How companies' characteristics influence CSR activities and how logistics deals with CSR expectations

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**Abstract** \_\_\_\_ The concept of Corporate Social Responsibility(CSR) has become an important issue in the strategy of companies. Interest in CSR has increased in recent decades. As there is no unit definition of CSR, each firm and company pursues a different strategy(Ngole Ajang et al., Derek, C). In the first part of this report, we investigated how reasons and planning of CSR activities are related to the size, region, sector and country of business entity.

The purpose of the second part of this report is to explain what kind of social responsibility factors generates competitive advantage for logistic companies. As logistics firms have a critical role in trades, they are under constant pressure from stakeholders to consider environmental and social issues. The method used in this report is a text analysis, in which the social responsibility reports of logistic companies are viewed. Furthermore, the appearance of certain key words associated with the CSR factors are counted in this study. The CSR factors are analyzed in this study including: greenhouse gas emissions, air quality, employee health & safety, and customer welfare.

The main limitations observed in this report are the following:1) The findings are only applicable for the logistic industry. 2) The sample is relatively small, which makes it hard to replicate the findings of this study. 3) Only English written reports are analyzed. The original value of this report is that it is a step towards understanding. In this report some CSR factors were analyzed that contributes to competitive advantage for logistic companies.

keywords: Corporate Social Responsibility (CSR), Firm Size, Firm Sector, Firm Region, Firm Company Logistic.

#### 1-Introduction

The concept of Corporate Social Responsibility(CSR) has been significantly focused since 1930's (Carroll, 1999). It has become a powerful tool for better management to facilitate different industries operations. The concept of CSR has various definitions. Sometimes it is concerned by global corporation, countries' government and individual citizens. It is also associated with corporation and its stakeholders (Guler et al, 2010). In addition, corporations have direct impact on environmental and social issues, which they further realized the importance of CSR as the key for their long-term survival (Porter and Kramer, 2006, p. 78)

According to EU Commission, it is essential for the companies to consider different factors related to environmental and social issues in their operation and interaction with their stakeholders. Therefore, the need for CSR report became an important component of companies' overall strategic approaches (Tong, Mengni, 2012). Stakeholders increased the pressure on companies to consider responsibility and sustainability. EU Commission has encouraged the companies to consider CSR, more specifically in issues related to society improvement, employee aspects, risks and outcomes regarding environmental matter, disaster relief, protection, peace initiatives and pollution reduction and so on (Tong, Mengni, 2012). In addition, the role of government in corporate social responsibility and performance has increased, especially since industrial revolution to recent vears. Government uses tools like legislation, regulation and taxation to protect social objectives. Although the concept of CSR has a long history (e.g. Bowen, 1953), its application within logistics emerged only recently and has not yet been widely adopted (Ciliberti et al., 2008, Seuring et al., 2008). The term Logistics Social Responsibility is often used toexamine CSR issues related to logistics management (Carter and Jennings, 2002, Ciliberti et al., 2008, Miao et al., 2012). Poist (1989) proposed a number of dimensions comprising logistics social responsibility, including the employee training, philanthropy, environment, urban renewal, workplace, diversity, health and safety, and community issues. According to Carter and Jennings 2002), Logistics Social Responsibility comprises the environment, ethics, diversity, working conditions and human rights.

In this study, we evaluate "how Corporate Social Responsibility(CSR) is related to different variables like sector, region, countries and size of the industries". In the second part of this study, there is uncertainty on how LSPs efficiently use their CSR reports as compared to companies in other sectors, and what aspects of sustainability are emphasized for the reports [Piecyk, M., Björklund, M].

The goal of this study is to examine the relationship between Corporate Social (CSR) and different variables Responsibility related to industries including size, sector, region and country, in which the data were obtained over the period of 1999- 2018. In the second part of this study, the content analysis of CSR reports published by LSPs are presented, and further, factors influencing the level and scope of reporting are analyzed. In order to address these objectives, we show that how much various social and environmental categories are covered in the CSR reports. The CSR factors used in this study are as follow: greenhouse gas emissions, air quality, employee health & safety and customer welfare.

## **2-Description of the Data**

In this report for task1we evaluate how Corporate Social Responsibility(CSR) is related to different variables like sector, region, countries and size of the industries. We evaluated 11500 different reports during the time period of 1999- 2017. For this evaluation we consider different factors based on their CSR activities. These factors consist of geographical differences, different size of companies, different sectors, different countries and different regions (Africa, Asia, Europe, Latin America, North America and Oceania). Table 1 shows number of reports in different regions based on the size of companies.

Region		Number or		
	Large	MNE	SME	Reports
Africa	2276	325	168	2767
Asia	8640	4634	764	14036
Europe	10854	4136	2327	17315
Latin America	4298	974	784	6054
North America	2641	2213	433	5284
Oceania	885	523	236	1642

Table 1: Number of reports in different region based on the size of companies.

Studies based on industry specification are important for logistic companies as their performance differs significantly from other industries (Busse and Wallenburg, 2011). For supporting the companies to communicate their CSR performance, a variety of reporting guidelines and standard have been developed. The Global Reporting Initiative (GRI) is the most acceptable framework for this issue (Ciliberti et al., 2008). In the second part of this research, the content of Corporate Social Responsibility reports published by Logistics Service Providers (LSPs) is analyzed by considering four key factors, influencing the level of reports. Table2 shows number of CSR

reports in different regions based on the size of logistic industries.

LogisticsIndustries	Region	Size			NumbarafDanauta
		Large	MNE	SME	NumberofReports
	Africa	73	8	0	81
	Asia	224	88	5	317
	Europe	259	90	43	392
	Latin America	105	15	17	137
	North America	11	36	6	53
	Oceania	32	11	0	43

Table2: Number of reports in different Region based on the size of logistics Industries

### 3-Method

Data analysis is performed in two sections: A) Qualitative Analysis B) Quantitative analysis. Qualitative analysis is done to evaluate CSR Activities undertaken by companies through text analytics for sustainability reports/ annual reports of different sectors in the following way: Data is analyzed qualitatively by the information collected from annual reports, sustainability reports, various sources and personal interview of managers for CSR activities. As qualitative data from reports are in the form of text, text analytics using text mining was resorted for deriving high quality information from the reports. The following methodology was used for text analytics using Voyant-tools.

- Identify source document-corpus.
- Stop word elimination- removing and so on.
- Stemming reduction by combining words of same root.
- Tokenizing- counting the word counts of unique words.
- High Quality Information from the report.

## 4-Results

In order to analyze the influence of companies' characteristics on CSR activities, we analyzed 11500 different companies during the time period of 1999-2017. In this report, the indicators including different sectors, regions, type of CSR reports, size of companies and geographical location of industries are examined. In analyzing different sectors, we observed that companies associated with Financial Services have reported CSR more than other sectors, as shown in Figure 1. Some studies have demonstrated that CSR activities are linked to the financial performance of

industries. It causes a competitive advantage, which leads to a growing number of companies engage in CSR activities during the time period of 1999-2017(H. G. Parsa). The result of this study suggested that industries and sectors can affect CSR activities. It further showed that firms involved in more environmental industries such as mining, oil and energy, and industries with the closest ties to consumer base and community (food retail) tend to engage more in CSR activities (Dabic, M).

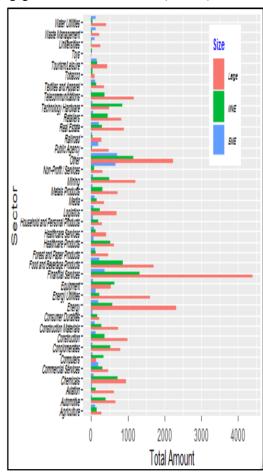


Figure 1. Relation between Sector and Size

By analyzing companies related to the different regions in these years, developed countries, on the other hand developed region has reported CSR more than other regions (Figure 2). The level of economic development of the country influences on CSR activities. It further showed that developed countries with better resources and organizations have higher expectations from CSR. Therefore according to the particular needs of different locations, the level of economic development plays an important role on implementation of CSR, (Ikemefuna, C). As we see Africa and Oceania have less CSR reports (Figure 3).

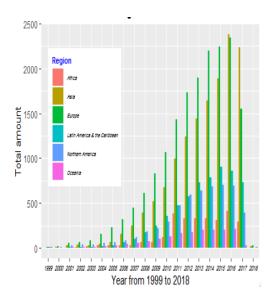


Figure 2-Relation between region and the year of publications.

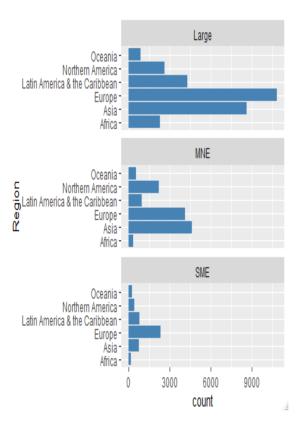


Figure 3- Relation between Region and Size of companies.

In the third examination, we analyzed the size of companies as expected, large companies contribute more on CSR reports by considering specific standard(Figure 4). Multiple studies have shown that larger companies may exhibit more social responsibility behavior. This may be associated with the increased expectation from stakeholder to act more socially with consumers, the environment, employees, and local communities (Waddock, S).

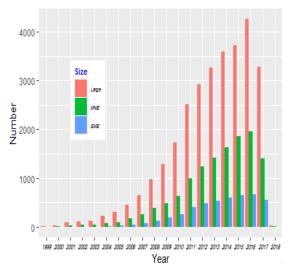


Figure 4- Relation between Size of companies and the Year of publication

In the second part of this research, a database of 190 international LSPs is analyzed. Based on the data provided, it appears that some companies have not efficiently reported CSR. Therefore, the availability of existing CSR was reviewed and further, the mechanism of cleaning data for these reports was applied. In addition, reports that were writing in English were only considered in this report. Each company has different CSR reports, which were provided in several years. Finally, the remaining and appropriate CSR reports were downloaded. In the next step of analysis, the Global Reporting Initiative (GRI) GRI G1 to GRI G4 for categorization was considered. Through the content analysis, we find the words by more than 4000 frequently(Figure 5), and we see word Clouding in Figure 6.

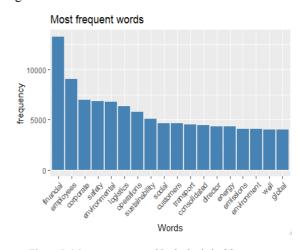


Figure 5- Most common word in the logistic CS reports



Figure 6- wordClouding

The next issue that was considered in the current study is analyzing the indicators. Many companies used text descriptive information in their CSR report to indicate the social responsibilities issue. In this work only measurable indicators were considered to be analyzed. Here we clean the text file for data mining, and then we search for specific keywords.

In the statistical analysis, the level of CSR reports was measured through the following variables: frequency of greenhouse gas emission (Figure 6), frequency of safety and health indicator reported (Figure 7), frequency of air costumer welfare (Figure 8). The effect of these four indicators were analyzed separately. By analyzing these indicators, we can see that safety and health have been considered as important indicators for CSR reporting. This research at first suggests that CSR reporting is becoming a critical issue for all companies nowadays. Based on the size, location and type of sector, the level of CSR importance differs too. In recent decade logistic companies follow the procedure to report CSR by considering specific indicators. In this research 190 logistic companies from five different economic regions (Asia, North America, Europe, Oceania) were analyzed.

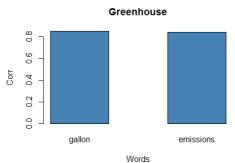


Figure 7- Correlation between "Greenhouse" with other words.

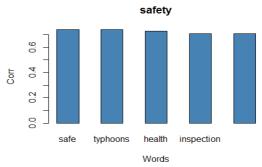


Figure 8- Correlation between "Safety" with other words.

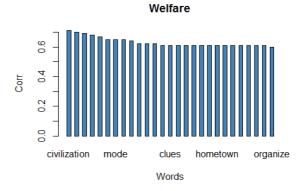


Figure9- Correlation between" Welfare" with other words

Particularly we analysis 160 different CSR reported that written in English.

The main findings can be resulted in:

- 1- Selected logistic companies adopt one of the Global Reporting Initiative standards (GR1-GR4) for categorization.
- 2- All logistic companies that are analyzed follow GRI guidelines.
- 3- CSR reports represent CSR activities of logistic companies in different social responsibility categories (Environment, Social, Employee)
- 4- Not all logistic companies represent CSR report.

#### 5-Discussion

This paper suggests that CSR is becoming an important issue increasingly for logistics companies. However, only 16% of world's LSPs produce a formal CSR report and publish at least some CSR-related indicators. The companies originating in Asia reported on average on more environmental indicators than LSPs headquarters located in Europe and North America. These reports did not present indicators like air quality. It is important to acknowledge that there may be other factors influencing the level of CSR reporting that is shown in text mining, but these indicators did not analyze in this report. These issues should be addressed by future research involving primary data collection. While most companies studied report on categories such as environment, employment, working conditions, ethics and human rights, there is no consistency in the choice of indicators. Even within one category, performance is reported in a number of ways. For instance, under costumer welfare companies report on the absolute number of civilizations, hometown, mode, etc. This suggests that a standardized set of indicators would be useful to GRI reporting and ensure the comparability of results. Framework provides a tool that could be used by LSPs to ensure industry-wide consistency of reporting. Despite this, only 99 of the 160 reports, are in the GRI format. This study supports the findings of the literature review by confirming that the meaning of the CSR in the logistics discipline has yet to reach uniformity. Air quality not yet covered by the GRI's reporting. This study is scoped out with regard to company size and sector. However, the sample is not geographically limited. The content of the CSR reports can be affected by the country, thus impacted by the nature and kind of governance rule-based versus relation-based governance (Tate et al., 2010, Tewari, 2011). The key question that emerges from this study is why the percentage of companies reporting on their CSR-related performance is so low and why have companies motivated to CSR activities after 2006. Is this because LSPs do not recognize the importance of the CSR issues or maybe due to a lack of tools and resources to manage the monitoring and reporting process? The analysis presented in this paper is based on CSR report from 1999 till 2017. It is acknowledged that this report may not be the most comprehensive one. A longitudinal study aiming to explore how CSR reporting in the sector reporting progressed over the years would be complementary to our work (Piecyk, M., Björklund, M).

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