, $p < 0.01$, N = 69). Companies with higher number of outlinks from the public sector also have higher presence in government web sites (Pearson r = 0.245, $p < 0.05$, N = 69).

4.2. Awareness of corporations across different stakeholders

To reveal the relations between reputable companies and their stakeholders across the different domains, a 2-mode matrix is constructed such that the rows correspond to 6 domains and the columns to 69 companies' sites. Figure 2 displays the network diagram of the relations between the listed companies and the domains.

Figure 2. Network of reputable companies and stakeholders in six spheres

The network was visualized using non-metric MDS layout. The size of node labels was set by the CSR scores. FedEx received the highest traffic from profit organizations, followed by other shipping giant UPS. Other top 10 companies in the profit sector are American (e.g., LinkedIn, American Express, Delta Air Lines, HP inc., Netflix) and big Asian brands (Samsung Electronics, Ford, and Honda Motor. The awareness in non-profit organizations suggests inconsistent findings. Different brands in automotive and aircraft industries are highly aware.

Nissan Motor is ranked first. The other top 10 list includes Air France-KLM, PSA Peugeot-Citroën, and Airbus. Interestingly, food companies (e.g., Campbell Soup company, Hershey company, Daimler, Danone, the KRAFT Heinz company) also receive much traffic in the non-profit domain as well as entertainment industry (e.g., the Walt Disney Company). For the public sector, Samsung Electronics received the most traffic, followed by Nissan Motor, LEGO Group, Electrolux, Procter & Gamble, and BBC, Intel, The Estée Lauder companies, The Kraft Heinz Company, and Toshiba. Interestingly, Visa's web site is the most popular in the government sector. Automotive and auto service companies (e.g., Nissan motor, Fiat Chrysler Automobiles, Rolls-Royce Aerospace, Goodyear) were also cited by government web sites. Other popular companies are food industries (e.g., Campbell Soup company, the Kraft Heinz company), and American multinational companies (e.g. Hilton Worldwide, Procter & Gamble, The Estée Lauder companies).

In the academic domain, the Hershey company is the most popular. Other food brands (e.g., Campbell Soup company, Kellogg's) also gained much traffic from academic institutions. The Walt Disney company, appeared in top lists of the other sectors, is also popular in the academic domain. The other popular companies in the academic sector are Anheuser-Busch InBev, Rolls-Royce Aerospace, Unilever, BBC, The Estée Lauder companies, and Electrolux.

4.3. CSR values and awareness in academic sector

Given that the companies' CSR value is positively correlated to the awareness in the academic sector, we closely analyzed the network of the listed companies and academic institutions. As shown in Figure 3, one large subgroup, comprised of popular companies (bigger nodes), is observed in the network.
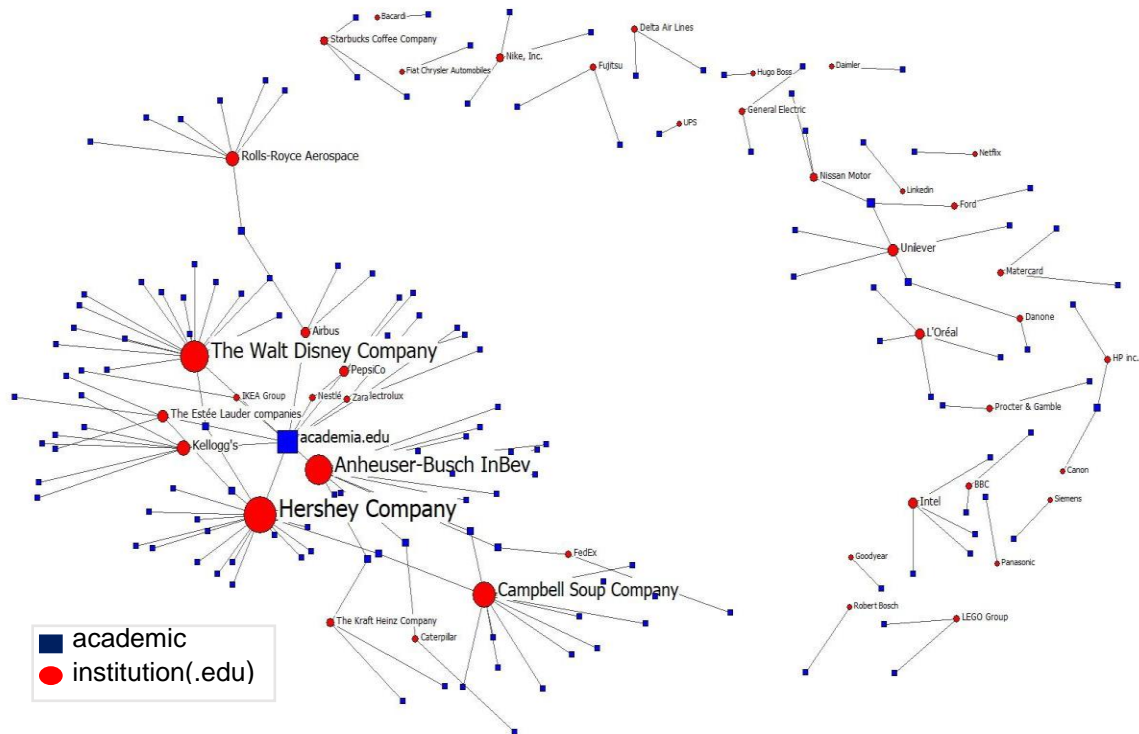
Figure 3. Network of reputable companies and academic sector

      The Hershey company, the Walt Disney company, and Anheuser-Busch InBev are strongly connected with Academia.edu, suggesting that these companies were cited in academic journal articles. Most of the other companies have relations with several companies.

To explore the indirect relations between reputable companies, we generated the network of the listed companies based on co-outlinks, which is the presence of sharing the same tie with academic institutions. For example, if Airbus and Zara are cited by web site A, Airbus and ZARA are treated as connected to each other. Co-outlinks indicate the similarity of web sites from a third site (Thelwall & Wilkinson, 2008).
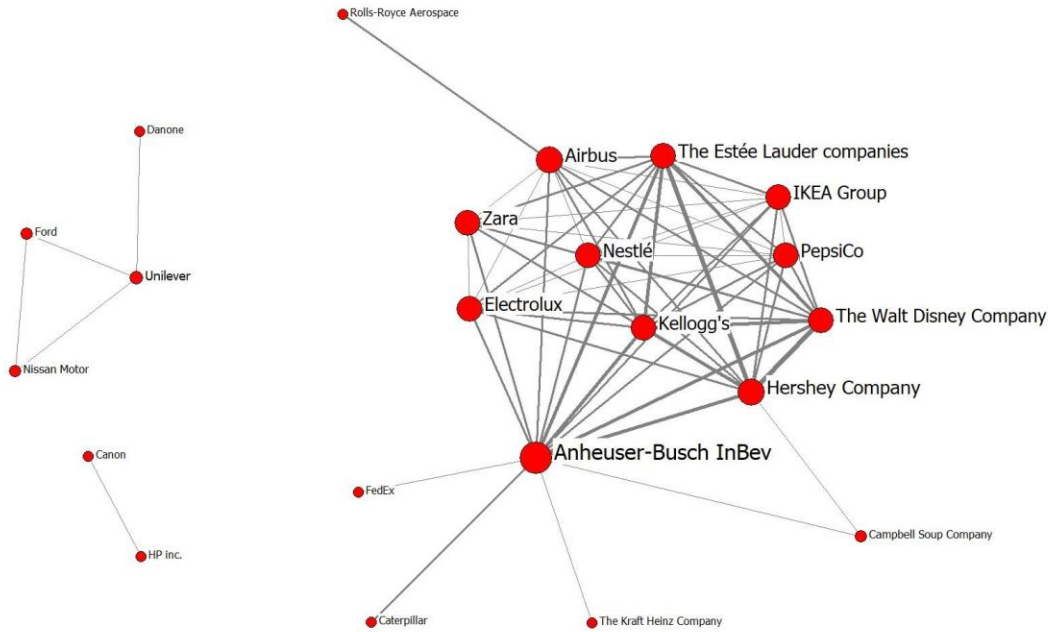
Figure 4. Co-inlink network diagram of reputable companies

As represented in Figure 4, the co-inlink network of reputable companies based on academic ties indicate that big food brands (e.g., Hershey company, Kellogg's, Nestlé, PepsiCo, Anheuser-Busch InBev) have strong relations to each other. They are also interconnected to other industries, such as home appliance and furniture companies (IKEA group, Electrolux), apparel (Zara), makeup (Estée Lauder companies), entertainment (The Walt Disney company), and automotive companies (e.g. Airbus).

5. Lessons for Asian Regions

The current study brings new insights, especially for large global Asian corporations, in social and economic trends using network studies. Although they are relatively underrepresented in Forbe's list of one hundred "Most Socially Reputable Companies," it was found that large Asian companies' CSR values are positively correlated to the awareness in the academic sector, and that among the public sector, Samsung Electronics, Nissan Motor, and Honda Motor receive the most traffic. Asian companies may have an authoritarian culture based on traditional society (Sharma, 2013) compared to European and American companies. As the corporate culture of Asian companies transform in the future, CSR activities of Asian companies may be further strengthened and emphasized.

When investigating CSR performance from the Triple Helix perspective, more socially reputable companies had stronger connections to the academic sector. It is possible to determine that higher awareness in the academic sector may result in stronger effectiveness of CSR performance. To improve the effectiveness of their CSR strategies, Asian corporations may strengthen their ties to the academic sector.

6. Discussions and Conclusion

This study examined the most socially reputable companies, using the triple-helix approach. Most companies' CSR values were significantly associated with the academic sector as they had links to academic institutions. The two-mode network analysis, which shows the overall relationship between CSR companies and the academic sector, identified companies with numerous links to educational institutions to be the Hershey Company, Walt Disney Company, Anheuser-Busch InBev, and Campbell Soup Company. In particular, Academia.edu had the most connections with companies.

Furthermore, the network diagram of CSR companies based on academic ties also showed that most companies were found to be associated with the academic sector, as a large cluster was found in the social network analysis. Based on the companies' academic links, Anheuser-Busch InBev, Walt Disney Company, Estée Lauder, PepsiCo, IKEA, Airbus, Nestlé, Kellogg's, Electrolux, and Zara were strongly associated with each other. Both the 69 companies' CSR values and their linkage with academic institutions are significantly associated (Pearson r = .245, p <0.05, N=69) while the other correlation tests are not statistically valid. This study demonstrates that social network analysis is useful to reveal the relationship dynamics between diverse stakeholders generated on the web (Park & Park, 2021).

References

Agle, B.R., Mitchell, R.K, & Sonnenfeld. J.A. (1999). Who matters to Ceos? An investigation of stakeholder attributes and salience, corporate performance, and Ceo values. *Academy of Management Journal,* 42(5), 507-525.

Alrousan, R. M., Bader, M. A., & Abuamoud, I. (2015). Stakeholders approach in influencing corporate social responsibility: A case study at two hotels in Jordan. *International Journal of Tourism Policy*, *6*(1), 17-28.

Bansal, P. & Hoffman, A. (Eds.). (2001). *Oxford handbook of business and the environment*. New York: Oxford University Press.

Bendheim, C. L., Waddock, S. A., & Graves, S. B. (1998). Determining best practice in corporate-stakeholder relations using data envelopment analysis: An industry-level study. *Business & Society*, *37*(3), 306-338.

Berman, S. L., Wicks, A. C., Kotha, S., & Jones, T. M. (1999). Does stakeholder orientation matter? The relationship between stakeholder management models and firm financial performance. *Academy of Management Journal, 42*(5), 488-506.

Carayannis, E. G., & Campbell, D. F. (2011). Open innovation diplomacy and a 21st century fractal research, education and innovation (FREIE) ecosystem: building on the quadruple and quintuple helix innovation concepts and the "mode 3" knowledge production system. *Journal of the Knowledge Economy*, *2*(3), 327-372.

Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of Management Review*, *4*(4), 497-505.

Cummings, J. L., & Doh, J. P. (2000). Identifying who matters: mapping key players in multiple environments. *California Management Review*, *42*(2), 83-104.

Dauvergne, P., & Lister, J. (2012). Big brand sustainability: Governance prospects and environmental limits. *Global Environmental Change*, *22*(1), 36-45.

Dawkins, C., & Ngunjiri, F. W. (2008). Corporate Social Responsibility Reporting in South Africa A Descriptive and Comparative Analysis. *Journal of Business Communication*, *45*(3), 286-307.

Deegan, C., Rankin, M., & Voght, P. (2000, March). Firms' disclosure reactions to major social incidents: Australian evidence. In *Accounting forum* (Vol. 24, No. 1, pp. 101- 130). Taylor & Francis.

Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of Management Review*, *20*(1), 65-91.

Du, S., Bhattacharya, C. B., & Sen, S. (2010). Maximizing business returns to corporate social responsibility (CSR): The role of CSR communication. *International Journal of Management Reviews*, *12*(1), 8-19.

Dunphy, D., Griffiths, A., & Benn, S. (2007). *Organizational change for corporate sustainability*. 2nd ed. London: Routledge.

Estrada, I., Faems, D., & de Faria, P. (2016). Coopetition and product innovation performance: The role of internal knowledge sharing mechanisms and formal knowledge protection mechanisms. *Industrial Marketing Management*, *53*, 56-65.

Etzkowitz, H., & Viale, R. (2010). Polyvalent knowledge and the entrepreneurial university: A third academic revolution?. *Critical Sociology*, *36*(4), 595-609.

Ferus-Comelo, A. (2014). CSR as corporate self-reporting in India's tourism industry. *Social Responsibility Journal*.

Freeman, R. E., & Reed, D. L. (1983). Stockholders and stakeholders: A new perspective on corporate governance. *California Management Review*, *25*(3), 88-106.

Galbreath, J. (2006). Corporate social responsibility strategy: strategic options, global considerations. Corporate Governance: *The international journal of business in society*.

Handelman, J. M. & Arnold, S. J. (1999). The role of Marketing Actions with a Social Dimension: Appeals to the Institutional Environment. *Journal of Marketing*, *63* (July), 33-48.

Hernández-Trasobares, A., & Murillo-Luna, J. L. (2020). The effect of triple helix cooperation on business innovation: The case of Spain. *Technological Forecasting and Social Change*, *161*, 120296.

Hoffman, A. (2001). *From heresy to dogma: An institutional history of corporate environmentalism*. Stanford: Stanford University Press.

Hooghiemstra, R. (2000). Corporate communication and impression management–new perspectives why companies engage in corporate social reporting. *Journal of Business Ethics*, *27*(1), 55-68.

Jones, T. M. (2016). Instrumental stakeholder theory: A synthesis of ethics and economics. *The Corporation and its stakeholders*, 205-242.

Kim, H. J. (2018). Multi-stakeholders in public and cultural diplomacies as seen through the lens of public-private partnerships: A comparative case study of Germany and South Korea. *Journal of Contemporary Eastern Asia*, *17*(1), 68-93.

Kim, D., & Nam, Y. (2012). Corporate relations with environmental organizations represented by hyperlinks on the Fortune Global 500 companies' websites. *Journal of Business Ethics*, *105*(4), 475-487.

Lubin, D., & Esty, D. (2010). The sustainability imperative. *Havard Business Review*, 88 (May), 42-50.

Leydesdorff, L., & Etzkowitz, H. (1996). Emergence of a Triple Helix of university—industry—government relations. *Science and public policy*, *23*(5), 279-286.

Lu, L. (2008). Creating knowledge-based innovation in China: The strategic implications of triple helix model. *Journal of Technology Management in China*, *3*(3), 249-263.

Martínez, P., & Del Bosque, I. R. (2013). CSR and customer loyalty: The roles of trust, customer identification with the company and satisfaction. *International Journal of Hospitality Management*, *35*, 89-99.

McWilliams, A., & Siegel, D. (2001). Profit maximizing corporate social responsibility. *Academy of Management Review*, *26*(4), 504-505.

Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of management review*, *22*(4), 853-886.

Nam, Y. (2015). Institutional network structure of corporate stakeholders regarding global corporate social responsibility issues. *Quality & Quantity*, *49*(3), 1063-1080.

Ogden, S., & Watson, R. (1999). Corporate performance and stakeholder management: Balancing shareholder and customer interests in the UK privatized water industry. *Academy of Management Journal*, *42*(5), 526-538.

Park, H. W. (2014). Transition from the triple helix to N-tuple helices? An interview with Elias G. Carayannis and David FJ Campbell. *Scientometrics*, *99*(1), 203-207.

Park, S., & Park, H. W. (2020). The effects of infotainment on public reaction to North Korea using hybrid text mining: Content analysis, machine learning-based sentiment analysis, and co-word analysis. *El Profesional de la Información*, *29*(5).

Park, S., & Park, H. W. (2021). A webometric network analysis of electronic word of mouth (eWOM) characteristics and machine learning approach to consumer comments during a crisis. *El Profesional de la Información*, *29*(5). In press.

Park, S., Li, H., & Park, H. W. (2017). Can sustainability information on corporate website reflect CSR strategies?: A semantic network analysis of top companies in South Korea and China. *Journal of the Korean Data Analysis Society*, *19*(1), 43-54.

Phillips, F. (2014). Triple helix and the circle of innovation. *Journal of Contemporary Eastern Asia*, *13*(1), 57-68.

Pomering, A., & Dolnicar, S. (2009). Assessing the prerequisite of successful CSR implementation: are consumers aware of CSR initiatives? *Journal of Business Ethics*, *85*(2), 285-301.

Porter, M., & Kramer, M. (2006). Strategy and society: The link between competitive advante and corporate social responsibility. *Harvard Business Review*, 84 (December), 78-92.

Porto-Gomez, I., Aguirre-Larracoechea, U., & Zabala-Iturriagagoitia, J. M. (2018). Tacit coopetition: chimera or reality? Evidence from the basque country. *European Planning Studies*, *26*(3), 611-634.

Rangan, K., Chase, L., & Karim, S. (2015). The truth about CSR. *Harvard Business Review*, *93*(1/2), 40-49.

Razak, A. A., & Saad, M. (2007). The role of universities in the evolution of the Triple Helix culture of innovation network: The case of Malaysia. *International Journal of Technology Management & Sustainable Development*, *6*(3), 211-225.

Romero, I., Gómez, I. P., & Zabala-Iturriagagoitia, J. M. (2019). 'Cookpetition': Do restaurants coopete to innovate? *Tourism Economics*, *25*(6), 904-922.

Rowley, T. J. (1997). Moving beyond dyadic ties: A network theory of stakeholder influences. *Academy of Management Review*, *22*(4), 887-910.

Russo, M. V., & Fouts, P. A. (1997). A resource-based perspective on corporate environmental performance and profitability. *Academy of Management Journal*, *40*(3), 534-559.

Sen, S., & Bhattacharya, C. B. (2001). Does Doing Good Always Lead to Doing Better? Consumer Reactions to Corporate Social Responsibility. *Journal of Marketing Research*, 38 (May), 225-243.

Serra-Cantallops, A., Peña-Miranda, D. D., Ramón-Cardona, J., & Martorell-Cunill, O. (2018). Progress in research on CSR and the hotel industry (2006-2015). *Cornell Hospitality Quarterly*, *59*(1), 15-38.

Sharma, B. (2013). *Contextualising CSR in Asia: Corporate social responsibility in Asian Economies.* Lien Centre for Social Innovation.

Signitzer, B., & Prexl, A. (2007). Corporate sustainability communications: aspects of theory and professionalization. *Journal of Public Relations Research*, *20*(1), 1-19.

Thelwall, M., & Wilkinson, D. (2008). A generic lexical URL segmentation framework for counting links, colinks or URLs. *Library & Information Science Research*, *30*(2), 94-101.

Van Geenhuizen, N. (2016). Living labs as boundary-spanners between triple helix actors. *Journal of Contemporary Eastern Asia*, *15*(1), 78-97.

Worasinchai, L., Ribière, V., & Arntzen Bechina, A. A. (2009). The role of knowledge flow in the Thai GUIN version of the triple helix model. *Electronic journal of knowledge management*, *7*(2), 287-296.

Yang, H., & Jung, W.S. (2016). Assessing knowledge structures for public research institutes. *Journal of Contemporary Eastern Asia*, *15*(1), 27-40.

Yoon, J.W., & Park. H.W. (2017). Triple Helix Dynamics of South Korea's Innovation System: A Network Analysis of Inter-Regional Technological Collaborations. *Quality & Quantity, 51*(3), 989-1007.