LOGISTICS SOCIAL RESPONSIBILITY: UNDERSTANDING AND DEVELOPMENT OF THE CONCEPT IN THE SLOVAK REPUBLIC*

Vít Hinčica** Mária Maliková*** Hana Řezanková****

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Abstract

This paper aims at finding out what effort logistics-related companies based in the Slovak Republic demonstrate, concerning their social responsibility. Using a standardized questionnaire, addressing approximately 30 issues from the field of social responsibility, grouped in five categories, we approached over 100 members of the Association of Logistics and Freight Forwarding of the Slovak Republic, of which 29 provided answers. Despite the low number of respondents, it was still possible to formulate several findings. First, it was revealed that a part of the Slovak logistics industry cares about the issue of social responsibility although the level of such a commitment is uneven for the

1. INTRODUCTION

Logistics is considered the lifeblood of economies (Sezer and Abasiz 2017). Its role in the world today is progressively increasing. As pointed out by Yan et al. (2019), logistics stopped merely serving a business function and over time became the main driving factor in business development.

five analyzed dimensions. Second, the responding companies with employees, or a department, dealing specifically with corporate social responsibility, demonstrate more effort in the field. Third, the responding foreign-owned companies also demonstrate additional efforts towards social responsibility. These findings may become a starting point for further research on the topic and intensify the discussion on the still underdeveloped concept of logistics social responsibility, not only from a one-country perspective.

Keywords: logistics social responsibility, Corporate Social Responsibility, Slovak Republic

Nonetheless, thus far, only a few scholars have attempted to investigate more deeply the behavior and (inter)actions of logistics-oriented or logistics-connected firms vis-à-vis their stakeholders, a broader environment, and, after all, the respective society in which these firms operate. In the early 21st century, the term "logistics social"

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^{**} Vít Hinčica, University of Economics, Faculty of International Relations, Department of International Business, Nám. W. Churchilla 1938/4, 130 67 Prague, Czech Republic, E-mail: vit.hincica@vse.cz., ORCID: https://orcid.org/0000-0002-8591-632X

^{***} Mária Maliková, University of Economics, Prague, Faculty of International Relations, Department of International Business, Czech Republic

^{****} Hana Řezanková, University of Economics, Prague, Faculty of Informatics and Statistics, Department of Statistics and Probability, Czech Republic, ORCID: https://orcid.org/0000-0002-4131-5506

responsibility" was born, to narrow down the examination of corporate social responsibility and investigate the issues that relate specifically to socially responsible logistics management (Carter and Jennings 2002). Yet, the concept of logistics social responsibility (LSR) has been developed rather insignificantly and more emphasis has still been put on the earlier-born concepts of green logistics, sustainable logistics, and corporate social responsibility (CSR) in general. However, with the growing role of logistics, it is worthwhile to continuously add more insight into the socially responsible behavior of the companies working in this industry.

This paper presents practice-oriented research, aimed at learning more about corporate social responsibility attitudes among companies actively participating in the field of logistics. We have decided to work with companies based in the Slovak Republic and collect answers from them on many issues, related to the topic of social responsibility. Due to the empirically underdeveloped and thus still rather unanchored concept of LSR, an awarenessraising questionnaire that was designed to help firms think about their efforts towards responsible entrepreneurship was used. This CSR-oriented questionnaire can be applied to any company, including those working in the field of logistics, so we find it appropriate to implement it in the present research. Moreover, by drawing relevant conclusions on the topic, this paper could reactivate the debate on the attitudes of logistics-related companies and become another bridge between the traditional concept of corporate social responsibility and the still immature concept of logistics social responsibility. The way companies reacted to the questionnaire may also help in designing future questionnaires that will reflect the activities of the logistics industry more clearly.

2. CSR IN LOGISTICS AND BIRTH OF LSR -LITERATURE REVIEW

Due to the expansion of globalization, associated with an ever-increasing economic specialization and division of labor, the volume of international trade has risen sharply (Heidbrink et al. 2014). This implies more complicated supply chains and transport of increasing quantities of goods over increasing distances, ensured by logistics, the role of which has also increased in importance (Flämig 2014).

Currently, there are many problems associated with logistics, which have attracted the attention of various stakeholders in recent decades. In the transport sector, in particular, the voices of different parties, pointing to the social and environmental drawbacks of this sector have been raised, not only the voices of customers, but also those of residents, impacted by logistics activities, or of the employees themselves, especially lorry drivers (Endres et al. 2014; Kisperska-Moroń and Klosa 2013).

Changes in consumer habits and lifestyles, which are due, among other things, to the advent of e-commerce, have led to an increase in demand for smaller and more specific deliveries that are not that easy to consolidate (Köylüoglu and Krumme 2014). Also, the use of supply systems, such as just-in-time, has led to an increase in the volume of freight traffic. This increase then, also, causes more frequent congestion (Günther and Tempelmeier 2012), which may, subsequently, be a cause for complaints by residents, living near the main roads. From the environmental point of view, increased traffic not only leads to air and noise pollution but also over-utilization of resources (Flämig 2014). Frequent trash on, or near transportation routes, either intentionally or unintentionally

generated, is another negative effect of increased freight traffic (Nelson 2001).

In the social field, logistics copes with demographic change and the associated shortage of workers, but also with changing working conditions and employee training requirements (Heidbrink et al. 2014). While the demand for workers is increasing, there is a shortage of skilled labor in the market (Heidbrink et al. 2014). One of the problems in transport is the question of aging drivers, who are expected to retire in the relatively near future (Endres et al. 2014). Some authors (Heidbrink et al. 2014; Endres et al. 2014) attribute the unwillingness of particularly young people to engage in transport to the negative image of the driver's profession – whether long periods away from home, pressure on delivery speed, or low pay.

From the economic point of view, large competition in the logistics sector is pushing prices for services – especially the transportation services – downwards (Flämig 2014). Meanwhile, customer demands for faster services at a higher standard of quality are increasing (Markmann et al. 2013). Given the competition, logistics companies can barely translate the rising oil prices caused by the depletion of available resources into the final price the customer must pay if they do not wish to lose him. Therefore, it is not uncommon to see logistics companies bearing the cost themselves (Heidbrink et al. 2014).

On that account, it is obvious that pressure from customers regarding environmental measures or higher wages for employees and their simultaneous current reluctance to pay extra for the services offered puts them and logistics companies in a conflict of interest (Heidbrink et al. 2014). However, many problems can be alleviated

by measures in the field of corporate social responsibility.

As mentioned in the introduction, the concept of LSR exists. Ciliberti et al. (2008: 88) state that "LSR is socially responsible management of the supply chain", whereas Murphy and Poist (2002: 24) state that LSR "refers to the idea that logistics managers have a responsibility to seek socially beneficial results along with economically beneficial results in their decision making". Piecyk and Björklund (2015) claim that the term is often used by authors when dealing with the concept of corporate social responsibility within logistics management. Most of the literature on this concept is relatively recent and limited in scope, appearing at the beginning of the 21st century, and most studies in this area address its specific aspects, such as transportation (Ciliberti et al. 2008). Probably the first author that designed a concept resembling LSR was Poist (1989), who used the term "total responsibility approach" in his research.

The need for building a concept, such as LSR, was likely motivated by the unclear interconnection between CSR and the field of logistics, while in the late 20th century, logistics managers also happened to be in need to develop patterns of behavior, concerning CSR issues (Carter and Jennings 2002). Already in 2002, Carter and Jennings (2002: 145), quoting other authors, pointed out that CSR "has long been researched in the wider arena of business management but the field of logistics management has yet to see the development of its own general framework". Therefore, Carter and Jennings (2002) attempted to shape the LSR concept by addressing 26 logistics managers, but their interviews became only a starting point for further research.

In 2020, one can state that even though a growing number of papers on LSR emerged after the beginning of the 21st century they have still not led to the design of one specific definition of LSR. Moreover, one sees a great gap when it comes to the theoretical and empirical research on the topic of CSR.

There are other issues when it comes to the research in the field of LSR. Kisperska-Moroń and Klosa (2013: 27) indicated that "responsibility of businesses involved in supply chains can increasingly be found high on the CSR-agenda of European companies and governments. However, despite all these efforts and standards, a number of CSR issues connected to logistics issues still remain unsolved." Some other authors (Carter and Jennings 2002; Piecyk and Björklund 2015) argued that while individual CSR areas are often examined separately in logistics literature, there is a lack of a coherent view that takes into account the interrelationships between them. The logistics functions, dealt with in this literature, are the already mentioned transportation, packaging, warehousing, and purchasing, but also, for example, reverse logistics (Ciliberti et al. 2008).

The following section will be oriented towards the business sphere, to gather some tangible data from a selected country. In our case, we work with the Slovak Republic. As there are already several other papers summarizing the conducted pieces of research within the sphere of LSR (e.g. those of Miao et al. 2012, or Mejías et al. 2016), our literature review will be further narrowed down to this country.

3. CSR AND LSR IN THE SLOVAK REPUBLIC

Many authors have focused their attention to the issue of corporate social responsibility among Slovak companies, such as Antošová and Csikósová (2016), Dvořáček and Dovčíková (2016), Klieštiková (2017), Jaďuďová (2013), Ubrežiová et al. (2013), Ubrežiová et. al. (2015), Pongráczová (2013), Habek et al. (2018), etc. However, these and other studies available usually do not offer a deep investigation, and, thus, contribute to the current research in a limited way. From all the afore-mentioned papers, three major findings can be extracted, which are common for, at least, two of these afore-mentioned papers. First, the progress in the development of corporate social responsibility among Slovak companies has been slow, hence, it has been receiving more and more attention in recent years, as found by, e.g., Pongráczová (2013), or Habek et al. (2018). Second, the number of respondents claiming to report on their CSR in a specific document has almost been insignificant, as found by Habek et al. (2018), and Antošová and Csikósová (2016). Third, large companies and companies, belonging to multinational corporations, were more likely to be concerned with the issue of CSR (see, e.g., Jad'ud'ová, 2013; Habek et al., 2018).

No research on logistics social responsibility among Slovak companies has been carried out. However, there have been three papers published on green logistics in Slovakia. Malá and Musová (2015) focused on the perception of implementation processes of green logistics in Slovak small and medium-sized enterprises (SMEs). By

using a questionnaire, answered by 250 companies from different industries (2 of them medium-sized, 248 small), they concluded that SMEs in Slovakia performed a very small number of green logistics activities and that a shortage in financial resources was regarded as the largest barrier to the implementation of green logistics processes in Slovak SMEs. At the same time, the authors pointed out that enterprises were not interested in educating their employees in the field of green logistics. Malá et al. (2017a) conducted substantial research on the application and consideration of green logistics among Slovak small and medium wood-processing enterprises. A large sample of 567 SMEs was included in the research. The authors' main findings were that these surveyed companies saw a reduction of costs as the main benefit of implementing green logistics. Only a quarter of them demanded implementation of green logistics in their corporate documents and less than half carried out at least five green logistics activities. A third of the SMEs never performed any green logistics activity in their business. Another study by Malá et. al (2017b), working with data, collected in 2014, was focused on green logistics of small and medium Slovak forestry and wood-processing enterprises, based on a sample of 248 companies. According to this study, some 29% of the surveyed companies did not have any experience with the activities of green logistics. Less than half (42%) believed that implementation of green logistics is necessary for wood processing and forestry SMEs in Slovakia, to remove or reduce the negative effects of their business on the environment. Surprisingly, a slightly higher number of companies (45.2%) claimed to have implemented some green logistics, although it was not standardized in their corporate documents.

4. RESEARCH DESIGN

To learn the attitudes of Slovak logistics companies regarding the topic of logistics social responsibility, we decided to collect data, by using a questionnaire. Scientific and expert literature still lacks standardized research instruments on the topic of logistics social responsibility. Furthermore, there is no standardized research instrument on corporate social responsibility, specifically designed for companies, operating in the field of logistics. Although Carter and Jennings (2002) attempted to list all possible activities (over 50 of them), which could be discussed in the sphere of LSR, they listed the task of empirical validation of these activities as an open issue for further research. Since this appeal has, apparently, not been responded to yet, the design of a questionnaire, based on the initial Carter and Jennings's extensive list also remains to be achieved.

As Slovak logistics companies have not been addressed with the issue of LSR employing a thorough survey yet, and the term LSR may thus not be known to them at all, a solution, related to using a universal questionnaire, used for general analysis of corporate social responsibility, was opted for. We find this approach very reasonable from both a practical and a theoretical viewpoint. From a practical viewpoint, it can be argued that, by using a completely new questionnaire, in the situation where the LSR issue empirically remains almost unexplored and the Slovak logistics environment may not be familiar with the LSR term yet, the accurate understanding of such a research instrument could be significantly jeopardized. From a theoretical viewpoint, we assume that there will be no logical infringement with the proposed approach if adopted. This is not because LSR is still not firmly anchored in scientific literature, but because it is obvious that LSR historically stems

from CSR. Regardless of whether the LSR issue can nowadays be considered either as a mere subset of CSR, a concept, sharing many common aspects with CSR, or development of the CSR issue, we believe that, for an initial stage of primary research on the LSR issue, a CSR-oriented questionnaire will be more than sufficient and valuable for obtaining an idea of how Slovak logistics companies perceive their responsibility towards society.

Though, despite the extensive literature on the topic of corporate social responsibility, locating a CSR universal questionnaire has not been a simple task, mainly since there is a significant number of questionnaires, used by public or private entities, from short to more extensive ones, from original to modified ones. Several years ago, the European Commission Directorate-General Enterprise and Industry (today Directorate-General for Internal Market, Industry, Entrepreneurship, and SMEs) created the 'awareness-raising questionnaire'. We decided to use it because it is practically applicable to any business and allows all sorts of respondents to participate.

The questionnaire (Directorate-General for Enterprise and Industry, 2015) is composed of 30 questions. Five questions are dedicated to workplace policies, nine questions to environmental policies, six questions to marketplace policies, five questions to community policies, and the last five questions to company values. All thirty questions offer options "yes", "no", "in part", "don't know", "not applicable". All thirty questions are displayed in their original wordings in Annex 1. As the questions are typically long, Annex 1 also shows the abbreviated versions, used in the statistical analyses and some parts of the following text.

In addition to these thirty questions, four questions, related to the specific characteristics of a responding company were added, by which the following data was collected:

- company size, measured by the number of employees in the past fiscal year,
- company turnover in the past fiscal year,
- whether it is a daughter company in foreign ownership,
- whether it has an employee or a department that deals specifically with corporate social responsibility.

Since acquiring information on the population of all Slovak companies, specializing in the field of logistics was impossible, a specialized database was utilized and the questionnaire was sent to 105 current members of the Association of Logistics and Freight Forwarding of the Slovak Republic. These members are not necessarily companies focused primarily on logistics, but they are always logistics-oriented, to a certain extent.

Since the questionnaire was designed as an anonymous online survey, which usually involves low response rates (Monroe 2012), it was likely that there would be a limited number of answers. Therefore, it was found inappropriate to formulate hypotheses. Instead, based on the literature review presented herein, three research questions were formulated:

- 1 Do Slovak logistics-oriented daughter companies of a foreign owner demonstrate more efforts towards responsible entrepreneurship than Slovak companies without a foreign owner?
- 2 Measured by their staff headcount and turnover, do Slovak logistics-oriented

SMEs evince more efforts towards responsible entrepreneurship than Slovak logistics-oriented large companies?

3 Do Slovak logistics-oriented companies with an employee or department dealing specifically with corporate social responsibility evince more efforts towards responsible entrepreneurship than other companies?

To answer these research questions, we decided to compare the obtained numbers of "yes", "partly", "no", "don't know" and "not applicable" responses. The number of affirmative answers ("yes" and "partly") will become the key to answering these research questions. As the numbers of Slovak logistics-oriented companies with and without a foreign owner were not likely to be even, the shares of answers should be compared.

5. RESULTS

Out of the 105 members, registered currently in the association, one member could not be contacted, because there was no contact available. The survey ran from the second half of November to late December 2019. A pilot survey was not needed, as our questionnaire is already based on a previously validated survey and was only complemented by the other four questions frequently used in surveys. Nevertheless, a university expert was consulted, to check whether our questionnaire is applicable and accurate. On November 21, 2019, a request to all 104 members was sent out. The

questionnaire was anonymous, so the firms that answered and the firms that ignored it could not be identified. As the number of answers received was still too low, after a period exceeding 2 weeks, another reminder was sent on December 9, 2019. Two companies explicitly refused to answer. In total, 29 answers (27.9%) of 104 were received. This number is, obviously, too low to allow some broader generalization on the entire population, but still reveals some tendencies among Slovak logistics companies.

The first important finding is that in 28 (93.3%) of the 30 questions asked, the number of positive responses outweighs the number of negative ones. Both questions, with more negative than positive responses, belong to the category of "Community Policies", where five questions were asked. In all 30 questions, the number of responses in the "partly" category was usually low, but in 19 of the cases (63.3%), it was still higher than the number of negative responses. Although it is also worth mentioning that, in two questions the number of positive responses was outweighed by the "not applicable" response, the survey results clearly show the predominance of affirmative responses in almost all questions.

Table 1 shows the categories, in which the number of positive responses was the highest. However, since the number of questions in each category differs, the averages are used. The table shows that the surveyed companies were most affirmative in the questions of the "Marketplace Policies" category.

Table 1. General results of the survey – affirmative answers

Block of questions	Number of questions	Numbers of positive and partially positive responses (the latter in brackets)	The average number of positive responses
Workplace Policies	5	19 (6), 21 (0), 21 (8), 25 (4), 19 (8)	21
Environmental Policies	9	22 (5), 21 (5), 16 (4), 12 (5), 13 (7), 11 (7), 14 (3), 8 (6), 9 (5)	14
Marketplace Policies	6	23 (1), 25 (2), 27 (2), 25 (4), 28 (1), 14 (6)	23.7
Community Policies	5	7 (4), 6 (5), 24 (4), 13 (5), 18 (4)	13.6
Company Values	5	22 (5), 19 (7), 17 (7), 22 (4), 18 (4)	19.6

Question 19 ("Does your enterprise register and resolve complaints from customers, suppliers, and business partners?") received the highest number of positive responses, i.e. 28 (96.6%) and one partially positive, which means that each surveyed company responds to this matter in their practice.

The two questions with more negative than positive responses were related to training opportunities (Question 21) and open dialogue (Question 22), asking if a company offers training opportunities to people from the local community (e.g., apprenticeships or work experience for the young or disadvantaged groups) and whether it has an open dialogue with the local community on adverse, controversial or sensitive issues, involving the company (e.g. accumulation of waste outside its premises, vehicles obstructing roads or footpaths), respectively. However, it needs to be pointed out that it does not mean that in the category of community policies Slovak logistics companies register a prevalence of negative attitudes.

Generally, one can claim that the sample of companies responding to our questionnaire may lead to the assumption that Slovak logistics companies from the Association of Logistics and Freight Forwarding are socially responsible to a great extent. This is reflected by the fact that the responses received are mostly positive for a vast majority of questions asked. Moreover, as this Association accounts for an important number of Slovak companies, operating in the field of logistics, one could, at least to a certain extent, say that

a part of the Slovak logistics industry does care about the issue of social responsibility, although the level of such preoccupation is uneven for the five investigated categories.

Regarding our first research question, the foreign-owned companies in Slovakia responded with a higher share of affirmative (positive, or partially positive) answers for almost all questions, than the domestically owned companies, or the share of those responses was the same (these two situations account for 90% of the questions). The only exceptions were questions on Purchasing locally (Question 23), Employees' participation in the local community (Question 24), and Financially supporting local community (Question 25), related to an enterprise, trying to purchase locally, encouraging its employees to participate in local community activities and providing regular financial support to local community activities and projects (see Table 2). As the differences in shares are very small for these three questions, as well as the other two questions from the block on community policies, it can still hardly be considered that the domestically owned Slovak companies might be likely to exert a higher level of participation vis-à-vis community policies. Thus, it can be said that the first research question can be answered positively.

Table 2. Shares of affirmative answers – Slovak logistics-oriented companies with a foreign owner (F) and domestic (D) ownership

Question	Foreign (F) or Domestic (D) ownership	Yes	Partly	No	Don't know	Not applicable	Share of positive and partially positive answers
Workplace policies						•	
1. Encouraging skills and careers	F	90%	10%	0%	0%	0%	100%
	D	53%	26%	16%	0%	5%	79%
2. Process against discrimination	F	90%	0%	0%	10%	0%	90%
	D	63%	0%	26%	0%	11%	63%
3. Consulting important issues with employees	F	70%	30%	0%	0%	0%	100%
	D	74%	26%	0%	0%	0%	100%
4. Suitable arrangements protecting employees	F	90%	10%	0%	0%	0%	100%
	D	84%	16%	0%	0%	0%	100%
5. Offering a good work-	F	70%	30%	0%	0%	0%	100%
life balance	D	63%	26%	11%	0%	0%	89%
Environmental policies		,					
6. Energy conservation	F	80%	20%	0%	0%	0%	100%
nergy conservation	D	74%	16%	5%	0%	5%	89%
7. Waste minimization	F	100%	0%	0%	0%	0%	100%
and recycling	D	58%	26%	5%	5%	5%	84%
8. Pollution prevention	F	70%	10%	0%	0%	20%	80%
o. I onution prevention	D	47%	16%	16%	0%	21%	63%
9. Protection of the	F	70%	10%	0%	0%	20%	80%
natural environment	D	26%	21%	26%	0%	26%	47%
10. Sustainable transport	F	60%	30%	10%	0%	0%	90%
	D	37%	21%	26%	0%	16%	58%
11. Environmental	F	70%	20%	10%	0%	0%	90%
impact	D	21%	26%	32%	21%	0%	47%
12. Potential environmental impacts of	F	80%	20%	0%	0%	0%	100%
new products and		32%	5%	16%	5%	42%	37%
services	D	4007	200/	100/	00/	200/	700/
13. Clear and accurate environmental	F	40%	30%	10%	0%	20%	70%
information	D	21%	16%	16%	0%	47%	37%
14. Using sustainability	F	50%	20%	10%	0%	20%	70%
to gain an advantage	D	21%	16%	11%	11%	42%	37%
Marketplace policies							
15. Ensuring honesty and	F	90%	0%	0%	0%	10%	90%
quality in contracts	D	74%	5%	16%	0%	5%	79%
16. Clear and accurate	F	90%	10%	0%	0%	0%	100%
information and labelling	D	84%	5%	0%	0%	11%	89%
17. Timely payment of	F	90%	10%	0%	0%	0%	100%
invoices	D	95%	5%	0%	0%	0%	100%
18. Process for effective feedback	F	100%	0%	0%	0%	0%	100%
	D	79%	21%	0%	0%	0%	100%
19. Resolving complaints	F	90%	10%	0%	0%	0%	100%
	D	100%	0%	0%	0%	0%	100%
20. Cross-business	F	50%	30%	10%	10%	0%	80%
cooperation	D	47%	16%	37%	0%	0%	63%

Regarding the second research question, it cannot be answered as only answers from two large companies and 27 from SMEs were received. This is not a ratio that would enable us to compare the answers, not even approximately.

In turn, the third research question can be answered, since answers from 12 (41.4%) companies, possessing an employee, or a department dealing specifically with corporate social responsibility were received and answers from 17 (58.6%) companies, without such an employee or a department, were received. For almost all questions asked (93.3%), companies with an employee or a department, in charge of corporate social responsibility, provided the same or more affirmative answers than the companies without such staff (see Table 3). The only exceptions were questions 5 and 23, but the differences in their share were very small. It can be, thus, concluded that Slovak logistics-oriented companies, with an employee or a department, in charge of corporate social responsibility demonstrate more efforts towards responsible entrepreneurship than other companies.

Furthermore, we wanted to show, if there is a statistically significant dependence between the valid answers (positive and partially positive vs. negative) to the 30 questions at one hand, and two of the four classification questions at the other hand, i.e. whether the surveyed companies are foreign-owned and whether they have an employee or department, specialized in corporate social responsibility. In the case of questions 3, 4, 16, 17, 18 19, and 23, all answers are positive, so we did not analyze them. Because of small expected frequencies, an exact test was used. We applied the Goodman and Kruskal tau, which is a directional measure.

We found several statistically significant dependencies at the 0.05 significance level (according to the exact test). The answers to the question Protection of the natural environment (Question 9) depend on the former classification question (P-value was 0.034), and the answers to questions Process against discrimination (Question 2), Energy conservation (Question 6), Waste minimization and recycling (Question 7), Pollution prevention (Question 8), Cross-business cooperation (Question 20), Open dialogue (Question 22), Definition of values (Question 26), Communicating values (Question 27), and Training employees on values (Question 30) depend on the latter classification question (P-values were 0.042, 0.029, 0.027, 0.027, 0.026, 0.012, 0.026, 0.024, and 0.028).

Thus, the Slovak logistically-oriented companies with a foreign owner are likely to assert that they have tried to reduce their enterprise's environmental impact in terms of protection of the natural environment. In addition, logistics-oriented companies, based in Slovakia, with an employee, or a department in charge of corporate social responsibility are likely to assert that:

- There is a process in the company to ensure adequate steps are taken against all forms of discrimination, both in the workplace and at the time of recruitment.
- They have tried to reduce their enterprise's environmental impact in terms of energy conservation.
- They have tried to reduce their enterprise's environmental impact in terms of waste minimization and recycling.
- They have tried to reduce their enterprise's environmental impact in terms of pollution prevention.

Table 3. Shares of affirmative answers – companies with and without an employee or department dealing specifically with corporate social responsibility

Question	CSR employees or a dept.	Yes	Partly	No	Don't know	Not applicable	Share of positive and partially positive answers
Workplace policies							
1. Encouraging skills and careers	yes	75%	25%	0%	0%	0%	100%
	no	59%	18%	18%	0%	6%	76%
2. Process against	yes	100%	0%	0%	0%	0%	100%
discrimination	no	53%	0%	29%	6%	12%	53%
3. Consulting	yes	67%	33%	0%	0%	0%	100%
important issues with employees	no	76%	24%	0%	0%	0%	100%
4. Suitable		100%	0%	0%	0%	0%	100%
arrangements	yes	76%	24%	0%	0%	0%	100%
protecting employees	no						92%
5. Offering a good work-life balance	yes	58%	33%	8%	0%	0%	
Environmental policies	no	71%	24%	6%	0%	0%	94%
Environmental poncies		100%	0%	0%	0%	0%	100%
6. Energy conservation	yes no	59%	29%	6%	0%	6%	88%
7. Waste minimization	yes	100%	0%	0%	0%	0%	100%
and recycling	no	53%	29%	6%	6%	6%	82%
8. Pollution prevention	yes	92%	8%	0%	0%	0%	100%
o. Foliution prevention	no	29%	18%	18%	0%	35%	47%
9. Protection of the	yes	67%	17%	8%	0%	8%	83%
natural environment	no	24%	18%	24%	0%	35%	41%
10. Sustainable	yes	50%	42%	8%	0%	0%	92%
transport	no	41%	12%	29%	0%	18%	53%
11. Environmental	yes	58%	25%	17%	0%	0%	83%
impact	no	24%	24%	29%	24%	0%	47%
12. Potential environmental impacts	yes	58%	8%	0%	0%	33%	67%
of new products and		41%	12%	18%	6%	24%	53%
services	no						
13. Clear and accurate environmental	yes	42%	33%	8%	0%	17%	75%
information	no	18%	12%	18%	0%	53%	29%
14. Using sustainability	yes	42%	25%	8%	0%	25%	67%
to gain an advantage	no	24%	12%	12%	12%	41%	35%
Marketplace policies				-			
15. Ensuring honesty	yes	100%	0%	0%	0%	0%	100%
and quality in contracts	no	65%	6%	18%	0%	12%	71%
16. Clear and accurate	yes	100%	0%	0%	0%	0%	100%
information and labelling	no	76%	12%	0%	0%	12%	88%
17. Timely payment of		92%	8%	0%	0%	0%	100%
invoices	yes	94%	6%	0%	0%	0%	100%
	no	92%	8%	0%	0%	0%	100%
18. Process for effective feedback	yes	82%	18%	0%	0%	0%	100%
	no	92%	8%	0%	0%	0%	100%
19. Resolving complaints	yes						
complaints	no	100%	0%	0%	0%	0%	100%
20. Cross-business	yes	58%	33%	0%	8%	0%	92%
cooperation	no	41%	12%	47%	0%	0%	53%

- They work together with other companies or other organizations to address issues, raised by responsible entrepreneurship.
- They have an open dialogue with the local community on adverse, controversial, or sensitive issues that involve their enterprise.
- They have clearly defined their enterprise's values and rules of conduct.
- They have communicated their enterprise's values to customers, business partners, suppliers, and other interested parties.
- They train employees on the importance of their enterprise's values and rules of conduct.

6. LIMITATIONS

Apart from the results and comments provided above, we shall enumerate the major limitations of our survey. The first limitation is the limited sample size. This is caused by the fact that we used a selected database of companies, to compensate for the fact that there is no knowledge about the whole population of companies operating in the logistics branch in the country and we contacted the companies from the database several times. If some respondents preferred not to answer, we had no means of obtaining the response. Besides, our survey was anonymous intentionally, so that companies are more likely to provide accurate information. Therefore, it was objectively impossible to obtain a sample larger than 29 companies. Any attempts to do so would lead to the unethical manipulation of data (e.g., adding companies outside of the database, thus breaking the anonymity of the new companies) and would violate the research

principles of sample selection, described above.

Second, as most of the members of the Association of Logistics and Freight Forwarding of the Slovak Republic decided not to respond to our request, there is a risk that many of them might not be providing an affirmative answer, as compared to the current respondents, or that they may be unable to decide how to answer. Our literature review on papers, concerning CSR in the Slovak Republic, shows that a large number of Slovak companies did not engage significantly in the sphere of corporate social responsibility. In other words, one must be very careful about drafting a more general conclusion on the behavior of the entire association, or even the entire population of Slovak logistics companies.

Third, we used a general CSR questionnaire, authored by the EU Commission, that does not directly address the issue of LSR. Therefore, drafting conclusions for this study has become a challenging matter. The chosen questionnaire uses the same scale for all questions, which complicates the choice and the application of the statistical tools. Nonetheless, we believe that for such novel research, it was better to use a reliable questionnaire that can be linked to the topic of our paper than introducing a new one, since the concept of LSR is still unlikely to be understood in the Slovak business environment.

7. CONCLUSION AND DISCUSSION

This paper aimed at concluding which efforts logistics-related companies, based in the Slovak Republic, demonstrate regarding their social responsibility. By using a standardized CSR-oriented questionnaire,

with 30 questions, grouped in five categories, over 100 members of the Association of Logistics and Freight Forwarding of the Slovak Republic were surveyed.

We were cautious when asking questions about the characteristics of the respondents because the answers provided could be viewed as sensitive since questions could lead to a clear disclosure on how the responding company generally behaves towards its environment and stakeholders. This was also the reason why we opted for the anonymous responses.

In total, we received 29 answers. Despite the low number of respondents, there was enough information collected to formulate several findings. First, it became evident that a part of the Slovak logistics industry cares about the issue of social responsibility, although the level of such preoccupation is uneven across the five analyzed categories. These categories were: workplace policies, environmental policies, marketplace policies, community policies, and company values. Second, responding companies with an employee, or a department, in charge of corporate social responsibility invest more effort towards responsible entrepreneurship than other respondents. Third, responding foreignowned companies invest more effort towards responsible entrepreneurship than domestically owned responding companies.

On the other hand, we are unable to answer one of the three research questions and cannot state whether Slovak logistics-oriented SMEs invest more effort towards responsible entrepreneurship than large companies. However, we also found ten statistically significant dependencies between answers to the 30 survey questions and answers to two of the four classification questions. These dependencies may be subject to further future research.

After processing all the collected data, we cannot say to what extent the term and the concept of "logistics social responsibility" are understood and developed in Slovakia, but the concept of CSR itself seems to be seriously considered by some logistics-oriented businesses. Two major reasons are explaining our inability to decide how LSR is understood and developed in Slovakia.

As already shown in the literature review section, CSR-related issues in Slovakia lack thorough practice-oriented research. The reason is attributable not only to the negligence of scholars but also to the reluctance of companies to provide answers. The situation with scarce indepth research is even worse in the sphere of LSR because so far, no paper has connected LSR with the Slovak environment yet. Therefore, we cannot compare our results with past research and found it more reliable to use a validated CSR-oriented questionnaire to substitute the absence of a reliable LSR-focused survey. With an LSR-focused survey, we would be able to provide a sounder answer, regarding the understanding and development of LSR in Slovakia.

Moreover, LSR is a concept that would need much more attention in global expert and scientific literature, because even nowadays, it has not been anchored in it. Therefore, it still stands unclear which place on the map of scientific endeavor LSR should occupy – as a part of the CSR issue, an extension of it, or a mixture of CSR and industry-specific issues? While it is still unclear how LSR should be perceived globally, a definite verdict on LSR development and understanding in Slovakia could be considered a hasty decision.

Hence, we believe that our results may become a gateway to further investigation

of the topic and deepen the discussion on the still underdeveloped concept of logistics social responsibility, not only from a singlecountry perspective.

REFERENCES

- Antošová, M., & Csikósová, A. (2016). Corporate Social Responsibility in small and medium enterprises in Slovakia. *Actual Problems of Economics*, 175, 217–224.
- 2. Carter, C. R., & Jennings, M. M. (2002). Logistics Social Responsibility: An Integrative Framework. *Journal of Business Logistics*, 23(1), 145–180.
- Ciliberti, F., Pontrandolfo, P., & Scozzi, B. (2008). Logistics social responsibility: Standard adoption and practices in Italian companies. *International Journal of Production Economics*, 113(1), 88–106.
- Directorate-General for Enterprise and Industry (2015). Awareness-raising questionnaire. European Commission. Retrieved from https://ec.europa.eu/ docsroom/documents/10369 (accessed 3 November 2019).
- Dvořáček, J., & Dovčíková, A. (2016). CSR and legislation frame in the Slovak Republic. In Jelačić, D. (Ed.), The Path Forward for Wood Products: A Global Perspective. Proceedings of Scientific Papers. (pp. 129–134). Zagreb: WoodEMA.
- Endres, P., Geßner, C., & Kölle, A. (2014). Nachhaltiger Wirtschaften in Logistiknetzwerken. In Heidbrink, L., Meyer, N., Reidel, J., & Schmidt, I. (Eds.), Corporate Social Responsibility in der Logistikbranche. Anforderungen an eine nachhaltige Unternehmensführung. (pp. 93–111). Berlin: Erich Schmidt Verlag.

- Flämig, H. (2014). Logistik und Nachhaltigkeit. In Heidbrink, L., Meyer, N., Reidel, J., & Schmidt, I. (Eds.), Corporate Social Responsibility in der Logistikbranche. Anforderungen an eine nachhaltige Unternehmensführung. (pp. 25–44). Berlin: Erich Schmidt Verlag.
- 8. Günther, H.-O., & Tempelmeier, H. (2012). *Produktion und Logistik*. Berlin Heidelberg: Springer-Verlag.
- 9. Hąbek, P., Sujová, E. & Čierna, H. (2018). Comparative analysis of CSR reporting practices in Poland and Slovakia. Scientific Papers of Silesian University of Technology, Series: Organization and Management, 116(1995), 51–66.
- Heidbrink, L., Meyer, N., Reidel, J., & Schmidt, I. (2014). Einleitung. In Heidbrink, L., Meyer, N., Reidel, J., & Schmidt, I. (Eds.), Corporate Social Responsibility in der Logistikbranche. Anforderungen an eine nachhaltige Unternehmensführung. (pp. 7–21). Berlin: Erich Schmidt Verlag.
- Jad'ud'ová, J. (2013). Perception of Corporate Social Responsibility in selected sector of national economy of the Slovak Republic. Electronic International Interdisciplinary Conference, 2, 339–342.
- Kisperska-Moroń, D., & Klosa, E. (2013). The Importance of Logistic Risk for Achieving Corporate Social Responsibility Goals in Supply Chains. *Logistics and Transport*, 19(3), 27–36.
- 13. Klieštiková, J. (2017). CSR reporting in specific conditions of Slovak Republic. New Trends and Issues Proceedings on Humanities and Social Sciences, 2017(4), 159–167.
- 14. Köylüoglu, G., & Krumme, K. (2014). Kriterienfindung für nachhaltige

- Geschäftsprozesse in der Logistik. In Heidbrink, L., Meyer, N., Reidel, J., & Schmidt, I. (Eds.), Corporate Social Responsibility in der Logistikbranche. Anforderungen an eine nachhaltige Unternehmensführung. (pp. 63–90). Berlin: Erich Schmidt Verlag.
- Malá, D., & Musová, Z. (2015).
 Perception of implementation processes of green logistics in SMEs in Slovakia. Procedia Economics and Finance, doi: 10.1016/S2212-5671(15)00900-4
- 16. Malá, D., Sedliačiková, M., Kaščáková, A., Benčiková, D., Vavrová, K., & Bikár, M. (2017a). Green Logistics in Slovak Small and Medium Wood-Processing Enterprises. BioResources, 12(3), 5155–5173.
- Malá, D., Sedliačiková, M., Dušak, M., Kaščáková, A., Musová, Z., & Klementová, J. (2017b). Green Logistics in the Context of Sustainable Development in Small and Medium Enterprises. *Drvna industrija*, 68(1), 69–79.
- 18. Markmann, C. et al. (2013). The Competitiveness Monitor as an Innovative Foresight Support System for Mobility, Logistics and Beyond. In Clausen, U., ten Hompel, M., & Klumpp, M. (Eds.), Efficiency and Logistics. Lecture Notes in Logistics. (pp. 31–41). Berlin Heidelberg: Springer-Verlag.
- 19. Mejías, A. M., Paz, E., & Pardo, J. E. (2016). Efficiency and sustainability through the best practices in the Logistics Social Responsibility framework. *International Journal of Operations & Production Management*, doi:10.1108/ijopm-07-2014-0301

- Miao, Z., Cai, S., & Xu, D. (2012). Exploring the antecedents of logistics social responsibility: A focus on Chinese firms. *International Journal of Production Economics*, doi:10.1016/j. ijpe.2011.05.030
- 21. Monroe, M. C., & Adams, D. C. (2012). Increasing response rates to web-based surveys. *Journal of Extension*, 50(6), 6–7.
- 22. Murphy, P. R., & Poist, R. F. (2002). Socially responsible logistics: an exploratory study. *Transportation Journal*, 41(4), 23–35.
- Nelson, D. C. (2001). Roadside Litter Control: A Survey of Programs and Practice. Report prepared for: Maryland State: Highway Administration Contract Number: SP707B4, Task 3.
- Piecyk, M. I., & Björklund, M. (2015). Logistics service providers and corporate social responsibility: sustainability reporting in the logistics industry. *International Journal of Physical Distribution & Logistics Management*, doi:10.1108/ijpdlm-08-2013-0228
- 25. Poist, R. F. (1989). Evolution of conceptual approaches to the design of logistics systems: a sequel. *Transportation Journal*, 28(3), 35–39.
- 26. Pongráczová, E. (2013). Social entrepreneurship and corporate social responsibility in Slovakia. In Filipovic, D., & Urnaut, A. G. (Eds.), Economic and Social Development: Book of Proceedings of the 2nd International Scientific Conference. (pp. 711–717). Varazdin Celje: Varazdin development and Entrepreneurship Agency, Faculty of Commercial and Business Sciences.
- 27. Sezer, S., & Abasiz, T. (2017). The Impact Of Logistics Industry On Economic Growth: an application in

- OECD countries. *Eurasian Journal of Social Sciences*, 5(1), 11–23.
- 28. Ubrežiová, I., Kozáková, J., & Malejčíková, A. (2015). Corporate Social Responsibility and Perception of Environmental Pillar in the Selected Set of the Slovak Enterprises. *Procedia Economics and Finance*, 34(2015), 542–549.
- Ubrežiová, I., Stankovič, L., Mihalčová, B., & Ubrežiová, A. (2013): Perception of Corporate Social
- Responsibility in companies of Eastern Slovakia region in 2009 and 2010. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 61(7), 2903–2910.
- Yan, Z., Ismail, H., Chen, L., Zhao, X., & Wang, L. (2019). The application of big data analytics in optimizing logistics: a developmental perspective review. *Journal of Data, Information and Management*, 1(1–2), 33–43.

DRUŠTVENO ODGOVORNA LOGISTIKA: RAZUMIJEVANJE I RAZVOJ KONCEPTA U REPUBLICI SLOVAČKOJ

Sažetak

U ovom se radu utvrđuju napori logističkih poduzeća u Slovačkoj Republici za ostvarivanje društvene odgovornosti. Uz korištenje standardiziranog upitnika, koji je obuhvaćao 30-ak problema iz područja društvene odgovornosti, grupiranih u pet kategorija, zamolili smo za suradnju više od 100 članica slovačke Udruge za logistiku i špediciju, od kojih je 29 odgovorilo na upitnik. Iako je broj ispitanika mali, bilo je moguće doći do nekoliko zaključaka. Prvo je utvrđeno da se dio slovačke logističke industrije brine za društvenu odgovornost, iako je razina posvećenosti istoj različita za pet analiziranih kategorija. Nadalje, ispitanici, koji imaju zaposlenike ili

odjel, koji se bave problematikom korporacijske društvene odgovornosti, pokazuju višu razinu posvećenosti u ovom području. Na kraju, poduzeća u stranom vlasništvu također pokazuju dodatnu posvećenost društvenoj odgovornosti. Ovi rezultati bi mogli postati polazište za buduća istraživanja navedenog područja, kao i potaknuti raspravu o još uvijek nedovoljno razvijenom konceptu društveno odgovorne logistike, i to iz perspektive više država.

Ključne riječi: društveno odgovorna logistika, društveno odgovorno poslovanje, Slovačka republika

APPENDIX I – LIST OF QUESTIONS AND THEIR ABBREVIATIONS

Workplace Policies

- 1. Do you encourage your employees to develop real skills and long-term careers (e.g. via a performance appraisal process, a training plan)? Encouraging skills and careers
- 2. Is there a process to ensure adequate steps are taken against all forms of discrimination, both in the workplace and at the time of recruitment (e.g. against women, ethnic groups, disabled people, etc.)? Process against discrimination
- 3. Do you consult with employees on important issues? Consulting important issues with employees
- 4. Does your enterprise have suitable arrangements for health, safety and welfare that provide sufficient protection for your employees? Suitable arrangements protecting employees
- 5. Does your enterprise actively offer a good work-life balance for its employees, for example, by considering flexible working hours or allowing employees to work from home? Offering a good work-life balance

Environmental Policies

- Have you tried to reduce your enterprise's environmental impact in terms of energy conservation? –Energy conservation
- 2. Have you tried to reduce your enterprise's environmental impact in terms of waste minimization and recycling? – Waste minimization and recycling
- 3. Have you tried to reduce your enterprise's environmental impact in terms

- of pollution prevention (e.g. emissions to air and water, effluent discharges, noise)? Pollution prevention
- 4. Have you tried to reduce your enterprise's environmental impact in terms of protection of the natural environment? Protection of the natural environment
- Have you tried to reduce your enterprise's environmental impact in terms of sustainable transport options? – Sustainable transport
- 6. Can your enterprise save money by reducing its environmental impact (e.g. by recycling, reducing energy consumption, preventing pollution)? Environmental impact
- 7. Do you consider the potential environmental impacts when developing new products and services (e.g. assessing energy usage, recyclability or pollution generation)? Potential environmental impacts of new products and services
- 8. Does your enterprise supply clear and accurate environmental information on its products, services and activities to customers, suppliers, local community, etc.? Clear and accurate environmental information
- Can you think of ways in which your enterprise could use the sustainability of its products and services to gain an advantage over competitors (e.g. recyclability of products, energy efficiency, etc)? – Using sustainability to gain an advantage

Marketplace Policies

1. Does your company have a policy to ensure honesty and quality in all its contracts, dealings and advertising (e.g. a fair purchasing policy, provisions for

- consumer protection, etc.)? Ensuring honesty and quality in contracts
- 2. Does your enterprise supply clear and accurate information and labelling about products and services, including its after-sales obligations? Clear and accurate information and labelling
- 3. Does your business ensure timely payment of suppliers' invoices? Timely payment of invoices
- 4. Does your company have a process to ensure effective feedback, consultation and/or dialogue with customers, suppliers and the other people you do business with? Process for effective feedback
- Does your enterprise register and resolve complaints from customers, suppliers and business partners? – Resolving complaints
- Does your company work together with other companies or other organizations to address issues raised by responsible entrepreneurship? – Cross-business cooperation

Community Policies

- Does your company offer training opportunities to people from the local community (e.g. apprenticeships or work experience for the young or for disadvantaged groups?) – Training opportunities
- 2. Do you have an open dialogue with the local community on adverse, controversial, or sensitive issues that involve your enterprise (e.g. accumulation of waste outside your premises, vehicles obstructing roads or footpaths)? Open dialogue

- 3. Does your enterprise try to purchase locally? – Purchasing locally
- Are your employees encouraged to participate in local community activities (e.g. providing employee time and expertise, or other practical help)?

 Employees' participation in local community
- Does your enterprise give regular financial support to local community activities and projects (e.g. charitable donations or sponsorship)? – Financially supporting local community

Company Values

- Have you clearly defined your enterprise's values and rules of conduct? – Definition of values
- Do you communicate your enterprise's values to customers, business partners, suppliers and other interested parties (e.g. in sales presentations, marketing material or informal communication)?

 Communicating values
- Are your customers aware of your enterprise's values and rules of conduct?
 Customer awareness of values
- 4. Are your employees aware of your enterprise's values and rules of conduct?– Employees' awareness of values
- 5. Do you train employees on the importance of your enterprise's values and rules of conduct? Training employees on values

Source: Questionnaire to raise SME awareness of CSR, https://ec.europa.eu/docsroom/documents/10369 (Directorate-General for Enterprise and Industry, 2015). Used according to the Creative Commons Attribution 4.0 International (CC BY 4.0) license (under the terms, published at: https://ec.europa.eu/info/legal-notice en).