DOI: 10.55643/fcaptp.4.45.2022.3802

Alla Grechan
D.Sc. in Economics, Professor, National Transport University, Kyiv, Ukraine;
e-mail: alla1.education12@gmail.com
ORCID: 0000-0003-3984-9952
(Corresponding author)

Artem Bezuglyi
Ph.D. in Economics, Associate Professor, National Transport University, Kyiv, Ukraine;
ORCID: 0000-0003-3883-7968

Olena Parfentieva
Ph.D. in Economics, Assistant, National Transport University, Kyiv, Ukraine;
ORCID: 0000-0002-5946-9490

Kateryna Kompanets
Ph.D. in Economics, Associate Professor, National Transport University, Kyiv, Ukraine;
ORCID: 0000-0002-7189-2355

Alina Hroza
Postgraduate student, National Transport University, Kyiv, Ukraine;
ORCID: 0000-0001-7677-3075

Inna Kara
Ph.D. in Technical Sciences, Lviv Polytechnic National University, Lviv, Ukraine;
ORCID: 0000-0001-7167-051X

Received: 08/07/2022
Accepted: 26/07/2022
Published: 31/08/2022

FULFILLMENT OF SUSTAINABLE DEVELOPMENT GOALS BY THE EXAMPLE OF THE TRANSPORT AND LOGISTICS SECTOR

ABSTRACT

The aim of the study is to determine the extent to which the transport and logistics companies fulfilled sustainable development goals. The research sample includes 2021 top 10 transport and logistics companies. The research was conducted through an in-depth study of sustainable development reports, content analysis, systematization, and grouping of information on tools used to achieve sustainable development goals by transport and logistics companies. The dependence of the number of fulfilled sustainable development goals on the amount of revenue, net income, and the number of employees was established through trend analysis of logarithmic dependence. The research results demonstrated that transport and logistics companies fulfill much more sustainable development goals than expected. Transport and logistics companies are actively fulfilling quality education, gender equality, and clean energy in addition to the emission reduction targets and mitigating the effects of climate change. The companies have developed policies to significantly expand the impact on fields other than the provision of transport and logistics services. Companies are actively developing and implementing alternative energy sources, and clean energy, and contribute to the fulfillment of good health and well-being goals. The research results indicate the dependence of the number of fulfilled sustainable development goals on the company size. It is established that the greater the amount of gross revenue, net revenue, or a number of employees, the more sustainable development goals the company fulfills. The obtained results can be used by transport and logistics companies in the further development of policies for the fulfillment of sustainable development goals. The conducted research opens up new areas for further studies, in particular the impact of fulfilling sustainable development goals by transport and logistics companies on their investment attractiveness and market capitalization.

Keywords: gender equality, alternative energy, environmental footprint, innovation, renewable energy, investment

JEL Classification: O12

INTRODUCTION

Anthropogenic factors inevitably affect the environment at the level of technological development achieved by mankind. International organizations led by the United Nations are calling for a reduction of human impact on the environment, as damage to the environment is becoming irreversible. The appeals of environmental activists contradict the economic development goals, as economic growth entails increased use of resources, thus increasing the negative human impact on the environment. Sustainable development goals have been developed to balance the interests of all parties. They were intended to ensure the economic and social development of mankind while reducing harmful effects on the environment. The sustainable development goals cover economic, social, and environmental areas of human activity. All UN Member States have committed to fulfilling these goals. The commitments of the states, however, only declare their readiness to promote the fulfillment of the goals, while the authorities and businesses are entrusted all the work to fulfill those goals. The transport and logistics sector is one of the largest environmental pollution sources, as the vast majority of water, land, and air vehicles currently use petroleum products as the main source of

energy. Therefore, fulfilling the sustainable development goals is the most urgent for these companies, because this directly affects their core business.

LITERATURE REVIEW

Authors [1] substantiate the development of the Five Transformations concept in their study of sustainable development of the transport sector, where the city, economy, transport technologies, modal distribution, and lifestyle are the main components to be transformed in order to fulfill sustainable development goals. Reviewing "green logistics" practices of logistics and transport companies, researchers [2] note that reducing harmful emissions is one of the most pressing issues that humanity must solve. The authors propose a "green logistics" model, which should provide the fulfillment of sustainable development goals. The model includes green transport, green storage, environmental management, and sustainable waste management.

Author [3] points out in research on the sustainable development of the transport sector that the dimensions of sustainable development are represented by the specific actions of both transport companies and their regulators. Actions that have their implications at the intersection of economic, social, and environmental planes have the greatest impact on fulfilling the sustainable development goals of transport companies. The 2021 UN Report [4] states that safer, eco-friendly, and accessible transport is an important component of sustainable development. Besides, a number of important issues – poverty, inequality reduction, women empowerment, and access – can be addressed by sustainable transport. Researchers [5] studied the factors of sustainable transport and logistics development and demonstrated the impact of the transport and logistics system on sustainable development goals. The authors accentuate that economic, social, and environmental factors influence the sustainable development of transport and logistics, thus making it necessary to take them into consideration in the development and operation of transport and logistics systems. The United Nations Economic and Social Commission for Asia and the Pacific mentions a number of studies on transport and sustainable development [6]. In particular, authors [7] provide evidence of the active work of ASEAN Member States towards the development of sustainable transport. The exchange of experience and knowledge, capacity building, seminars, and joint research are the main tools of such cooperation.

The study by the researcher [8] on the place of the transport sector among the sustainable development goals is of interest. The rapid economic development of developing countries entails the need to increase intermodal passenger and freight transportation. This should result in such a transport system, where the best-suited type of transport not only in terms of economic but also social costs is selected at each stage.

The 2016 ECLAC Report [9] on logistics and transport development policies to fulfill the sustainable development goals points out the need to change the transport paradigm. Logistics and mobility should replace the infrastructure and transport paradigm. This transformation should take place on the basis of a developed national program and should be initiated by the government. Author [10] points out that sustainable development must entail the achievement of social benefits. The author suggests promoting the development of river and inland water transport, which can become a competitor to road transport. Researcher [11] examines examples of sustainable development in the transport sector. High panel prices and the unreadiness of cities to provide green transport infrastructure impede companies that are changing their business model. The UNCTAD Framework for Sustainable Freight Transport [12] also reveals the link between the transport sector and other market participants. The United Nations Economic Commission for Europe [13] also draws conclusions that are similar to the UNCTAD findings. The growth of urbanization has aggravated congestion problems in European countries. The use of digital technologies in the development of intermodal communication significantly reduces the cost of resources, money, and time for the carriage of passengers and goods [14]. Besides, the use of artificial intelligence allows the development of the most optimal routes and travel schedules to minimize the consumption of resources. The literature review demonstrated that the fulfillment of sustainable development goals by transport and logistics companies entails a comprehensive transformation of their business processes. It is possible to achieve goals only if the company's management understands that the effects of their activities go far beyond the company itself and impact not only economic parameters.

AIMS AND OBJECTIVES

In view of the above, the aim of the study is to determine the extent to which the companies in the transport and logistics sector implemented sustainable development goals. The aim involved the following research objectives:

DOI: 10.55643/fcaptp.4.45.2022.3802

- determine the list of sustainable development goals that are fulfilled by companies in the transport and logistics sector;
- identify tools used by companies in the transport and logistics sector to fulfill sustainable development goals.

METHODS

The first – preparatory – stage involved the development of a research design and the collection of initial data for further processing. The second stage of the research involves an in-depth study and content analysis of sustainable development reports with the purpose of making a list of sustainable development goals that are fulfilled by transport and logistics companies, as well as tools for their fulfillment. The final stage of the research involves an indication of the methodological and implementation constraints of the study and drawing conclusions of the study.

The 2021 top 10 largest transport and logistics companies were selected for the sample [15]. Table 1 includes the list of companies included in the sample.

Table 1. Companies that make up the sample population of the study.

Name	Gross Revenue for 2020, $ million	Net Revenue for 2020, $ million	Number of Employees, thousand people
C.H. Robinson Worldwide [16]	15.490	2.241	9.114
XPO Logistics [17]	12.107	6.470	62.000
UPS Supply Chain Solutions [18]	11.048	5.565	77.000
Expeditors International of Washington [19]	10.116	2.927	17.908
J.B. Hunt Transport Services [20]	9.198	3.045	23.000
Kuehne + Nagel Americas [21]	6.615	1.656	15.000
DHL Supply Chain [22]	5.800	5.290	36.339
Ryder Supply Chain Solutions [23]	3.774	2.800	15.000
Penske Logistics [24]	2.600	2.040	20.033
Geodis (North America) [25]	2.700	1.600	17.337

In this study, we will explore the sustainable development reports of transport and logistics companies in order to identify the tools that they use to fulfill these goals. We will also analyze the goals that the companies are being fulfilled and which they fail to fulfill. The UN approach to formulating sustainable development goals was used in the study [26]. This classification was adopted in 2015 and includes 17 sustainable development goals, so we analyze the fulfillment of sustainable development goals by transport and logistics companies for 2020 in this study. The reason is that companies need time to determine the sustainable development goals that they can fulfill in their activities, identify tools to fulfill these goals, and generate reports on the fulfillment of those goals. The main research method is an in-depth study of sustainable development reports of transport and logistics companies. The research also involved content analysis to identify and systematize tools to achieve sustainable development goals. The words used in formulating sustainable development goals were the main keywords for the analysis. The method of systematization and grouping was used to summarize information about the methods that the transport and logistics companies use to fulfill sustainable development goals. Systematization and grouping were carried out by the tools that corresponded to the content of sustainable development goals. The trend analysis of the logarithmic dependence was used to establish the dependence of the number of fulfilled sustainable development goals on the amount of Gross Revenue, Net Revenue, and the number of Employees:

$$SDGs = f(Gross\ Revenue, Net\ Revenue, Employee) \quad (1)$$

where: SDGs – the number of fulfilled sustainable development goals; Gross| Revenue – gross revenue; Net| Revenue – net revenue; Employee – the number of employees.

The figures and tables were made and the calculations were carried out in Microsoft Excel. Gross Revenue - gross revenue; Net Revenue - net revenue; Employee - the number of employees. The formation of figures, tables, and calculations was carried out in the software product Microsoft Excel.

RESULTS

The sustainable development goals are many-sided and are aimed at ensuring transformational changes in all aspects of human life. In general, they can be divided into three groups depending on the sphere of influence: economic, social, and environmental. The full UN list consists of 17 goals. We will focus on the goals that transport and logistics companies are fulfilling, and consider the actions they take to fulfill these goals.

Goal 3. Good health and well-being. UPS Supply Chain Solutions [18] has ensured the delivery of personal protection equipment against COVID-19 and more than half a billion doses of vaccines. Expeditors International of Washington launched a program to reduce workers' health risks in 2010. J.B. Hunt Transport Services [20] has introduced paid leave of up to 80 hours for workers who tested positive for COVID-19. Besides, after the start of vaccination, the company provided employees with 8 hours of paid working time to get vaccinated.

Goal 4. Quality education. The restrictions imposed by the Covid-19 pandemic entailed an active use of tools that ensure distance work, which also concerned education. For example, GEODIS [25] has developed several e-learning platforms – G-Campus and Ultipro. These and other resources make multilingual courses available to staff around the world. This is a manifestation of the company's commitment to providing a wide range of training opportunities for employees ranging from mandatory courses for certain professions to specific programs to comply with the laws and the company's internal regulations.

Goal 5. Gender equality. Gender equality has been one of the major social problems over the last few decades. C.H. Robinson Worldwide [16] uses specialized HCM software (human capital management). Geodis is actively involved in women's empowerment. The company has developed measures to increase the number of women holding management positions in order to achieve this goal. Besides, GEODIS Women's Network, a global network working to promote inclusion, addresses gender equality and women's empowerment by reducing gender disparities, improving work-life balance, and encouraging women to fulfill their potential in full [25].

Goal 6. Clean water and sanitation. Experts from Expeditors International of Washington [19] help to determine facility-specific methods for conserving water. Many of the company's offices have implemented water saving and reduction measures, including automatic controls of sinks and toilets. Kuehne+Nagel Americas [21] has developed and operates an environmental program aimed at reducing water consumption.

Goal 7. Affordable and clean energy. Transport and logistics companies are regular energy consumers, so fulfilling this goal is probably the most important for them. The most popular measure to achieve this goal is the use of biofuels for vehicles. Kuehne+Nagel Americas is installing power plants for renewable energy, which results in 21% of the energy used at Kuehne + Nagel facilities coming from renewable sources [21].

Goal 8. Decent work and economic growth. Finding talented employees and their capacity building, employee performance evaluation and rewarding performance are the main tools for fulfilling this goal. All new employees at Expeditors International [21] take a safety course.

Goal 9. Industry, innovation, and infrastructure. C.H. Robinson Worldwide [16] has set up the North American Surface Transportation Division engaged in optimizing transportation routes. In 2020, Robinson LabsTM – an innovative incubator that helps the company's customers to choose the best purchasing strategies – was created. J.B. Hunt Transport Services [20] introduces a new design of vehicles with better aerodynamic performance. DHL Supply Chain [22] uses hybrid vehicles, which contributes to increased transportation efficiency.

Goal 10. Reduced inequalities. This problem is related to addressing gender equality issues. J.B. Hunt Transport Services [20] favors the employment of people with disabilities, as it provides all the conditions for inclusion. The company has created a separate inclusion training program to raise awareness and inform about the benefit it provides. The company also encourages employees to take anti-discrimination and loyalty-building courses.

Goal 12. Responsible consumption and production. Responsible consumption is a matter of concern not only for the transport and logistics companies themselves but also for their customers. Expeditors International [19] is building its new energy-efficient facilities. Penske Logistics [24] focuses on waste stream management, where waste usually comes from truck maintenance and refueling. They operate a waste management program to minimize waste generation, recycling and ensure proper disposal to limit environmental impact.

Goal 13. Climate action. All surveyed companies without exception are developing and implementing measures to fulfill this goal. C.H. Robinson Worldwide [16] has been part of the US Environmental Protection Agency's SmartWay Transport

DOI: 10.55643/fcaptp.4.45.2022.3802

program since 2005, which helps companies advance supply chain sustainability by measuring, benchmarking, and improving freight transportation. The company continually reports on its carbon footprint and is committed to reducing its carbon emissions. UPS Supply Chain Solutions [18] reduced CO2 emissions by 15% in 2020 compared to 2010.

DHL Supply Chain [22] developed its first- and last-mile solutions to reduce emissions by using its own environmentally friendly facilities. Penske Logistics [24] is the most advanced company in its field, which is actively replacing traditional vehicles with electric vehicles. Geodis [25] reduces emissions by optimizing traffic through their multimodal transportation solutions.

Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems. UPS Supply Chain Solutions [18] has undertaken the Tree Planting Pledge with more than 15 million trees planted in 2020, although this is not the company's core business. Expeditors International [18] reduces paper usage for record keeping.

Table 2 summarizes the tools that transport and logistics companies use to fulfill sustainable development goals are summarized.

Table 2. Tools that the transport and logistics companies used to fulfill sustainable development goals.

Goal	Tools
3. Good health and well-being	▪ delivery of COVID-19 vaccines; ▪ programs to reduce life and health risks of employees; ▪ paid sick leave for employees tested positive for COVID-19; ▪ paid time to get a COVID-19vaccination; ▪ access to corporate healthcare packages
4. Quality education	▪ advanced training; ▪ annual professional training; ▪ e-learning platforms
5. Gender equality	▪ -use of human capital management software; ▪ internal ethnic diversity policies; ▪ promotion of women's employment and empowerment
6. Clean water and sanitation	▪ reduced water consumption; ▪ water reuse
7. Affordable and clean energy	▪ use of biofuels; ▪ use of electric vehicles; ▪ use of renewable energy
8. Decent work and economic growth	▪ finding talented employees; ▪ employee capacity building; ▪ qualification-based wages
9. Industry, innovation and infrastructure	▪ transport route optimization; ▪ vehicle design optimization
10. Reduced inequalities	▪ hiring people with disabilities; ▪ promotion of inclusion
12. Responsible consumption and production	▪ business process automation efforts; ▪ building energy efficient facilities; ▪ waste stream management
13. Climate action	▪ reduction of CO_2 emissions
15. Protect, restore and promote sustainable use of terrestrial ecosystems	▪ planting trees; ▪ reducing paper use; ▪ recycling of raw materials

A study of sustainable development reports of the surveyed companies showed that they failed to fulfill 6 out of 17 goals (Figure 1).

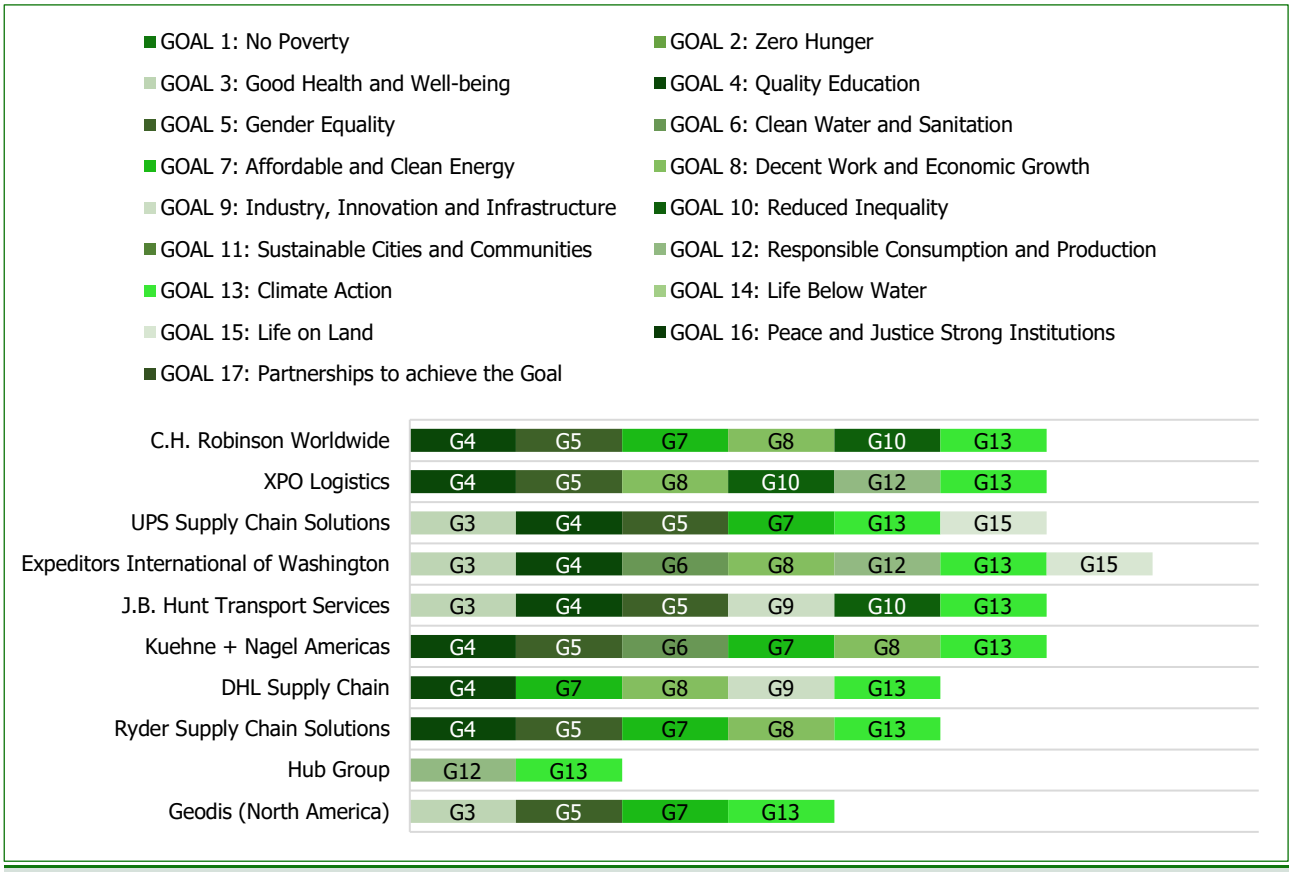

Figure 1. Extent to which transport and logistics companies fulfilled sustainable development goals.

Those goals include: 1. No Poverty; 2. Zero Hunger; 11. Sustainable Cities and Communities; 14. Life Below Water; 16. Peace and Justice Strong Institutions; 17. Partnership to achieve the Goal. Expeditors International of Washington has fulfilled the greatest number of goals – 7. Hub Group and Geodis [25] (North America) have fulfilled the fewest number of goals – 2 and 4, respectively. The most common goals that companies pursue are Quality Education, Gender Equality, and Climate Action.

We will proceed with the analysis of the information on the comparison of the company's share in the sample in terms of the amount of revenue, net income, and the number of employees with the share of sustainable development goals (Figures 2, 3, 4).

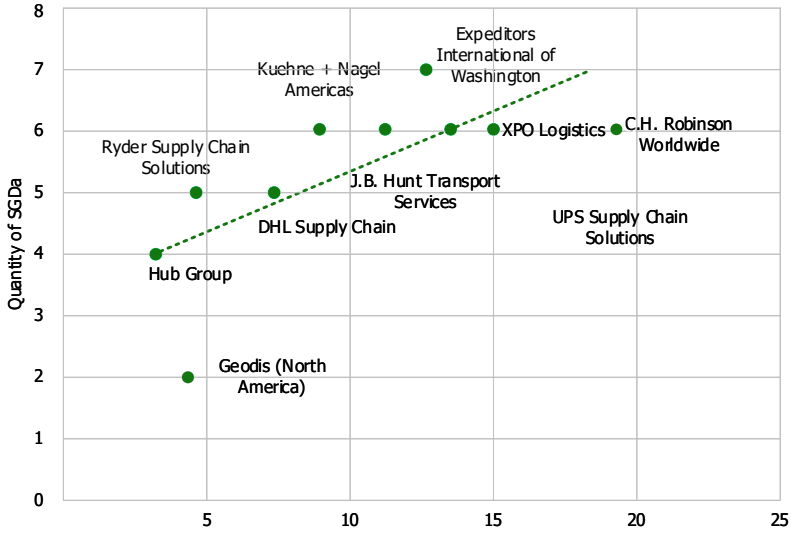

Figure 2. Dependence of the number of sustainable development goals fulfilled on gross revenue.

DOI: 10.55643/fcaptp.4.45.2022.3802

A graphic representation of the comparison of gross revenue and the number of companies' sustainable development goals clearly demonstrates the relationship between them. The higher the company's gross revenue, the more sustainable development goals it fulfills. This dependence is confirmed by the trend line with a reliability of 57%.

The graphical representation of the comparison of net revenue and the number of sustainable development goals fulfilled by companies also demonstrates a dependence. The greater the amount of net revenue, the greater the number of sustainable development goals fulfilled. These results are confirmed by the trend line with a reliability of 57%.

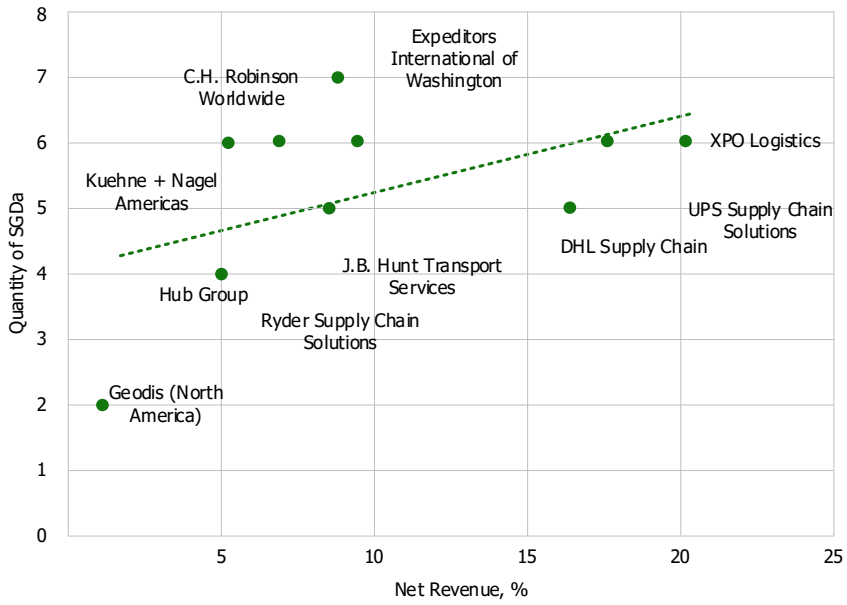

Figure 3. Dependence of the number of sustainable development goals fulfilled on net revenue.

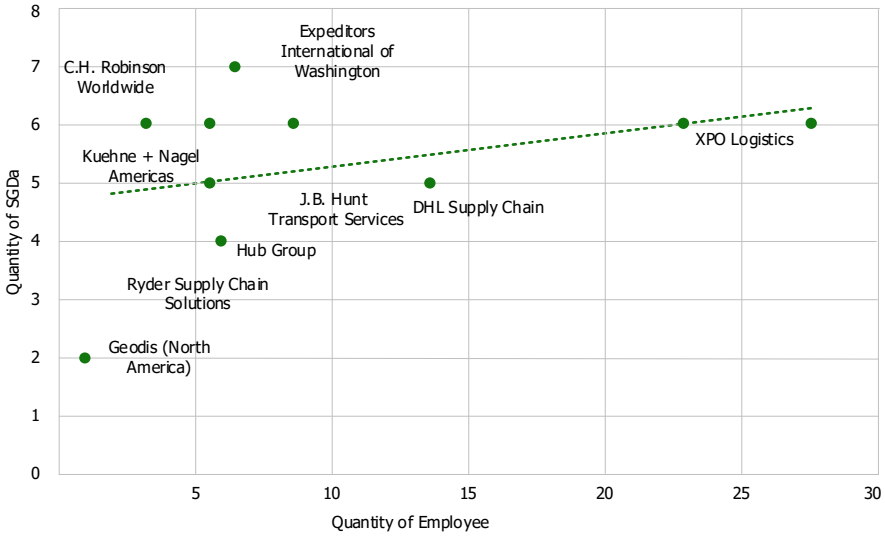

Figure 4. Dependence of the number of sustainable development goals fulfilled on the number of employees.

Limitations and implications for the research. This study has methodological and implementation limitations. The sample that includes 10 companies is a methodological limitation. Although the selected companies are the world's largest in this field, the inclusion of more companies in the sample may change the results. The implementation limitation is that the results obtained can only be used for comparison with other transport and logistics companies. Moreover, companies operating in other industries may have a different structure for the fulfillment of sustainable development goals.

DISCUSSION

Researchers [27] studied the challenges of sustainable logistics development and noted that the use of green technologies provides long-term competitive advantages in addition to improved operational and economic performance. Our findings confirm their conclusions, as the company's sustainable development reports showed an increased performance due to the new technologies introduced in order to fulfill sustainable development goals.

Urban logistics is also in the transition process to sustainable development. As authors [28] noted that the regular freight flows through cities cause congestion, increased emissions, and adverse effects on people. Researchers [29] studied the impact of green logistics on economic development and the environment. Improved efficiency of logistics operations has a statistically significant positive correlation with per capita income, value-added and open trade. Our research also provides grounds for this finding, as transport and logistics companies are trying to increase their performance with unchanged or reduced resource consumption.

Author [30] maintains that cooperation with representatives of supply chains is the best model for the development of green logistics for small and medium-sized businesses. Our research demonstrated that many transport and logistics companies cooperate with their partners to achieve responsible consumption and production goal. The use of green logistics reduces emissions into the atmosphere, thus improving the environmental situation. According to the findings of researchers [31], the use of eco-friendly transport allows for fulfilling environmental sustainability goals even against an absolute increase in the number of vehicles.

Author [32] notes that sustainable development goals are fulfilled through the transformation of business models and the development of intermodal solutions by transport companies. The study showed that all surveyed companies use alternative energy sources and biofuels to reduce the negative impact on the atmosphere and the environment. The composite authors [33] indicate that the transport and logistics sector has been entrusted with a range of sustainable development goals to be fulfilled. The reason is transport and logistics being one of the main polluters of the environment. The Report on Sustainable Transport in China prepared by the China Academy of Transportation Sciences [34] states that China has programs in place aimed at reducing emissions to the environment, which provide that all urban public transport will be gradually replaced by electric transport. This will result in reduced energy consumption in the country's economy in addition to a significant reduction in harmful emissions.

According to researchers [35], green technologies should be introduced in the transport sector by joint actions of both businesses and authorities. Integrated implementation of green technologies requires significant investment in the transformation of transport companies just as in the creation of appropriate urban infrastructure. The latest technological advances will be applied for the fulfillment of sustainable development goals that involve a transformation of the transport and logistics system in the short run. Drones and automated systems will be used as last-mile logistics solutions, which will significantly improve the environmental situation and reduce the costs incurred by logistics companies [36].

Authors [37] developed a model for integrating sustainable development principles into the logistics companies' operations. The model provides a complete revision of business processes and their optimization [38; 39]. However, logistics companies need to assess all distribution areas for compliance with the sustainable development principles in order to use the proposed model in practice.

Our findings are consistent with the results obtained by other researchers. Many researchers emphasize that transport and supply companies must reduce their emissions. The study found that all world's largest companies surveyed have implemented and are using tools to fulfill the goal of mitigation and reducing CO2 emissions. Besides, the transport and logistics companies were found to fulfill much more goals than researchers considered. In particular, transport and logistics companies are actively engaged in developing measures and implementing policies to contribute to quality education, gender equality, affordable and clean energy, decent work, and economic growth.

CONCLUSIONS

Sustainable development goals are aimed at balancing the economic and social development of mankind with social and environmental implications. The study demonstrated that transport and logistics companies fulfill far more sustainable development goals than the researchers expect them to do. Although reducing the environmental footprint is the main goal for transport and logistics companies, they are actively contributing to gender equality and quality education. Many companies are engaged in the development and implementation of biofuels and alternative energy technologies in order to reduce CO2 emissions.

DOI: 10.55643/fcaptp.4.45.2022.3802

In fulfilling the Good Health and Well-Being goal, some companies provided uninterrupted supplies of personal protection equipment and vaccines during the COVID-19 pandemic. This gives grounds to state that transport and logistics companies are actively fulfilling sustainable development goals. The study revealed a dependence of the number of fulfilled sustainable development goals on the company's size. The greater the company's Gross Revenue, Net Revenue, or the number of Employees, the more sustainable development goals it fulfills. The sample consisting of 10 companies is the methodological limitation of the study. Although the selected companies are the world's largest in this field, the inclusion of more companies in the sample may change the results. The implementation limitation is the possibility of comparing the results obtained with other transport and logistics companies only, as companies in other industries may have a different structure of sustainable development goals and a different dependence of the number of fulfilled sustainable development goals on the company's size.

REFERENCES

1. Loo, B., Tsoi, K.H. The sustainable transport pathway: A holistic strategy of Five Transformations. *Journal of Transport and Land Use*, 2018, Vol.11, No. 1, pp. 961-980. https://doi.org/10.5198/jtlu.2018.1354
2. Vienažindiene, M., Tamuliene, V., Zaleckiene, J. Green Logistics Practices Seeking Development of Sustainability: Evidence from Lithuanian Transportation and Logistics Companies. *Energies*, 2021, Vol. 14, No. 22, 7500. https://doi.org/10.3390/en14227500
3. Sztangret, I. Systemic Sustainable Development in the Transport Service Sector. *Sustainability*, 2020, Vol. 12, No. 22, 9525. https://doi.org/10.3390/su12229525
4. United Nations. *Sustainable transport, sustainable development. Interagency report for second Global Sustainable Transport Conference*, 2021. URL: https://sdgs.un.org/sites/default/files/2021-10/Transportation%20Report%202021_FullReport_Digital.pdf (access date: 15.04.2022).
5. Osintsev, N., Kazarmshchikova, E. *Factors of sustainable development of transport and logistics systems*, 2017. URL: https://www.researchgate.net/publication/322564550_Factors_of_sustainable_development_of_transport_and_logistics_systems (access date: 14.04.2022).
6. ESCAP. Transport and Sustainable Development Goals. *Transport and Communications Bulletin for Asia and the Pacific*, 2017, No. 87. URL: https://www.unescap.org/sites/default/files/publications/bulletin87_Fulltext.pdf (access date: 13.04.2022).
7. Bakker, S., Major, M., Mejia, A., Banomyong, R. ASEAN Cooperation on Sustainable Transport: Progress and Options. *Transport and Communications Bulletin for Asia and the Pacific*, 2017, No. 87 Transport and Sustainable Development Goals, pp. 1-15. URL: https://www.unescap.org/sites/default/files/publications/bulletin87_Fulltext.pdf (access date: 13.04.2022).
8. Puri, B.N. (2017). Sustainable Transport and Inter Modal Mix. *Transport and Communications Bulletin for Asia and the Pacific*, 2017, No. 87 Transport and Sustainable Development Goals, pp. 53-65. URL: https://www.unescap.org/sites/default/files/publications/bulletin87_Fulltext.pdf (access date: 13.04.2022).
9. ECLAC. Logistics and mobility policies for sustainable development and regional integration: conceptual framework and regional experiences. *Bulletin FAL*, 2016, Vol. 345, No. 1. URL: https://repositorio.cepal.org/bitstream/handle/11362/39996/1/S1600141_en.pdf (access date: 13.04.2022).
10. Marin, M. (2017). Impact of Logistics and Shipping in the Sustainable Development of Societies. *Journal of Marine Technology and Environment*, 2017, pp. 55-60. URL: https://upcommons.upc.edu/bitstream/handle/2117/86595/IMPACT+OF+LOGISTICS+AND+SHIPPING+IN+THE+SUSTAINABLE+DEVELOPMENT+OF+SOCIETIES.pdf?sequence=1 (access date: 13.04.2022).
11. Kadlubek, M. Examples of Sustainable Development in the Area of Transport. *Procedia Economics and Finance*, 2015, Vol. 27, pp. 494-500. https://doi.org/10.1016/S2212-5671(15)01026-6
12. UNCTAD. UNCTAD Framework for Sustainable Freight Transport, 2017. URL: https://www.sft-framework.org/UNCTAD-SFT-Framework.pdf (access date: 13.04.2022).
13. UNECE. Transport for Sustainable Development In The ECE Region, 2011. URL: https://unece.org/fileadmin/DAM/trans/publications/Transport_for_sustainable_development_in_the_ECE_region.pdf (access date: 14.04.2022).

14. Dmitriev, A., Plastunyak, I. (2020). Digital platforms for managing transport and logistics systems in the context of sustainable development. *E3S Web of Conferences*, 2020, No. 208, 01007. URL: https://www.e3s-conferences.org/articles/e3sconf/pdf/2020/68/e3sconf_ift2020_01007.pdf (access date: 15.04.2022).

15. Transport Topics. *2021 Essential Financial and Operating Information for the 50 Largest Logistics Companies in North America*, 2021. URL: https://www.ttnews.com/top50/logistics/2021 (access date: 13.04.2022).

16. C.H. Robinson. *Sustainability Report 2020*, 2021. URL: https://www.chrobinson.com/en-us/-/media/chrobinson/documents/ch_robinson_2020_sustainability_report.pdf (access date: 15.04.2022).

17. XPO Logistics. Sustainability Report, 2021. URL: https://sustainability.xpo.com (access date: 15.04.2022).

18. UPS Supply Chain Solutions. *Corporate Sustainability Progress Report 2019*, 2020. URL: https://about.ups.com/content/dam/upsstories/assets/reporting/2019-UPS-Corporate-Sustainability-Progress-Report.pdf (access date: 14.04.2022).

19. Expeditors. *Sustainability Report 2020*. 2021. URL: https://www.expeditors.com/media/2203/2020-sustainability-report_final-032321.pdf (access date: 13.04.2022).

20. J.B. Hunt Transport Services. *Sustainability Report 2020*, 2021. URL: https://www.jbhunt.com/content/dam/jbhunt/jbh/corporate-responsibility/documents/2020_Sustainability_Report.pdf (access date: 13.04.2022).

21. Kuehne + Nagel. *Sustainability Report*. 2020. URL: https://2020-annual-report.kuehne-nagel.com/fileadmin/user_upload/Dateien/documents/Sustainabilityreport_2020.pdf (access date: 14.04.2022).

22. Deutsche Post DHL Group. *Sustainability Report 2019*, 2020. URL: https://www.dhl.com/content/dam/dhl/global/core/documents/pdf/sustainability-report.pdf (access date: 15.04.2022).

23. Ryder Supply Chain Solutions. *Corporate Sustainability Report 2019/2020*, 2021. URL: https://rydercsr.com (access date: 14.04.2022).

24. Penske Logistics. *Sustainability Initiatives*, 2021. URL: https://www.gopenske.com/our-company/sustainability/environmental-compliance (access date: 14.04.2022).

25. Geodis. *Operating resilient supply chains. Activity and Corporate Social Responsibility Report 2020*, 2020. URL: https://geodis.com/sites/default/files/2021-07/GEODIS%20RA_RSE_2020_UK.pdf (access date: 15.04.2022).

26. United Nations. Sustainable Development Goals, 2022. URL: https://www.un.org/sustainabledevelopment/sustainable-development-goals/ (access date: 15.04.2022).

27. Cosimato, S., Troisi, O. (2014). The Influence of Green Innovation in Logistics Competitiveness and Sustainability. The DHL Case Study. *Conference Proceedings of 17th Toulon-Verona International Conference Liverpool John Moores University "Excellence in Services"*, 2014, pp. 95-112. URL: https://sites.les.univr.it/eisic/wp-content/uploads/2018/07/Cosimato-Troisi.pdf (access date: 12.04.2022).

28. Russo, F., Pellicano, D.S. Planning and Sustainable Development of Urban Logistics: From International Goals to Regional Realization. *WIT Transactions on Ecology and the Environment*, 2019, Vol 238, pp. 59-72. URL: https://www.witpress.com/Secure/elibrary/papers/SC19/SC19006FU1.pdf (access date: 15.04.2022).

29. Khan S.A.R. *The Effect of Green logistics on Economic growth, Social and Environmental sustainability: An Empirical study of Developing countries in Asia*, 2019. URL: https://www.preprints.org/manuscript/201901.0104/v1 (access date: 12.04.2022).

30. Zovada, K. (2020). Green Logistics: The Way to Environmental Sustainability of Logistics. Empirical Evidence from Polish SMEs. European Journal of Sustainable Development, 2020, Vol. 9, No. 4, pp. 231-240. https://doi.org/10.14207/ejsd.2020.v9n4p231

31. Baimukhanbetova, E.E., Tazhieva, K.K. Problems of «Green» Logistics Within the Concept Of Sustainable Transportation Develompent. *Bulletin of Al-Farabi Kazakh National University*, 2017, Vol. 4, No. 122, pp. 123-131. URL: https://www.kaznu.kz/content/files/pages/folder21060/Статья%20Вестник%20КазНУ%202017%20№4.pdf (access date: 13.04.2022).

32. Sulskyte, D. The impact of logistics sector on sustainable development. *14th Prof. Vladas Gronskas International Scientific Conference Kaunas: Vilnius University Kaunas Faculty, 5th of December*, 2019. URL: https://www.researchgate.net/publication/34220882

DOI: 10.55643/fcaptp.4.45.2022.3802

9_The_impact_of_logistics_sector_on_sustainable_development (access date: 13.04.2022).

33. Rakhmangulov, A., Sladkowski, A., Osintsev, N., Muravev D. *Green Logistics: Element of the Sustainable Development Concept. Part 1*, 2017. URL: https://pdfs.semanticscholar.org/f1a1/358a4b3857cda87b3b19a99cbdb30a729dfc.pdf?_ga=2.17181628.486817117.1642613877-36077047.1642613877 (access date: 14.04.2022).
34. China Academy of Transportation Sciences. *Report on Sustainable Transport in China*, 2021. URL: https://www.mot.gov.cn/zhuanti/transport/chengguowj/202110/P020211027595442474938.pdf (access date: 13.04.2022).
35. Larina, I., Larin, A., Kiriliuk, O., Ingaldi, M. Green logistics - modern transportation process technology. Production Engineering Archives, 2021, Vol. 27, No. 3, pp. 184-190 URL: https://doi.org/10.30657/pea.2021.27.24
36. European Environment Agency. The first and last mile – the key to sustainable urban transport. Transport and environment report 2019. *EEA Report*, 2019, No. 18. URL: https://www.eea.europa.eu/publications/the-first-and-last-mile/download (access date: 12.04.2022).
37. Drejeris, R., Samuolaitis, M. Development of Sustainable Distribution Logistics System. *Research for rural development*, 2020, Vol. 35. URL: https://www2.llu.lv/research_conf/proceedings2020/docs/LatviaResRuralDev_26th_2020-169-175.pdf
38. Zahorskyi, V., Lipentsev, A., Mazii, N., & Bashtannyk, V. (2020). Strategic directions of state assistance to enterprises development in Ukraine: managerial and financial aspects. *Financial and Credit Activity-Problems of Theory and Practice,* 2(33), 452-462. DOI: https://doi.org/10.18371/fcaptp.v2i33.207230.
39. Zahorskyi, V.S., Lipentsev, A.V., Yurystovska, N.Ya., & Mazii, N.H. (2019). Financial and administrative aspects of small business development in Ukraine. *Financial and Credit Activity-Problems of Theory and Practice*, 3(30), 351-360. DOI: https://doi.org/10.18371/fcaptp.v3i30.179717.

Гречан А., Безуглий А., Парфентьєва О., Компанець К., Гроза А., Кара І.

РЕАЛІЗАЦІЯ ЦІЛЕЙ СТАЛОГО РОЗВИТКУ НА ПРИКЛАДІ ТРАНСПОРТНО-ЛОГІСТИЧНОГО СЕКТОРА

Мета дослідження полягає в тому, щоб визначити ступінь досягнення цілей сталого розвитку транспортними та логістичними компаніями. Зразок дослідження включає 10 найкращих у 2021 році транспортних та логістичних компаній. Дослідження проводилося шляхом поглибленого вивчення звітів про розвиток, аналіз контенту, систематизації та групування інформації про інструменти, що використовуються для досягнення цілей сталого розвитку транспортними та логістичними компаніями. Залежність кількості досягнутих цілей сталого розвитку на суму доходів, чистого доходу та кількості працівників була визначена через тенденційний аналіз логарифмічної залежності. Результати дослідження показали, що транспортні та логістичні компанії досягають набагато більш стійких цілей розвитку, ніж очікувалося. Транспортно-логістичні компанії активно забезпечують якісну освіту, гендерну рівність та чисту енергію, крім цілей скорочення викидів та пом'якшення наслідків змін клімату. Компанії розробили політику для істотного розширення впливу на поля, відмінну від надання транспортних та логістичних послуг. Компанії активно розвиваються й упроваджують альтернативні джерела енергії, чисту енергію та сприяють досягненню доброго здоров'я й благополуччя. Результати досліджень свідчать про залежність кількості досягнутих цілей сталого розвитку від розміру компанії. Установлено, що чим більша кількість валового доходу, чистого доходу або кількості працівників, тим більшої кількості цілей сталого розвитку компанія досягає. Отримані результати можуть бути використані транспортними та логістичними компаніями в подальшому розвитку політики для досягнення цілей сталого розвитку. Проведене дослідження відкриває нові напрями подальших досліджень, зокрема, уплив досягнення цілей сталого розвитку транспортними та логістичними компаніями на їхню інвестиційну привабливість та ринкову капіталізацію.

Ключові слова: гендерна рівність, альтернативна енергія, екологічний слід, інновації, відновлювана енергія, інвестиції

JEL Класифікація: O12