ECOLOGICA, Vol. 29, No 107 (2022), 315-323
https://doi.org/ 10.18485/ecologica.2022.29.107.3
Originalni naučni rad
UDC: 338.1:502.131.1]: 336.71(73)
616.98:578.834

What do the biggest US banks disclosure about green intellectual capital in the period of COVID-19 crisis?

Šta najveće američke banke otkrivaju o zelenom intelektualnom kapitalu u razdoblju krize COVID-19?

Miloš Petković

Singidunum University, Faculty of Business, Belgrade, Serbia /
Univerzitet Singidunum, Poslovni Fakultet, Beograd, Srbija

orcid.org/0000-0002-1989-0504
e-mail: mpetkovic@singidinum.ac.rs,

Received / Rad primljen: 07.03.2022, Accepted / Rad prihvaćen: 12.06.2022.

Abstract: The purpose of this study is to explore the corporate news related to the topic of green intellectual capital in 6 biggest US banks in the period of Covid-19 pandemic crisis. In order to answer the research question, computerized lexical qualitative content analyses were done of 50 corporate separate news (texts) from March 2020 until February 2022, with 40,126 words. The research study concentrates on 4 main clusters of news that focus on (1) green human capital; (2) green structural capital; (3) green relational capital, and (4) financial performance as a company's potential to gain competitive advantage. The research findings prove that biggest US banks disclosure intensively in public about green intellectual capital together with its components. These green intellectual resources are sufficiently present in communication practices. The article contributes to the current literature on green intellectual capital narratives. It tends to provide explanation how biggest US banks companies interpret green intellectual capital in its corporate news and which components companies focus most in order to gain competitive advantage and better financial results.

Keywords: green intellectual capital, green human capital, green structural capital, green relational capital, financial performance, US banks, Covid-19 crisis.

Sažetak: Cilj rada je istraživanje poslovnih vesti usmerene ka temi zelenog intelektualnog kapitala u 6 najvećih američkih banaka u periodu korona krize. U cilju odgovora na istraživačko pitanje, kompjuterizovane leksičke kvalitativne analize su urađene na 50 korporativnih vesti od marta 2020 do februara 2022 godine, sa 40,126 reči. Ova studija skoncentrisana je na 4 glavna klastera vesti, a to su (1) zeleni ljudski kapital; (2) zeleni strukturalni kapital; (3) zeleni relacioni kapital, i (4) finansijska performansa kao glavni kompanijski potencijal ostvarivanja konkurentske prednosti. Rezultati istraživanja pokazuju da najveće američke banke objavljuju intenzivno u javnosti o zelenom intelektualnom kapital zajedno sa njenim komponentama. Ovi intelektualni resursi su adekvatno prisutni u komunikacionim praksama. Rad doprinosi trenutnoj literaturi po osnovu glavnih narativa zelenog intelektualno kapitala. Rad teži da obezbedi objašnjenje kako najveće američke banke interpretiraju zeleni intelektualni kapital u svojim poslovnim vestima i koje komponente su posebno naglašene, a sve u cilju ostvarivanja konkurentske prednosti i boljih finansijskih rezultata.

Ključne reči: zeleni intelektualni kapital, zeleni ljudski kapital, zeleni strukturalni kapital, zeleni relacioni kapital, finansijska performansa, američke banke, korona kriza.

INTRODUCTION

Starting from 2011, when the officially 4.0 industry has been conceived as a future business strategy and reality, nothing remained the same as before. Advanced technology, the Internet of things (IoT), Cyber-physical systems (CPS), cloud computing, autonomous vehicles, and many more pushed the business processes up to unprecedented levels. These changes resulted in completely different forms of human interaction with technology (Kusi-Sarpong et al., 2022). Authors Mubarik et al. (2021) think that these technological advancements change dramatically company's operations.

In order to adopt new technological practices amicably, companies must understand faced challenges linked to the sustainable production, environmental protection, international trade, economics and other. Increased awareness of changing climate, environmental and social concerns have brought sustainability in the center of companies' attention. Companies are pushed toward considering both internal and external economic environments to ensure the adequate sustainability of its company's processes, productions and performance (Khan et al., 2021).

Due to growing environmental concerns in the period of economic and pandemic crisis, green business has become of the highest importance, especially in the most developed economies such the US. The significance of being green has attracted attention both from professionals and scholars in recent years. There are numerous authors who talked about importance of green businesses, green innovation, green management, green human resources management, green processes (Kazancoglu et al., 2018; Li et al., 2018; Mustapha & Abdelheq, 2018; Petković & Džamić, 2020; Przychodzen et al., 2018; Radić, N. et al., 2019; Zhang et al., 2018).

Current global market has been extremely competitive in which companies must not be only successful economically, but also and responsible towards environment. On the highly competitive global market, the life cycle of products becomes increasingly shorter that pressures companies to react faster. That would not be possible if a company does not possess adequate innovations, business uniqueness, human capital, expertise. What cannot be copied and imitated by competition companies are all those intellectual resources such as news ideas, innovations, knowledge. These resources bring long-term benefits to all companies that become green (Carmona-Moreno et al., 2012; Petković & Đorđević, 2021).

The top management green commitment on emphasizing the importance of green intellectual capital lead to the conservation of the natural environment. The support for environmental issues coming from top management, especially in their public discourse is widely seen as a positive stimulus of green practices among company's employees, but also other company stakeholders. Further on this will lead to better environmental sustainable performance. (Haldorai et al., 2022).

The paper draws attention on the role of possessing company's knowledge for both economic and environmental interests. Precisely, possessing knowledge accumulated in the forms of human, structural and relational capital may lead to improvement of company's advantage, results and performance. Further, study construes how green intellectual capital, and its three components are interpreted and presented publicly in companies' communications in the period of pandemic crisis by top decision makers, directors and top management. Do the selected companies pay attention on these questions, when problems with financial profitability may exist in the period of crisis?

The corporate news data was collected from the Clarivate database ProQuest of 6 available biggest US banks listed on the NYSE over period of time March 2020 to February 2022. The focus is on the banks' public communication about the raising concern of green intellectual capital in the period of the corona pandemic crisis. The qualitative textual data was taken to be empirical and statistically examined. In doing so, the paper contribute the literature in at least three ways. First, drawing attention on importance of green intellectual capital as a main driven for achieving necessary company's competitive advantage. It is not enough only to posse knowledge and expertise for achieving economic goals, but also possessing knowledge and expertise for achieving economic goals without hurting the environment. Second, how companies understand and interpret green intellectual capital in public communication to its stakeholders. What are the terms, messages and conclusion in their public discourse about the topic? Third, how much attention do they pay in their news, what is the frequency of specific terminology?

The paper proceeds with the following structure. In the section 1, the extant literature on green intellectual capital introduces the review of studies. Section 2 explains the research methodology, data sample and main findings. Section 3 proposes a conclusion and highlights limitations of the study and suggestions for future research.

1. LITERATURE REVIEW

1.1. What is green intellectual capital?

Green intellectual capital topic started to be more interesting in recent years. Even though it is a relatively new and young field, many studies have been published already in the past short period of time. Liu (2017) defined green intellectual capital as a synergy of environmental and green intellectual sources of companies' efforts to achieve necessary competitive advantage. Green intellectual capital resources are all company's knowledge able to leverage in the process of generating economic benefits and environmental management (López-Gamero et al., 2011). Green intellectual capital allows companies to meet very high international environmental standards demanded by their consumers (Huang & Kung, 2011).

The literature recognizes the classification of green intellectual capital into three main components, and those are: 1) green human capital; 2) green structural capital; 3) green relational capital.

1.2. Components of green intellectual capital

According to Chahal & Bakshi (2014) green human capital is defined as a sum of all employees' knowledge, education, skills, techniques, competencies, experience related to the green innovation and environmental protection within one company. Furthermore, the green human capital is the main green intellectual capital component mostly because the fact that human factor is the driving factor of every organization. Mazzi et al. (2016) states that green human capital is composed of all employees' explicit and implicit (tacit) knowledge valuable in achieving company's competitive advantage fully respecting its environment. Compared to other components such as green structural and relational capitals, green human capital is not owned by the company, unless is not transformed in some concrete asset or value (Ahmed et al., 2019). Campbell et al. (2012) states that the green human capital is considered as the main strategic resource for obtaining sustainable competitive advantage.

Wang et al. (2014) defined a green structural capital as a second component of green intellectual capital. Green structural capital are all assets integrated within the company. These assets are company's ownership and property, such as organizational informational technology, systems, databases, trademarks, patents, structure, culture, processes and many more. For Mubarik et al. (2021) and Ahmed et al. (2019) structural capital represents the organizational ownership, codified institutional knowledge that will remain even employees at some certain moment change its jobs.

Finally, Tumwine et al. (2012) defined the last green intellectual capital component, and it is green relational capital. Green relational capital includes all company's stocks related to its relationships with suppliers, customers, competition, shareholders, government, public, partners and other organizations. These significant relationships permit adoption of corporate environment management practices and development of green innovations. Most importantly, they will lead to higher economic results and value creation. Guerci et al. (2016) emphasizes important role of relational capital on the company's HRM.

1.3. Influence of green intellectual capital on company's performance

There are not so many studies examining the links between green intellectual capital and company's performance until now. Pioneers in the field are Yong et al. (2019), who examined the link between green intellectual capital components and green HRM. The results showed surprisingly positive relationship between green human capital and green structural capital on green HRM, but negative correlation between green human capital and green structural capital on HRM. According to Delgado-Verde et al. (2014) green structural capital had an indirect impact on company's sustainable production innovations. The authors explored that within green structural capital are all environmental policies, responsibilities, communications, procedures that one company possess. These elements have only indirect influence on company's innovative green products. Further, the green structural capital has a direct link with its own green human capital on success of the company's environmental innovative products. Chen & Chang (2013) identified direct lineal effect of green human capital on green innovative performance. Also, the same authors came up to the positive result between green human capital and corporate environmental ethics. Authors highlighted that companies should invest in green human capital in order to improve its corporate environmental ethical standards. Companies obtain long-term competitive advantage when they adopt green human capital such as green training from green intellectual capital (Yusoff et al., 2020).

2. METHODOLOGY

2.1. Data sample explanation

The research study relies on the corporate news in order to explore main narratives on the topic of green intellectual capital. The corporate news are publicly available on the official websites of different corporate newspapers. The corporate news observ-

ed in the study starts from March 2020 (when covid-19 crisis has started) until February 2022 (when this papers has been prepared). The sample includes sole 6 biggest US banks listed on the New York Stock Exchange (NYSE).

2.2. Content analysis by textual statistical software

The existence of specialized textual statistical software becomes very important in the qualitative analysis. For the purpose of the study, the specialized content textual qualitative statistical software "Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires" (or IRaMuTeQ) will be used. The software was developed by Pierre Ratinaud from Laboratory LERASS, University Toulouse, France in 2008. Ramos et al. (2019) proved that IRaMuTeQ provides necessary qualitative textual data analysis. The main objective of the study is to identify how words group to each other in a text segment related to the topic of green intellectual capital.

The computerized lexical content analysis was applied within the study with IRaMuTeQ software because of sample size composed of 50 corporate news, and in total 40,126 words. This method allows us to highlight the strategic plans of companies through the textual analysis of the topic of green intellectual capital.

2.3. Formatting the text corpus

The corpus text composes of the corporate news of 6 banks published in 2020, 2021 and 2022. The corporate news were obtained from Clarivate database ProQuest. Preparing the corpus is consisted of copying the body of text in a txt document, which resulted in 177 pages of pure text. The qualitative analysis with the selected corpus is possible thanks to the dictionaries available in IRaMuTeQ software. They allow easier to lemmatize the texts by conserving infinitive forms of verbs and singular forms of nouns in order to be grouped into semantic given 4 categories.

2.4. Findings

The content analysis is composed of two main phases that has an impact on the processed results. The step-by-step procedure has been executed, which means from phase 1 to phase 2 because the order of the phases has a final impact on study results.

Phase 1: Analysis of the whole corpus text to reveal main categories of the selected 6 banks.

This phase showed that the corpus is composed of 5,260 forms, 1,122 text segments, 4,168 lemmas, which covered 95,54% of the corpus. These are the elements classified into 4 main categories (Fig. 1).

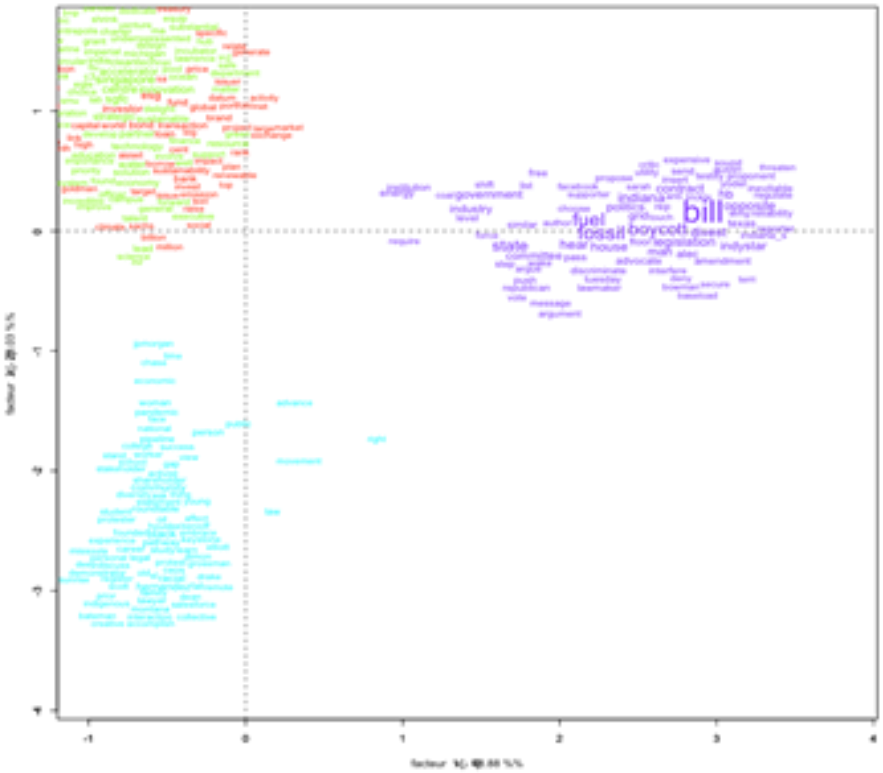

Figure 1. Semantic clouds of 4 categories of corporate news published by observed companies
Source: Author's calculation

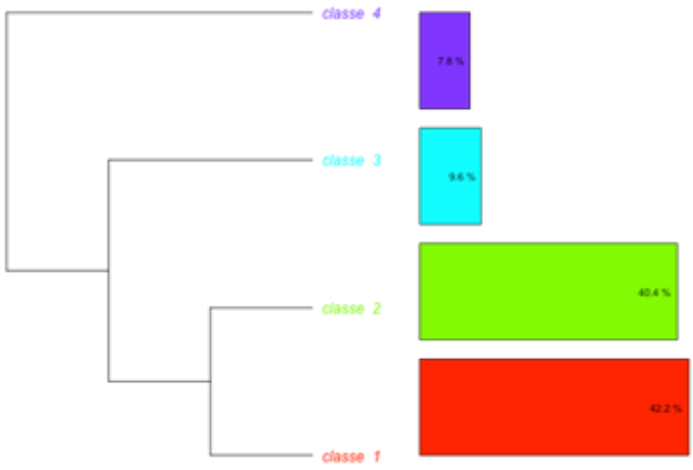

Figure 2: Dendrogram of 4 main classes of corpus text
Source: Author's calculation

Table 1. Categories revealed in the phase 1

Category	Color code	Name	% of forms analyzed
Category 1	Red	ESG	41%
Category 2	Green	Green innovation	15%
Category 3	Turquoise	Human capital	27.9%
Category 4	Purple	Nonrenewable resources	16%

Source: Author's calculation

All four categories that have emerged have very big links to the topic of green intellectual capital. Category 1 – Environmental, Social and Governance (ESG) covers topics related to organization and governance (sustainability, work, management, green, company, strategy, pathway, accelerator, etc.). Category 2 – Green innovation talks about green innovations, products and services (stock, high, growth, strong, stimulus, increase, share, research, development, rise, etc.). Category 3 covers the vocabulary related to human capital and personnel (man, employee, energy, human resource, skills, education, etc.). Finally, Category 4 covers the topic of nonrenewable resources (fossil, fuel, opposite, energy, inevitable, pipeline, terminate, steam, etc.).

More precisely, two of the four categories with the highest % of forms analyzed will be further examined and included in the next sub corpus. In other words, the first level of analysis permitted us to identify categories that will be more receptive of the green intellectual capital components. In the Figures 1 and 2, we may see that categories 1 and 2 are overlapping and require the clearer separation. Categories 3 and 4 are separated, pretty homogeneous and independent. In order to obtain more precise image of the whole corpus, categories 1 and 2 representing 56% will be further examined and included in the sub-corpus within the phase 2 analysis.

Phase 2: Creating sub-corpus from the initial corpus

The second phase in the lexical content analysis considers creation of the sub-corpus from initial corpus text in order to clarify categories 1 and 2. The clarification will lead to better and broader understanding (Figure 3).

The final second level of analysis gave us a clearer classification of the words into 4 categories, that were named Environmental sustainability (Category 1), Economic Growth Rate (Category 2), Limitation of nonrenewable resources (Category 3), and Profitability (Category 4). Category 1 deals with topic of environmental sustainability relying on accelerating green technology, strategies and pathways made by chief decision makers. Category 2 talks about the economic growth rate emphasizing economic growth, higher stock prices, increased trades, controlling inflation, strong recovery, earnings expectations, etc. Category 3 delivers insights about limiting nonrenewable resources utilization and efficient utility of alternative sources of energy. Final Category 4 talks about main companies' financial performance – profitability, but more precisely revenues, sales, cash, etc.

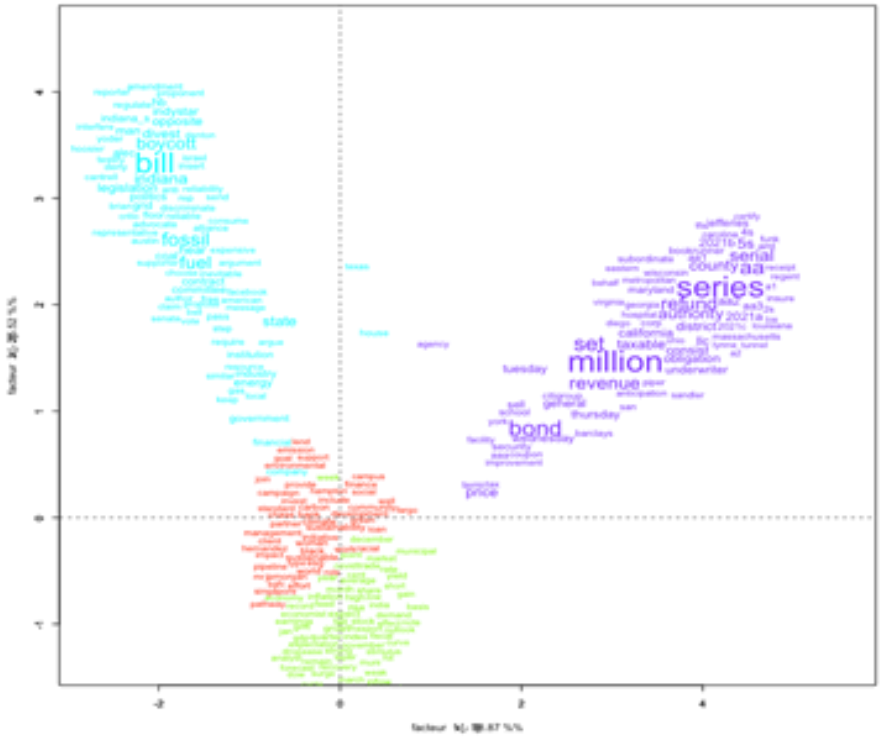

Figure 3. Creation of sub-semantic clouds from initial corpus
Source: Author's calculation

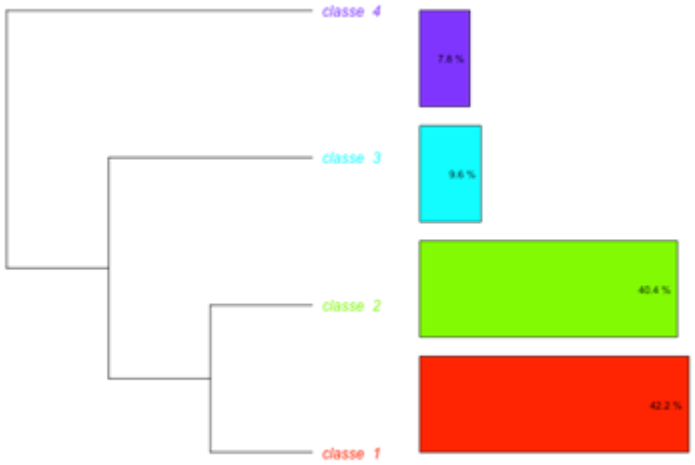

Figure 4: Dendrogram of 4 main classes of sub-corpus text
Source: Author's calculation

Table 2. Categories revealed in the phase 2

Category	Color code	Name	% of forms analyzed
Category 1	Red	Environmental sustainability	42.2%
Category 2	Green	Economic growth rate	40.4%
Category 3	Turquoise	Limitation of nonrenewable resources	9.6%
Category 4	Purple	Profitability	7.8%

Source: Author's calculation

This second level of analysis allowed us to crystalize better the whole corpus into smaller homogeneous pieces that will produce key narratives related to the topic of green intellectual capital and its

main three components. The most importantly, the key narratives present us what do the key decision makers, directors and top managers of the US biggest banks disclosure about the green intellectual capital in their public communications. As we can identify, the selected 6 banks disclosure about profitability and economics expectations as a main financial performance, but together with importance of human capital, corporate governance, environmental sustainability, limitation of nonrenewable resources and green innovations.

Another IRaMuTeQ method able to present the main community of words is Similarity Analysis method, presented in the Figure 5. Very interestingly, symbolically, the analysis gave us the results in the form of "human lungs". On the left side, we may see that company and its management is very much linked to the energy and power consumption. On the right side, pandemic corona crisis is very much linked with external environmental concerns. In the balance of these two side, in between we may see positive company's impact on environment. To conclude the results, it is not possible to obtain and achieve planned financial and economic goals without taking into consideration necessary environmental concerns.

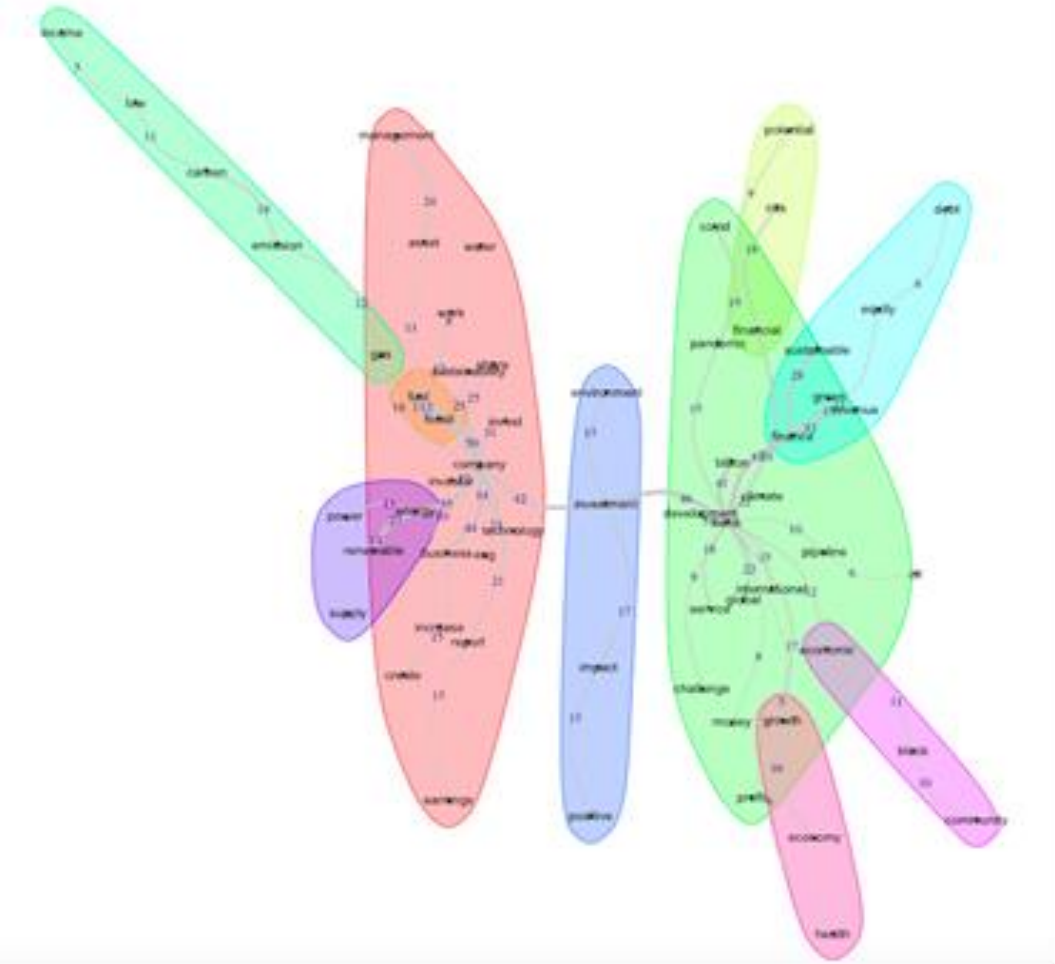

Figure 5. Similarities analysis of the cluster diversity
Source: Author's calculation

CONCLUSION

With this papers, companies are encouraged to adopt green practices in their business as a cause to the raising climate and environmental concerns. Achieving sustainable and green business processes are possible through companies' human resources only. Company going green is a fundamental condition to increase its short-term and long-term advantages and performance. Only enhancing companies potentials though green intellectual capital is possible to build one green successful organization.

The research study aims to contribute to the literature about the disclosure of green intellectual capital in the public communication news. The importance lays in the understanding of the acquisition of green intellectual capital on the organizational level. Moreover, the research presents what biggest banking companies publish and how much attention

do they pay on the raising topic as it is the green intellectual capital.

In order to cover the broad corporate news, the paper identified four main clusters using a lexical content analysis. Around those four clusters is expected to identify further terms and words how companies see and interpret green intellectual capital and its components. The paper is composed of 50 different news and 40,126 words on 177 pages from 6 biggest US banks listed on NYSE. The results showed that banking companies talk intensively about both economic and environmental issues, emphasizing company's employees, green innovations, ESG, environmental sustainability, nonrenewable sources of energy, economic and financial results. From the whole corpus text, both economic and environmental questions are almost equally mentioned.

The research gives a general message on the topic of green intellectual capital that company's knowledge, expertise and know-how from the sector of activity they belong is very important to be equally combined and balanced not only from its economic interest, but as well with environmental. So, the knowledge of company should not be only focused on gaining economic and financial objectives, but together with its environmental, both at the same time. The research paper has a profound implications for managers and decision makers. First and foremost is the need for strategic understanding of the top management on the topic of green intellectual capital and possessing necessary knowledge and expertise in the field company belongs. The knowledge cannot be only related to achieving economic objectives, but both economic and environmental at the same time. Secondly, managers must continue to talk and about these issues intensively and with its owns example to stimulate positive impact on societies they operate in.

The recommendation for further research can be extended to other industries and companies, broader and bigger sample size of corporate news, but also an interdisciplinary approach that would certainly combine qualitative and quantitative research methods.

Acknowledgement

The author is supported by the research project (Decision No. WGB-2/13/Z/2020) by Wroclaw University of Economics, Wroclaw, Poland.

REFERENCES

[1] Ahmed, S. S., Guozhu, J., Mubarik, S., Khan, M., & Khan, E. (2019). Intellectual capital and business performance: The role of dimensions of absorptive capacity. *Journal of Intellectual Capital*, 21(1), 23-39. https://doi.org/10.1108/JIC-11-2018-0199

[2] Campbell, B. A., Coff, R., & Kryscynski, D. (2012). Rethinking Sustained Competitive Advantage from Human Capital. *Academy of Management Review*, 37(3), 376-395. https://doi.org/10.5465/amr.2010.0276

[3] Carmona-Moreno, E., Céspedes-Lorente, J., & Martinez-del-Rio, J. (2012). Environmental human resource management and competitive advantage. *Management Research: Journal of the Iberoamerican Academy of Management*, 10(2), 125-142. https://doi.org/10.1108/1536-541211251607

[4] Chahal, H., & Bakshi, P. (2014). Effect of intellectual capital on competitive advantage and business performance: Role of innovation and learning culture. *International Journal of Learning and Intellectual Capital*, 11(1), 52. https://doi.org/10.1504/IJLIC.2014.059227

[5] Chen, Y.-S., & Chang, C.-H. (2013). Utilize structural equation modeling (SEM) to explore the influence of corporate environmental ethics: The mediation effect of green human capital. *Quality & Quantity*, 47(1), 79-95. https://doi.org/10.1007/s11135-011-9504-3

[6] Delgado-Verde, M., Amores-Salvadó, J., Martín-de Castro, G., & Emilio Navas-López, J. (2014). Erratum: Green intellectual capital and environmental product innovation: the mediating role of green social capital. *Knowledge Management Research & Practice*, 12(3), 350-350. https://doi.org/10.1057/kmrp.2014.8

[7] Guerci, M., Montanari, F., Scapolan, A., & Epifanio, A. (2016). Green and nongreen recruitment practices for attracting job applicants: Exploring independent and interactive effects. *The International Journal of Human Resource Management*, 27(2), 129-150. https://doi.org/10.1080/09585192.2015.1062040

[8] Haldorai, K., Kim, W. G., & Garcia, R. L. F. (2022). Top management green commitment and green intellectual capital as enablers of hotel environmental performance: The mediating role of green human resource management. *Tourism Management*, 88, 104431. https://doi.org/10.1016/j.tourman.2021.104431

[9] Huang, C., & Kung, F. (2011). Environmental consciousness and intellectual capital management: Evidence from Taiwan's manufacturing industry. *Management Decision*, 49(9), 1405-1425. https://doi.org/10/cmgqwv

[10] Kazancoglu, Y., Kazancoglu, I., & Sagnak, M. (2018). A new holistic conceptual framework for

green supply chain management performance assessment based on circular economy. *Journal of Cleaner Production*, 195, 1282-1299. https://doi.org/10/gd2q4r

[11] Khan, S. A., Mubarik, M. S., Kusi-Sarpong, S., Zaman, S. I., & Kazmi, S. H. A. (2021). Social sustainable supply chains in the food industry: A perspective of an emerging economy. *Corporate Social Responsibility and Environmental Management*, 28(1), 404-418. https://doi.org/10.1002/csr.2057

[12] Kusi-Sarpong, S., Mubarik, M. S., Khan, S. A., Brown, S., & Mubarak, M. F. (2022). Intellectual capital, blockchain-driven supply chain and sustainable production: Role of supply chain mapping. *Technological Forecasting and Social Change*, 175, 121331. https://doi.org/10.1016/j.techfore.2021.121331

[13] Li, D., Zhao, Y., Zhang, L., Chen, X., & Cao, C. (2018). Impact of quality management on green innovation. *Journal of Cleaner Production*, 170, 462-470. https://doi.org/10/gfwkzq

[14] Liu, C.-H. (2017). The relationships among intellectual capital, social capital, and performance - The moderating role of business ties and environmental uncertainty. *Tourism Management*, 61, 553-561. https://doi.org/10.1016/j.tourman.2017.03.017

[15] López-Gamero, M. D., Zaragoza-Sáez, P., Claver-Cortés, E., & Molina-Azorín, J. F. (2011). Sustainable development and intangibles: Building sustainable intellectual capital. *Business Strategy and the Environment*, 20(1), 18-37. https://doi.org/10.1002/bse.666

[16] Mazzi, A., Toniolo, S., Mason, M., Aguiari, F., & Scipioni, A. (2016). What are the benefits and difficulties in adopting an environmental management system? The opinion of Italian organizations. *Journal of Cleaner Production*, 139, 873-885. https://doi.org/10/f9bqpw

[17] Mubarik, M. S., Bontis, N., Mubarik, M., & Mahmood, T. (2021). Intellectual capital and supply chain resilience. *Journal of Intellectual Capital*, (ahead-of-print). https://doi.org/10.1108/JIC-06-2020-0206

[18] Mustapha, H., & Abdelheq, L. (2018). The Role of Investment in Intellectual Capital in improving organizational performance considering knowledge management: The case study of wireless communication sector in Algeria*. Arab Economic and Business Journal*, 13(1), 73-91. https://doi.org/10.1016/j.aebj.2018.02.002

[19] Petković, M., & Đorđević, M. (2021). Intellectual Capital Investments and Company's Profitability: French Context. *Economic Analysis*, 54(1), 104. https://doi.org/10.28934/ea.21.54.1.pp104-117.

[20] Petković, M. & Džamić, V. (2020). Theoretical determination of green intellectual capital. *Ecologica*, 27(100), 668-674.

[21] Przychodzen, W., Gómez-Bezares, F., & Przychodzen, J. (2018). Green information technologies practices and financial performance – The empirical evidence from German publicly traded companies. *Journal of Cleaner Production*, 201, 570-579. https://doi.org/10/gfdsz7

[22] Radić, N., Stevanović, M., & Radić, V. (2019). Životna sredina i resursi – globalni trendovi i odrazi na ekonomiju do 2050. godine. *Ecologica*, 27(97), 141-146.

[23] Ramos, M. G., do Rosário Lima, V. M., & Amaral-Rosa, M. P. (2019). IRAMUTEQ Software and Discursive Textual Analysis: Interpretive Possibilities. In A. P. Costa, L. P. Reis, & A. Moreira (Eds.), *Computer Supported Qualitative Research* (Vol. 861, pp. 58-72). Springer Intern. Publ. https://doi.org/10.1007/978-3-030-01406-3_6

[24] Tumwine, S., Kamukama, N., Ntayi, J. M. (2012). Relational capital and performance of tea manufacturing firms. *African Journal of Business Management*, 6(3), 799-810. https://doi.org/10.5897/AJBM11.659

[25] Wang, Z., Wang, N., & Liang, H. (2014). Knowledge sharing, intellectual capital and firm performance. *Management Decision*, 52(2), 230-258. https://doi.org/10/f5zc6t

[26] Yong, J. Y., Yusliza, M.-Y., Ramayah, T., & Fawehinmi, O. (2019). Nexus *between* green intellectual capital and green human resource management. *Journal of Cleaner Production*, 215, 364-374. https://doi.org/10.1016/j.jclepro.2018.12.306

[27] Yusoff, Y. M., Nejati, M., Kee, D. M. H., & Amran, A. (2020). Linking Green Human Resource Management Practices to Environmental Performance in Hotel Industry. *Global Business Review*, 21(3), 663-680. https://doi.org/10.1177/0972150918779294

[28] Zhang, L., Li, D., Cao, C., & Huang, S. (2018). The influence of greenwashing perception on green purchasing intentions: The mediating role of green word-of-mouth and moderating role of green concern. *Journal of Cleaner Production*, 187, 740-750. https://doi.org/10/gdk9r2