VILNIUS UNIVERSITY

FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION

BUSINESS PROCESS MANAGEMENT

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MASTER THESIS

Europos Žaliojo Kurso poveikis organizacijos verslo veiklai Lietuvos transport sektoriuje	**Impact of the European Green Deal on the business operations of an organization in Lithuania's Transportation Sector**

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Date of submission: 6th January 2026

Vilnius, 2026

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INTRODUCTION

With the increased concerns pertaining to the carbon emissions, the European Parliament and the European Commission presented the European Green Deal to the EU institutions and the public (Fetting, 2020). Furthermore, it mentions climate change, biodiversity decline, resource use, and pollution, while promoting economically inclusive growth.The increased change in climate is predominantly due to CO2 emissions which harm global climate (Adedoyin et al.,2020). The increased levels of CO2 emissions are linked to factors such as social, economic and industrial (Adom et al., 2012) and these emissions are emitted through various sources like burning fossil fuels as well as deforestation (Sanglimsuwan, 2011).

The European Union has put together a coordinated strategy for a sustainable growth and to take actions in the region to raise climate ambitions in member countries and to streamline targets. The strategy consists of initiatives on ways to raise awareness, along with designing carbon pricing methods and other initiatives on climate action (Sandri, Hussein, Alshyab and Sagatowski, 2023).

The European Green Deal sets out a legally binding goal for EU member states to achieve carbon neutrality by 2050 and to reduce overall greenhouse gas emissions by 2030 by at least 55% (Domorenok and Graziano, 2023). The European Green Deal is the cornerstone of a comprehensive strategic package (European Green Deal Strategic Framework, EGDSF) and was presented by the European Commission with an aim to transform European Union into a region of no net emissions of greenhouse gases by 2025 (Paleari, 2022).

Recent climate changes over the past decades have highlighted the urgent need for significant transformations across various economic sectors at global, European, national, and local levels. In line with the 2015 Paris Agreement, which aims to limit the global temperature increase to 1.5°C, the European Commission’s initiative is to serve Europe's new economic growth strategy, fostering job creation and striving for climate neutrality. To achieve these goals, Europe must prioritize the future development of the transport sector, with particular focus on the transport systems of EU member states where GDP per capita remains significantly below the European average (Koralova-Nozharova, P. (2021).

The core of any EGD portrays principles of sustainability theory that attempts to integrate economic growth, ecological preservation, and social equality (Purvis, Mao, & Robinson, 2019). This deal, on the one hand, foregrounds sustainable growth with a view to disassociating economic advancement from resource exploitation. On the other hand, it highlights sustainability in the policy environment that includes carbon neutrality targets, circular economy strategies, and mechanisms for green funding, and thus fits the definition of sustainable development put forward

by Brundtland: 'Development that meets the needs of the present without compromising the ability of future generations to meet their own needs'(World Commission on Environment and Development [WCED], 1987).

EGD presents opportunities but also challenges, especially for SMEs that do not have the resources to make the necessary adjustments. Financial and administrative burdens of compliance can be insupportable and will possibly affect competitiveness or result in exit from the market (Vasile et al., 2022). There is also evidence of sector-specific impacts, as for instance, there are now over $20 billion in annual costs related to environmental regulations, affecting others who are now asking themselves if it is worthwhile to stay around the EU.

Based on the analysis by Chapman, L. (2007), on the principal contributors of emissions of greenhouse gases within transport sector noted that the sole solution of the climate change problem is new technological innovations. He further added that policy makers must combine short-term behavioural changes and long-term technological solutions. In addition, based on the research presented by Gann et al. (2019) on the relationship between the passenger car CO2 emissions and efficiency in fuel and innovations in technology, presented that the estimated CO2 emissions were lowered through technological advancements and increased fuel efficiency.

The transportation sector is among the most affected by the EGD due to its substantial contribution to Greenhouse Gas (GHG) emissions which accounts for nearly 25% of EU emissions (EEA, 2021). The Sustainable and Smart Mobility Strategy (2020), a component of the EGD, outlines goals for reducing transport emissions by 90% by 2050 through digitalization, electrification, modal shifts, and the promotion of public transport.

The aim of this research is to better understand the impact of the European Green Deal on business operations within Lithuania's transportation sector. Accordingly, the underlying research question is how has the European Green Deal influenced the business operations of organizations in Lithuania's transportation sector?

The following are the research objectives:

1. To explore how the dimensions of the European Green Deal influence the internal business factors such as strategic planning and operational decision-making within Lithuanian transportation companies.
2. To investigate how Lithuanian transportation companies perceive and respond to external factors introduced by the European Green Deal, such as limited availability of electric vehicles, infrastructure gaps, shortages of skilled personnel and stakeholder expectations.
3. To develop a conceptual framework that better captures the impact of the European Green Deal on the business operations within Lithuania's transportation sector.

4. To produce practical guidelines for the transportation sector companies to improve business operations in response of the challenges and opportunities presented by the European Green Deal.

The first objective guided by Sustainability Theory which assists the research to analyze whether organizations adapt their internal processes, in things such as resource allocation, logistics planning, or mechanisms to ensure compliance, in regard to the EU sustainability goals.

The second objective follows the Transition Theory, to identify the main external challenges, such as financial constraints, technological readiness, and regulatory complexity, noting particularly the differences in responses between small and medium-sized enterprise (SMEs) towards their larger counterparts. The study further investigates how these barriers impact cost structures, business continuity, supply chain modifications, and the transformation of the workforce.

The research also determines opportunities that come from the Green Deal in areas such as innovation, digital transformation, and sustainable competitiveness. It investigates the use of emerging green technologies, alternative energies, and smart mobility solutions by companies for efficient operations and opening up new market opportunities. Conceptualizing the EGD as both a regulatory challenge and a strategic driver thus brings into focus the dual nature of the EGD for the companies, which is compliance and modernization. The workings will be done to produce from the studies some concrete strategies for the transportation bodies in Lithuania. These recommendations shall be drawn based on empirical results to assist both policy makers and industry leaders in nurturing a sustainable and resilient transportation sector.

The research proposal focuses on business operations rather than business processes because business processes are considered to be nested within operations (Weske, 2012) and function as components or processes through which operations function (Harmon, 2014).

Artificial intelligence (AI) tools were used in a limited manner to support language editing and improve clarity and coherence of selected sections of the thesis. AI was not used for data collection, empirical analysis, interpretation of results, or formulation of conclusions. The author remains fully responsible for the content and academic integrity of this thesis.

1. THEORETICAL FRAMEWORK

In John W. Creswell's Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research, the consideration of a theory is a focal part of the empirical study's framework as a form of organizing knowledge. In the case of assessing how the European Green Deal (EGD) affects operational decision-making, two fundamental theories are selected: Sustainability Theory and the Theory of Transition. These theories were comprehensively analyzed through a literature review so they were well understood in terms of their significance and fundamentals. Drawing on these theories creates the ground to analyze the normative demands and policies as well as the practical constraints and structures that organizations have to deal with when they respond to the EGD.

The inclusion of these theories to the methodological approach regarding research gives clarity into research objectives and the angle of analysis. More specifically, the framework designs a case study on the impact of EGD on strategic and operational decisions of the businesses, thereby enabling the examination of both policy responses and organizational response mechanisms.

1.1 Overview of Literature on Transportation Sector under European Green Deal

The transportation field is one of the most profoundly integrated industries within international trade since it heavily impacts and facilitates the movement of people, goods and services (Rodrigue & Notteboom, 2020). This industrial sector's business activities involve a wide range of tasks such as logistics, infrastructure building and maintenance, supervision of compliance with legal requirements, fleet servicing, and adoption of new technologies (Chopra & Meindl, 2019). The efficacy with which transportation is conducted affects the performance of the supply chain, influences regional development, and defines competitiveness in the market (McKinnon, 2018).

Another sub element of transportation is business logistics which is the planning, implementation, and control of the flow and storage of goods and services from point of origin to the endpoint (Rodrigue & Notteboom, 2020). Logistics activities are more influenced by globalized trade patterns, Just in time inventory systems, and customer demand that requires immediate fulfillment (Chopra & Meindl, 2019). To make these systems balance, companies need to have complex logistical information systems to manage and control planning and scheduling of warehousing, routing and inventories (Zhao, Liu, & Lopez, 2020). The growth of e-commerce has added stress to these systems because of the increased demand for expedient and flexible last-mile delivery services (Wang, Han, & Beynon-Davies, 2019).Companies that fail to optimize logistics face increased costs and customer dissatisfaction (Chopra & Meindl, 2019).

The logistics and transport sector is crucial for empowering the European Green Deal (EGD) which targets at achieving climate neutrality by 2050 for the European Union (Dupont &

Torney, 2021). Within the European Union, Transportation is one of the largest contributors of Greenhouse emissions, accounting for around a quarter of the total emissions (Grosso et al., 2021). McKinnon (2018) reports that road transport solely accounts for nearly three-quarters of global transport emissions, thus cleaner fuels and vehicle technologies are crucial and are needed to be adopted urgently.

Pianta and Lucchese (2020) points out that the EGD plans to reduce these emissions significantly, aiming to achieve a 90% reduction by 2050 compared to 1990 figures. To realize these goals, the European Commission has put forth several regulatory options, notably stricter emission performance standards for road vehicles (Haas & Sander, 2020). These factors appear to be in conflict with the existing market conditions, particularly the relative power of the automotive industry, notably in Germany (Mysirli, 2021).

Birindelli and Chiappini (2021) states the Green Deal works as a "holistic plan" where all sectors of the economy, such as transportation, energy, agriculture, construction, steel, cement, textiles, and chemical industries, are included. Moreover, fossil fuel supplanting and pollution-reducing technologies were specially funded. Other regulations, including emissions controls and carbon pricing, are also driving companies to go green (Ivanov, 2020). Companies are now transitioning to electric vehicles (EVs) and other low-emission alternates like hydrogen and biodiesel, and setting up energy-efficient logistic networks (Zhao et al., 2020).

According to Paleari (2022), the European Green Deal offers a clear pathway toward climate neutrality in the EU by 2050, and the transportation industry, which is heavily regulated and emission intensive, is at the heart of this transformation. Such policy goals are more than just environmental aims for transport operators, especially in some of the smaller EU markets such as Lithuania. They are a sign of major changes in business as usual, new business threats, and of the need for strategic, long-term adjustments. Table 1 presented by Paleari (2022), highlights EGD transportation objectives and the implications of each key-objective, or the potential impact that these will have on business.

Table 1

List of EGD Transportation objectives and their relevance to Business Operations in Lithuania's Transportation Sector

EGD Transportation Objective	**Target Year**	**Relevance to Business Operations in Lithuania's Transport Sector**
55% CO_2 emission reduction from new cars (vs. 2021)	2030	Signals the need to upgrade vehicle fleets and plan for higher capital expenditures in cleaner technologies.
50% CO_2 emission reduction from new vans (vs. 2021)	2030	Affects logistics and last-mile service providers, especially in urban areas with stricter emissions regulations.
30 million zero-emission vehicles + 80 million lorries	2030	Pushes companies to adopt electric or hydrogen-powered vehicles and consider their availability, cost, and maintenance needs.
100 climate-neutral cities	2030	May lead to local low-emission zones
Doubling of high-speed rail traffic	2030	Encourages modal shifts in passenger transport
Carbon-neutral scheduled collective travel < 500 km	2030	Drives changes in short-distance travel business models,
Zero-emission ocean-going vessels market-ready	2030	Impacts maritime operators working with Lithuanian ports (e.g., Klaipėda), requiring adaptation to cleaner fleets.
25% increase in inland waterways/short sea shipping	2030	Promotes alternative freight routes; logistics companies may need to diversify modes of transport.
30% reduction in chronic transport noise exposure (vs. 2017)	2030	May require quieter vehicle technologies and operational changes in high-density areas.
Zero CO_2 emissions from new cars and vans (vs. 2021)	2035	Suggests the eventual phasing out of internal combustion engine vehicles; long-term fleet planning becomes essential.
Zero-emission large aircraft market-ready	2035	Affects air freight and passenger.
Nearly all vehicles are zero-emission	2050	Points to a complete shift in vehicle technology and infrastructure dependency
Rail freight traffic doubles	2050	Freight companies may face competition from rail
High-speed rail traffic triples	2050	Reinforces the role of rail in passenger mobility
50% increase in inland waterway/short sea shipping	2050	Affects freight companies' route planning
90% reduction in GHG emissions from transport (vs. 1990)	2050	Represents full transformation of the industry.

Source: compiled by the author based on Paleari (2022)

Transitioning to cleaner transportation modes reduces greenhouse gas emissions and minimizes air pollution, thereby supporting the EU's climate aspirations (Sales et al., 2020). The concept of sustainable mobility encompasses the integration of efficient and environmentally friendly transport modes, focusing on cleaner energy for vehicles that aligns with supplying clean, affordable, and secure energy (Krupik, 2024).Research indicates that aligning transportation policies with the EGD can lead to significant carbon reductions, such as, enhancing public transport systems through dedicated bus lanes and promoting shared mobility can substantially decrease emissions (Li et al., 2019). Moreover, transitioning from road transport to rail solutions reinforces the need for holistic approaches that integrate sustainable logistics and urban planning (Wu et al., 2022).

Brescia et al. (2023) outlined the core elements of the European Green Deal, which reflect a comprehensive strategy aimed at achieving sustainability across various domains. These elements include: increasing the European Union’s climate ambition for 2030 and 2050; supplying clean, affordable, and secure energy; mobilizing industry for a clean and circular economy; building and renovating energy systems efficiently; pursuing zero pollution for a toxic-free environment; preserving and restoring ecosystems and biodiversity; and promoting a fair, healthy, and environmentally friendly food system. A key component also involves enabling a shift toward sustainable and smart mobility. This final point is particularly relevant to the transportation sector, as it underscores the need for transitioning to low-emission vehicles, investing in green infrastructure, and supporting multimodal transportation systems that reduce environmental impact and improve urban air quality (European Commission, 2019).

The EGD's regulatory framework includes stringent emission performance standards aimed at reducing emissions from all modes of transport. The European Commission has set specific targets that mandate significant cuts in carbon emissions from vehicles, with a focus on promoting electric vehicles (EVs) and hydrogen fuels (Bénichou, 2024) (Bénichou, 2024). Government initiatives also promote the adoption of cleaner technologies through fiscal incentives and regulatory mandates, pushing for the electrification of public transport and freight systems

The transportation sector can significantly contribute by adopting practices that prioritize recycling and resource efficiency in manufacturing vehicles and infrastructure (Brantschen et al., 2024). Upgrading transport infrastructures to promote biodiversity and ecosystem services can also enhance urban environments and reaffirm the ambition of preserving and restoring ecosystems (Moroń et al., 2024). For example, integrating green corridors in transport planning can foster wildlife mobility and habitat connectivity, reaffirming broader environmental goals (Moroń et al., 2024).

Implementing stringent regulations and encouraging the development of electric and hybrid vehicles could minimize the sector's ecological footprint (Sales et al., 2020). Such initiatives not only support public health and environmental welfare but also align with the shift towards creating a fair, healthy, and environmentally friendly food system, as the transport of food commodities can significantly benefit from greener logistics systems (Prete & Samoggia, 2023).

The ambitious objective of achieving decarbonization through the advancement of zero-emission transportation aims to reduce carbon emissions from transport systems by approximately 90%. However, reaching this target is challenging due to various obstacles in the current landscape. To expedite progress, researchers and policymakers are working on developing effective policies and zero-emission transportation systems, such as electric vehicles (EVs), that can significantly reduce CO_2 emissions (Argyriou, 2023 & Moktadir and Ren, (2023). In other words, transitioning to a fully renewable energy system presents challenges for both the power and transport sectors (Juul, N., & Meibom, P.,2012).

To achieve the objectives set by the European commission, transportation sector like aviation sector is already factoring in environmental mitigation to some degree, as fuel consumption and consequently emissions are directly linked to operational costs. This trend is expected to support in the coming future because of the rising environmental concerns and the implementation of carbon offsetting and pricing mechanisms. However, the in order to effectively reduce aviation emissions, development and enforcement of a comprehensive set of policies and measures remains very essential (Sgouridis et al., 2011).

There are various avenues to sustainability in aviation, such as sustainable aviation fuels (SAFs), increasing aircraft fuel efficiency, the development of potentially more sustainable new aircraft concepts such as electric aircraft (see also this related article), better air traffic management and ground operations, and modal shifts. These measures aim to enhance the capacity to meet demand from aviation, and to reduce its external effects (Eskenazi et al, 2023).

The EGD creates a need for a revaluation of social feasibility as there is a potential to further increasing the sustainability of the transportation sector. The transition might further deepen differences and additional economic burdens for member states with relatively low GDPs per capita (Koralova-Nozharova, 2021). The strongest point of any effective regulatory system is to take into account the economic conditions in different member states, so no region is left behind.

Among the major operational challenges, is the switch from an internal combustion engine fleet to an electric/hydrogen-powered fleet, requiring new charging infrastructure and operational procedures (Alves et al., 2022). Moreover, the EGD’s focus on modal shift away from road and

towards rail or inland waterways, creates logistical challenges for network integration and capacity planning (Behrends 2021).

Another issue of the EGD is an ever-increasing regulatory burden and reporting burden on emissions monitoring as well as reporting of sustainability metrics (Dolci & de Jong, 2022). Where the big organisations have the means to invest in Environmental, Social and Governance (ESG) compliant systems, the smaller players may face challenges with adapting – which could result in an uneven competitive landscape (Cullinane & Bergqvist, 2014). The absence of uniform standards and cross-boarder policy harmonization makes business in the EU even more complex, in particular for logistics companies that have an establishment in multiple member states (Monios & Wilmsmeier, 2020).

1.2. Overview of the Implications of Sustainability Theory for Business Operations under European Green Deal

Sustainability can be defined as the capacity to maintain or improve the state and availability of desirable materials or conditions over the long term. This definition retains the commonly cited characteristics of sustainability and sustainable development as oriented toward the long term, and the basic identification of sustaining any particular conditions or materials as keeping or maintaining them. The definition offered here also can be applied to particular interests, as well as to any spatial scale (Harrington, L. M. B. (2016).

Sustainability theory is drawn from several theoretical frameworks which serve as an explanatory theory of how complex aspects of sustainable development should be understood. McGuire et al. (2023) define a layered understanding of sustainability by considering different forms of impact on local ecosystems on the one hand and global environment on the other hand. This stratification is essential to understand how measures implemented under the EGD can lead to different effects at multiple scales to meet desired local versus global sustainability objectives (McGuire et al. (2023).

In turn, sustainability theory has moved from foundational ideas in the 1970s to sophisticated models that focus on systemic issues of environmental degradation and social justice. A classic study by Meadows et al. (1972) developed the concept of planetary boundaries and the necessity for economic systems to function within ecological limits. The EGD exemplifies these principles, as it pursues ambitious targets for greenhouse gas emissions reduction and the enhancement of resource efficiency and circular economy approaches, strongly aligning with the notion of strong sustainability (Neumayer, 2003). Neumayer (2003) argues that some forms of natural capital (like biodiversity, ecosystems and climate stability) are non-substitutable and so require maintaining in an untouched form for both existing and future generations. the focus in the deal of a circular economy can be considered as a direct link to the sustainability theory

suggesting (Geissdoerfer et al., 2017) to decouple economic growth from resource consumption and waste though generation. This system approach treats resource efficiency as a journey towards the long-term sustainability through minimizing ecological footprint from production/consumption. It is a theory that roots the philosophy of EGD, and is claimed to be based on three integrated pillars that are environmental soundness, social fairness, and economic feasibility (Purvis, Mao & Robinson, 2019).

In terms of policy, theory of sustainability is used as a theoretical basis for environmental governance and regulatory structures. The European Green Deal (EGD), announced by the European Commission in 2019, is an example of regional policy based on sustainability theory (Schunz, S. (2022).). It highlights systemic transformation in energy, mobility, agriculture and industry and is closely related to systems theory and the tenets of ecological economics (Kitzing et al., 2021). In terms of governance, polycentric governance theory speaks to the environmental sustainability literature by explaining the benefits of decentralized, multilevel systems where multiple actors manage natural resources collectively (Ostrom, 2010). This reality is especially pertinent to the EGD, as it must be translated into a policy package that is not only coherent among EU institutions and among member states but also harmonious between regional governments, businesses and civil society. The convoluted nature of climate governance under the EGD is conforming to the polycentric vision, but in practice coherence and compliance remain significant obstacles (Jordan et al., 2018).

Another important theoretical basis of the EGD is the triple bottom line (TBL) (Elkington, 1997), which emphasises that the three dimensions, including environmental protection, economic development, and social equity, should be considered equally. The European Green Deal is a step in the direction of achieving such social investments objectives by straddling the green jobs, energy transition and social inclusiveness pillars, particularly against the background of the "Just Transition Mechanism" set up to assist the regions and communities in greatest need as a result of the transition to a low carbon economy (Heffron & McCauley, 2018). This echoes with an emerging consensus in the sustainability literature that environmental policies ought to integrate with the social and economic dimensions for justice and fairness and that the environmental justice and equality issue should not be overlooked (Agyeman, 2005). Scholars have long been debated the principle of "Just Transition", a recognition that sustainable development must involve ecological health as well as social justice and participatory governance (Heffron & McCauley, 2018; Newell & Mulvaney, 2013). In addition, work by scholars such as Sachs et al. (2019) have highlighted how contemporary sustainability theory calls for systemic transformation rather than incremental change. The EGD reflects this by trying to align policy across various sectors such as agriculture, energy, transport and finance, encouraging coherence in climate action and

sustainable development. These systemic change articulations are crucial because few, if any, of the sustainability issues are uni-dimensional and call for comprehensive governance responses (Leach et al., 20101). The emphasis of the EGD on innovation, digitalization and green finance mechanisms takes place within the emerging literature on sustainability transitions and socio-technical change (Geels, 2011). Such frameworks stress multi-level governance, stakeholder participation and an adaptive governance approach in order to facilitate outlasting sustainability transformations.

Vukić et al. (2020) argue that the multimodal systems and smart transportation projects reduce environmental cost and achieve sustainability by establishing an optimal freight flow and minimizing external transportation cost. This transition is consistent with the spirit of the EGD, which calls for a targeted shift towards clean forms of transport such as rail and inland waterways so that In Europe's economy is no longer dependent on fossil fuel-based heavy trucking. Such studies ultimately conclude that energy and climate policy has to be closely coordinated with "higher" objectives outlined in the EGD that aim to give way for clean and energy efficient mobility. This highlights the necessity of a new kind of policy framework that integrates sustainability criteria into the business of planning for transport (Tutak et al., 2021). Štreimikienė et al. (2024) argue that, to support the objectives of the EGD, sustainable finance has a role to play in promoting investment in cutting-edge transport infrastructure, as well as in operational practices in transport that are consistent with climate objectives.

The success of the EGD is critically dependent on involvement of the relevant stakeholders engaging and working together toward common sustainable transportation goals. Haines & Scheelbeek (2020) suggest that the public commitment to sustainable modes of transport including cycling and public transport is needed for the health and environmental benefits of these activities to be realised. Greater availability of sustainable transport choices, especially in cities, can lead to substantial health benefits and make greener options more appealing.

Nevertheless applying sustainability theory through the EGD represents a major challenge. The normative aspirations of the theory for intergenerational justice and the protection of the ecosystem clash with the short-term political and economic interests (Dryzek, 2013). Also, transformation to a sustainable society requires structural adjustment that can lead to socioeconomic disruptions (redundancy in carbon inefficient sectors, increase of costs for SMEs) which brings up issues relating to equity and just transition. Moreover, Olzhebayeva et al. (2023) also note that a lack of knowledge and comprehension of sustainability principles among key actors may obstruct the path towards desired results. This highlights the importance for encouraging education and more public outreach to generate support for sustainable activities.

The ongoing development of transportation sustainability theory also needs to be put in perspective by continued engagement between policy makers, academics and industry, with respect to new knowledge. The analysis of the EGD discourse is important for understanding the role of sustainability narratives in conditioning sustainable transportation policies and practices and by engaging into critical discourse analysis, stakeholders can identify pathways for improving policy coherence and the effectiveness of sustainable transportation initiatives (Eckert & Kovalevska, 2021).

1.3. Overview of Transition Theory and Its Implications for Business Operations under the European Green Deal

The transition theory offers a useful framework for comprehending the complicated dynamics of such a far-reaching task. This literature review consolidates the most recent studies on the transition process, challenges, opportunities and the implications of the EGD on a variety of sectors including, among others, transport, energy and public engagement. Transition theory provides some explanations of how systems in society can be developed along more sustainable lines. It considers the changes required in socio-technical systems and focuses on the nexus of technology, policy and public behaviour (Rotmans, 2001).

The EGD gives effect to the transition pathways by instituting the governance for the upscaling of existing dominant economic and infrastructural models in Continental Europe. In transition theory, social and technological change at macro-level is considered, adopting a multi-level approach to understand how transitions evolve over time between competing niche innovations, dominant regimes and macro-landscape pressures (Geels, 2002). The EGD is developed to take account of these layers as it is deployed.

Finally, the EGD stimulates the innovation at niche level by supporting renewable energy and sustainable transport technologies. For example, the commitment to replacing fossil-fuel-driven transport and heating highlights the need to phase out established carbon-entrained regimes (Tröndle et al.,2023). The EGD paid particular attention to transportation due to its significant contribution to GHG emissions. The change at this sector includes a variety of strategies that spans from improving freight transportation efficiency to promotion of public transportation and investment in alternative vehicle technologies (Haas 2020). Schwanen et al. (2012) highlight the relevance of technological and behavioural shifts on transport. At the heart of reform in the transport sector are electrification of fleets, low-emission airborne fuels and smart logistics. Yet, there is scientific reservation that the perceived possibility and likelihood of earthquake early warning being implemented will be asymmetrical for Western and Eastern European Member states such as Lithuania, influenced by unequal assessment of technological preparedness and financial capacity (Anesiadou et al., 2022).

Promoting the circular economy, in particular in SMEs, is another important part of the Green Deal. Bassi and Guidolin (2021) performed HD study, and the results revealed that SMEs which have incorporated green jobs and sustainability positions are significantly more prone to RB to adopt resource-efficiency practices. Yet, despite this, most SMEs still do not possess the in-house skillset required to transition efficiently. The results highlight the importance of developing skills and technical support for small firms to enable them to meet EGD commitments. A study by Kalantaitė et al. (2023) notes that although Lithuanian transport enterprises are aware of the Green Deal, still many of them do not have clear strategies for transitioning. The disconnect between knowledge and implementation highlights the need for enabling policy, capacity development, and market encouragement.It is critical that public opinion supports the initiatives of the European Green Deal. Sustainably transitioning to the future can be achieved by transforming the attitude of citizens. As Schulte-Fischedick et al. (2021) note, the COVID-19 crisis has unintentionally set the stage for a world with lower transport emissions, underlining the potential for the public to accept interventions. Economic consequences of the transformation towards a climate-neutral economy have been widely debated in the academic literature. Finally, the employment creation potential of green jobs needs to be balanced against the risk of job losses in carbon-dependent sectors and thus effective policies and support to affected workers (Axsen et al., 2020).

2. RESEARCH METHODOLOGY

In the following section a description of the methodological approach will be provided in order to analyse the impact of the EGD on the business of transportation sector companies from Lithuania. Due to the multi-faceted and complicated character of the influence of the Green Deal varying from compliance to innovation, a qualitative research approach is chosen to obtain a deep understanding of organizational reactions. The approach aims at grasping strategic and operational dimensions of change as perceived by different stakeholders of the sector. The main aspects covered in this section are context, site section, design and strategy, data collection and data analysis. Collectively, these are intended to deliver a focused, contextually sensitive study, which take into account the dynamic and transitive character of the transport sector in Lithuania, in the midst of an emergent EU sustainability regime.

This chapter outlines the methodological approach used to investigate how the European Green Deal (EGD) influences business operations within Lithuania's transportation sector. Given the exploratory nature of the research and the need to interpret organisational responses within their real-world context, a qualitative research design was adopted. Qualitative approaches enable researchers to explore processes, meanings and organisational interpretations in depth (Creswell & Creswell, 2018). In line with Saunders, Lewis and Thornhill's (2019) research philosophy framework, the study follows an interpretivist perspective and a multiple case study strategy, which allows the researcher to analyse organisational behaviour in response to the EGD from several angles.

A multiple case study methodology is appropriate because it provides analytical depth by comparing similarities and differences across organisations (Yin, 2018). The study combines document analysis from four Lithuanian transportation and logistics companies with insights collected from two semi-structured interviews. Together, these data sources offer triangulation and increase the credibility of the research findings.

2.1 Research context

This research is situated within the framework of the European Green Deal (EGD). The European Green Deal was launched by Ursula Von der Leyen at theEuropean Commission in December in 2019, it was presented as a new growth strategy which aims to transform the European Union into a "fair and prosperous society with a modern, resource efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use" (European Commission, 2019, p. 2). It is a sweeping chart set to guide the EU to climate neutrality by 2050. The Green Deal, being the foremost growth strategy for the EU, integrates environmental sustainability with economic growth, seeking to decouple the latter from the use of resources and degradation of the

environment. The Deal comprehensively covers sectors ranging from energy and transportation to agriculture and industry so that effective policy tools are applied for a fair transition (European Commission, 2019a).

The EGD represents the all-encompassing route that the European Union is pursuing for the realization of climate neutrality by 2050. This ambitious approach definitely has a far reaching effect on businesses across sectors in different ways, which require significant changes in operations, compliance, and strategic planning.

The European Union membership of Lithuania requires its transportation sector to modify its operations according to these mandates which demand substantial changes in environmental compliance and operational efficiency and strategic sustainability goals (Eitminavičius & Minkevičius, 2022). The sector faces both obstacles and possibilities during its transition to sustainable operations because of its economic significance and its historical dependence on carbon-intensive infrastructure. The sector faces three main challenges which include regulatory pressure and technological transformation and changes in stakeholder expectations. The current situation makes it suitable to investigate how businesses adapt to sustainability frameworks that organizations impose from outside.

To reiterate, the study aims to investigate the difficulties that derive from objectives developed in the Green Deal on the business operations of Lithuania's Transportation sector. Furthermore, it is also intended to generate an overview of the conformity of the Lithuanian transport to the Green Deal objectives and to make strategic recommendations for a successful adjustment of the Lithuanian transport sector to the changing regulatory and business environment.

One of the main tasks of the analysis is to reflect thoroughly on the implications of the European Green Deal on the business in Lithuania's transport sector. This involves the question of how the EGD framework has led to the development of transport companies, the way in which companies organise their working practices, resource allocation, logistics planning and compliance activities in relation to the European Union's sustainability targets.

One more challenge would be to discover the specific operating problems that Lithuanian transport companies experience in attempting to implement the Green Deal rules to the environment and climate. This comprises an examination of factors which inhibit implementation, from a financial, technological and regulatory perspective and a consideration of how small and medium enterprises (SMEs) cope in comparison to larger firms. The study would thereby understand the influence of these issues areas like: (a) Business continuity; (b) Cost drivers; (c) Redesign of supply chain configuration; and (d) Workforce development.

Meanwhile, the proposition of innovation, digital transformation, and sustainable competitiveness within the sector represents the other key area for study offered by the Green Deal. This will see if companies are creating green technology, alternative fuels, and smart mobility solutions that increase operational efficiency and open up new markets. Understanding these opportunities will help frame the European Green Deal not only as a compliance challenge but also as a catalyst for growth and modernization.

In addition, the research aims to determine to what extent the transportation sector in Lithuania is strategically aligned with the core objectives of the European Green Deal. Among these aspects: policy integration at the national level, status of public infrastructure, and whether support measures such as subsidies and innovation grants are provided. Viewing it through this scope, the study will contribute to measuring national progress and observing possible implementation gaps.

2.2 Research site

The research was conducted within the transportation sector of Lithuania, a country strategically located at the crossroads of major European transport corridors. The transportation industry of Lithuania is crucial for both national economic growth and regional connectivity through its road, rail and intermodal logistics networks. The sector includes a broad spectrum of organizations which include freight forwarding companies, logistics service providers, public and private passenger transport operators and multimodal infrastructure hubs such as ports and railway terminals.

The research site selection of Lithuania bases on multiple reasons. The European Union membership of Lithuania requires it to fully implement European Green Deal and EU regulatory frameworks which aim for climate neutrality by 2050. The current research investigates how transportation organizations respond to EU sustainability mandates in this relevant and timely Lithuanian context. The transport and logistics sector in Lithuania has shown substantial growth during the last twenty years which established it as a leading logistics-intensive economy in the Baltic region (OECD, 2023). The high sectoral relevance creates an ideal setting to study how environmental policy interventions affect operational and strategic changes.

The study focused the organisations, mainly from the capital Vilnius, the industrial Kaunas, and the port Klaipėda, as the main nodes of transportation in Lithuania. These are the nodes containing a variety of actors whom are parts of the transportation value chain, such as multinationals, SMEs and state-owned companies. Interviewing from within these urban and economic areas will help provide a balanced reflection of opinions and experiences, and increase the transferability and relevance of findings across the sectors. Moreover, the transportation sector in Lithuania is currently undergoing a period of transformation under the influence of increasing

regulation and fuel efficiency standards, investment in electrifying rail networks and the search for alternative energy sources. These dynamics make the Lithuanian context particularly suitable for examining how European Green Deal objectives are influencing organizational adaptation, innovation adoption, and sustainability alignment within a transitional economy.

In summary, Lithuania's dynamic transport sector, its EU membership, and its strategic role in European logistics provided a compelling and appropriate research site for investigating the operational impact of the European Green Deal.

2.3 Research design and strategy

Methodology of this study will be based on a qualitative research design to examine a complex influence of the European Green Deal on activities of Lithuanian companies operating in transportation sector. The qualitative design is ideal for this study since it allows an in-depth understanding regarding how transportation companies are decoding and reacting to the regulatory, financial and technological aspects of the Green Deal (Creswell & Poth, 2018). The overall research approach is exploratory and underpinned by an interpretivist philosophy. Since EGD is relatively new and complex phenomenon the deductive approach enables the investigation to explore some areas, where little research has been done before, particularly within small-EU member country, such as Lithuania (Creswell & Creswell, 2018). An interpretivist stance facilitates the collection and interpretation of subjective experiences and meanings attributed by stakeholders, which is critical for understanding how the policy framework translates into organizational behaviour and strategic transformation (Saunders, Lewis, & Thornhill, 2019).

2.4 Case selection

A multiple case study design was selected to examine real-world organisational behaviours within their natural context (Yin, 2018). This design enables the researcher to compare the responses of different companies to the EGD, and to identify cross-case patterns and shared themes. The case studies are complemented by semi-structured interviews with two industry professionals who provide contextual and practice-based insights, enhancing the robustness of the analysis through data triangulation (Saunders et al., 2019). Four companies were selected using purposive sampling, following Creswell's (2014) recommendation to choose cases that best illuminate the central phenomenon. The selection criteria required that companies:

1. Operate within the Lithuanian transportation/logistics sector;

2. Publish sustainability reports, ESG documents or strategic disclosures relevant to EGD alignment;

3. Demonstrate observable activities related to environmental or operational change.

These companies represent a diverse range of sub-sectors—road freight, rail transport, last-mile delivery and multimodal logistics—allowing cross-case comparison (Yin, 2018).

Their documents provide non-reactive data and allow examination of organisational strategies, sustainability commitments and reported operational changes (Bowen, 2009). The case studies are in provided in Appendix A.

2.5 Participants

Participants were recruited from the Lithuanian transportation sector using expert purposive sampling. Expert sampling is appropriate when the research requires in-depth insights from individuals with specialised knowledge and professional experience relevant to the research topic (Saunders et al., 2019). Several potential participants were initially contacted across the transportation sector; however, participation was limited due to factors such as restricted availability, language barriers, or insufficient familiarity with sustainability and European Green Deal–related initiatives.

As a result, two participants were ultimately included in the study. Both participants held roles associated with sustainability management, operational decision-making, or regulatory compliance within transportation companies. To ensure confidentiality and anonymity, the participants were referred to as Participant A and Participant B. The participants provided valuable insights into organisational strategic responses to the European Green Deal, operational challenges, technological adaptation, and workforce-related issues within the Lithuanian transportation sector.

2.6 Data collection method

This study employed a qualitative data collection strategy that combined document analysis and semi-structured interviews to develop a comprehensive understanding of how the European Green Deal influenced business operations within Lithuania's transportation sector. The use of multiple data sources enabled data triangulation and enhanced the credibility and trustworthiness of the findings by allowing organisational practices to be examined from both documentary and experiential perspectives (Saunders et al., 2019).

2.6.1 Document analysis

Document analysis was used as the primary data collection method for the case studies, as it allowed for a systematic and non-intrusive examination of organisational responses to regulatory and sustainability-related pressures. Organisational documents were collected from official company websites. The documents analysed included sustainability reports, ESG disclosures, annual reports, and publicly available strategic plans.

These documents were considered appropriate for the purposes of this research because they reflected formal organisational positions, strategic priorities, and reported operational initiatives related to environmental sustainability and regulatory compliance. In particular, they

provided insight into how transportation companies articulated their alignment with European Union climate policy, including the European Green Deal, and how such alignment was translated into reported business practices.

Document analysis offered several methodological advantages. It provided stable and credible data that were not influenced by the presence or interaction of the researcher, thereby reducing the risk of response bias (Bowen, 2009). Additionally, organisational documents enabled comparative analysis across cases, as they included performance indicators, sustainability targets, and forward-looking statements that revealed patterns of strategic adaptation and operational change over time. In the context of this study, document analysis was especially valuable for identifying recurring themes related to strategic integration, operational transformation, and external constraints associated with the implementation of the European Green Deal.

2.6.2 Semi-Structured interviews

To complement the document analysis and deepen the empirical understanding of organisational responses, two semi-structured interviews were conducted with experts from the Lithuanian transportation sector. Semi-structured interviews were appropriate for this exploratory qualitative study, as they allowed for the use of a predefined interview guide while providing flexibility to explore issues raised by the participants in greater depth (Creswell, 2014).

Each interview lasted approximately 30–45 minutes. One interview was conducted online using a video conferencing platform, while the other was conducted in person, based on participant availability and practical considerations. Both interviews followed the same interview guide, which was designed to explore strategic decision-making, operational adaptations, external constraints, and perceived challenges related to the implementation of the European Green Deal.

Prior to each interview, participants were informed about the purpose of the study, the voluntary nature of their participation, and the measures taken to ensure confidentiality and anonymity. Verbal consent was obtained before the interviews commenced. The interviews provided valuable contextual insights that complemented the documentary evidence, particularly with regard to operational challenges, technological readiness, and workforce-related issues that may not be fully captured in formal organisational reports.

2.7 Data analysis method

For the data analysis, thematic analysis was used to analyse the qualitative data collected through case studies and semi-structured interviews, a widely used technique for identifying, analysing and reporting themes within the data (Braun & Clarke, 2006). Here, Microsoft Excel was used as a prime resource for both data handling operations and analysing the same. If software coding is unavailable, Excel has the advantage of being a readily available tool to help organize, sort and analyse basic qualitative data.

Guidelines of Braun and Clarke (2006) were followed for analytic work preparation and treatment procedure as summarised in the six phases outline below:

Phase 1: Familiarization with the Data

In the first phase, the researcher familiarised themselves with all collected data, including organisational documents used for the case studies and the interview data. The audio-recorded interviews were transcribed verbatim in Microsoft Word to ensure accuracy and preserve the original meaning of participants' responses. The completed transcripts were then transferred to Microsoft Excel to facilitate systematic organisation and analysis.

In parallel, sustainability reports, ESG disclosures, and strategic documents from the selected case study organisations were read in full multiple times. This repeated reading enabled immersion in the data and supported the development of initial observations regarding strategic responses, operational changes, and challenges related to the European Green Deal. During this phase, preliminary notes and reflections were recorded to capture early interpretations and emerging ideas. This process ensured that the researcher developed a comprehensive understanding of the dataset prior to formal coding and was consistent with best practices in qualitative analysis.

Phase 2: Generating Initial Codes

Following familiarisation, initial coding was conducted for both interview transcripts and case study documents. Relevant text segments were entered into Microsoft Excel either sentence by sentence or paragraph by paragraph, with each segment placed in a separate row to maintain clarity and traceability.

Initial codes were then applied alongside each data segment in adjacent columns. These codes consisted of short labels or phrases designed to capture the central idea or concept expressed in the text, such as strategic integration of sustainability, operational efficiency measures, infrastructure constraints, or regulatory pressure. Excel's filtering and sorting functions were used to organise and compare codes across different case studies and interview transcripts, enabling the identification of frequently occurring or particularly salient issues across the dataset.

Phase 3: Searching for Themes

Once initial coding was completed, the researcher examined the coded data to identify broader patterns and relationships. Codes that shared conceptual similarities were grouped together into potential themes using Microsoft Excel. This process involved reviewing the coding columns to cluster related codes into higher-level thematic categories, such as strategic adaptation, operational transformation, external constraints, and emerging opportunities linked to the European Green Deal.

To support transparency and analytical rigor, the full list of initial codes and their thematic groupings was documented and systematically organised. A detailed overview of the codes and their corresponding themes is provided in Table 2.

Table 2

Overview of codes

Code Category	Code Name	Description of Code	Data Source
Strategic	Strategic integration of sustainability	Sustainability embedded into corporate strategy and long-term planning	Case studies, interviews
Strategic	Long-term climate planning	References to 2030/2050 emission reduction targets	Case studies
Strategic	Alignment with EU climate policy	Explicit links to EU Green Deal objectives	Case studies
Strategic	ESG governance structures	Formal sustainability roles, policies, or governance mechanisms	Case studies
Strategic	Sustainability as competitive advantage	Sustainability used for differentiation or branding	Case studies, interviews
Operational	Fleet modernisation	Replacement of older vehicles with efficient models	Case studies, interviews
Operational	Electrification of transport	Use or piloting of electric vehicles	Case studies
Operational	Alternative fuel adoption	Use of biofuels, HVO, LNG	Case studies, interviews
Operational	Digitalisation and telematics	Use of digital tools for monitoring and optimisation	Case studies
Operational	Route optimisation	Operational planning to reduce fuel consumption	Case studies, interviews
Operational	Emission monitoring	Measurement and reporting of CO_2 emissions	Case studies
Constraint	Infrastructure limitations	Lack of charging or refuelling infrastructure	Case studies, interviews
Constraint	High investment costs	Financial barriers to sustainability transition	Case studies, interviews
Constraint	Technology readiness	Limitations of current vehicle technologies	Interviews
Constraint	Skills shortages	Lack of ESG, technical, or driver skills	Interviews

Continued Table 2: Overview of Codes

Code Category	Code Name	Description of Code	Data Source
Stakeholder	Customer sustainability pressure	Customer demand for low-emission transport	Case studies, interviews
Market	Unequal firm capacity	Differences between large firms and SMEs	Case studies, interviews

Source: compiled by the author based on findings

Phase 4: Reviewing Themes

In the fourth phase, the preliminary themes were critically reviewed in relation to the coded data and the dataset as a whole. The researcher assessed whether each theme was internally coherent, clearly distinguishable from other themes, and sufficiently supported by evidence derived from both the case study documents and interview transcripts.

Themes were refined, merged, or discarded based on their analytical relevance and the strength of supporting data. Throughout this iterative process, Excel's filtering and comment functions were used to review all coded segments associated with each theme. The refined thematic structure resulting from this phase is presented in Table 3, which outlines the final themes and their supporting codes.

Table 3 *Final themes*

Theme	Core Meaning	Supporting Codes	Evidence Sources
Strategic reorientation toward sustainability	Policy-driven changes to strategic planning	Strategic integration, EU alignment, governance	DPD, Girteka, interviews
Operational transformation	Concrete operational responses to EGD	Fleet modernisation, digitalisation, monitoring	All case studies, interviews
Constraint-mediated transition	External barriers limiting transformation	Infrastructure, cost, technology, skills	All case studies, interviews
Unequal organisational impact	Variation in adaptive capacity	Firm size, resources, market position	Case studies, interviews
Stakeholder-driven sustainability	Market pressure reinforcing regulation	Customer demand, reputation	DPD, Girteka, interviews

Source: compiled by the author based on findings

Phase 5: Defining and Naming Themes

Following the refinement process, each theme was clearly defined and named to reflect its core meaning and relevance to the research objectives. Detailed definitions were developed to explain the scope, significance, and analytical contribution of each theme.

Theme descriptions and summaries were prepared with reference to illustrative quotations from interview transcripts and extracts from organisational documents. These theme definitions, along with representative data extracts, are presented in Appendix B, providing additional evidence to support the analytical interpretations discussed in the findings chapter.

Phase 6: Producing the Report

In the final phase, the validated themes and supporting data were synthesised into a coherent narrative analysis. Findings were presented thematically, drawing on evidence from both the case studies and interview data to demonstrate how Lithuanian transportation companies have responded to the European Green Deal. Participant quotations and documentary extracts were integrated into the narrative to substantiate interpretations and enhance analytical credibility.

Even though programs like Excel may not have the automation capabilities and coding options that more advanced qualitative software offers, they do have enough flexibility and user-friendliness that appears to be "good enough" to maintain a thematic-aggregative analysis, particularly as long as they are used with a lot of organizing and quite a bit of consistent coding, and with structured analytical thinking (Meyer & Avery, 2009).

3. FINDINGS AND RESULTS

The present chapter intends to show the results and to give an interpretation of them, which are the results of the qualitative analysis of four case studies - DPD Lietuva, Girteka Logistics, Transimeksa, and Finėjas Group. The intention is to answer the research query which is to determine how the European Green Deal has affected the operations of the firms of the transportation sector in Lithuania. The results are based on the systematic document-based thematic analysis and they are presented in a manner that directly corresponds to the research question and objectives.

The analysis pointed out that the European Green Deal did not have a similar effect on the different organizations. On the contrary, it was organizational size, operational scope, market exposure, and resource availability that mediated the respective impact. The European Green Deal, being a significant external policy driver, was at the forefront of all four case studies as it directed both the internal organizational processes and the external business relationships. However, the depth and pace of the change varied to a great extent.

One of the most striking observations was that the European Green Deal exerted strategic influence over organizational planning and decision-making. In the instances of DPD Lietuva and Girteka Logistics, sustainability considerations were not just mentioned but were definitely integrated into the long-term strategic planning documents. The companies concerned openly stated that they were setting their strategic objectives in line with European climate goals, which included the emission reduction targets that were supposed to be achieved by the year 2030. Sustainability was defined as a strategic priority that was going to affect the decisions regarding investments, redesigning operations, and which markets to target. This strategic integration could be detected through the frequent allusions to long-term sustainability goals, governance structures, and alignment with EU climate policy in the various sections of the analyzed documents across.

In comparison, Transimeksa and Finėjas Group showed a more cautious strategic reaction. While acknowledging the importance of sustainability and environmental responsibility, they mainly portrayed these aspects as meeting the regulatory requirements rather than as strategic drivers. The thematic analysis disclosed that in the case of these companies, the sustainability-related statements could be more often found in the compliance-based parts of the reports, like regulatory disclosures or operational efficiency stories, rather than in the forward-looking strategic visions. This differentiation points out the varying effects of the European Green Deal on internal strategic factors depending on the organisational capability and market exposure, thereby directly meeting the first research objective.

Table 4

Strategic Influence of the European Green Deal Across Case Studies

Company	**Degree of Strategic Integration**	**Nature of Strategic Response**	**Alignment with EU Climate Objectives**
DPD Lietuva	High	Proactive, future-oriented	Strong
Girteka Logistics	Medium-High	Gradual, efficiency-driven	Moderate-Strong
Transimeksa	Medium	Compliance-oriented	Moderate
Finėjas Group	Low-Medium	Minimal, regulatory-focused	Weak

Source: compiled by the author based on findings

The pattern observed in Table 4 was ascertained through cross-case comparison of coded strategic statements. Higher strategic adaptation was observed in firms with broader international

exposure and under stronger pressure by stakeholders, whereas limited strategic change was observed in smaller or more domestically focused firms. This finding shows that although the European Green Deal sets a common policy direction, its organisational impact is mediated through firm-specific contexts.

The immediate and systematic operational impact of the European Green Deal was more pronounced. All four companies identified different kinds of actionable changes in their operations that resulted from reductions in emissions, improved efficiency and monitoring of the environment. The operational modifications of these included fleet modernisation, digital route optimisation, the introduction of emission-measuring systems, and in certain areas, even the electrification of transport operations. Operational changes were far more evident and real than strategic ones, since they mirrored the regulatory and market pressures on the transport sector that it was under in regards to emissions.

Perhaps the biggest operational transformation was implemented through DPD Lietuva, especially with respect to last-mile delivery. It noted extensive adoption of electric vehicles, routing optimization using software, and emission monitoring tools. Girteka Logistics focused on fleet renewal, telematics, eco-driving, and even intermodal transport solutions as a transitional measure to sustainability. Transimeksa and Finėjas Group made some small operational reforms, such as moving vehicles up to higher standards and working to enhance fuel efficiency, but they have shown little uptake of electric vehicles because of price and infrastructure-constraint factors.

These operational distinctions are presented in Table 3, which contrast the scale of operational change between the four case studies.

Table 5

Operational Changes Associated with the European Green Deal

Company	**DPD Lietuva**	**Girteka Logistics**	**Transimeksa**	**Finėjas Group**
Fleet modernisation	Extensive	Extensive	Moderate	Moderate
Electrification	High	Pilot-level	Minimal	None
Digitalisation & telematics	High	High	Medium	Medium
Emission monitoring	Advanced	Advanced	Basic	Basic

Source: compiled by the author based on findings

The distribution presented in Table 5 shows how often the references coded are found and how extensively they appear in the documents. Electrification and advanced emission monitoring was prevalent in DPD Lietuva's documents while references in Transimeksa and Finėjas Group showed smaller and timid references. The operational focus literally shows that the European Green Deal has had its significant impact on the daily operation level of the business and therefore the first research objective with relation to internal business factors has been achieved.

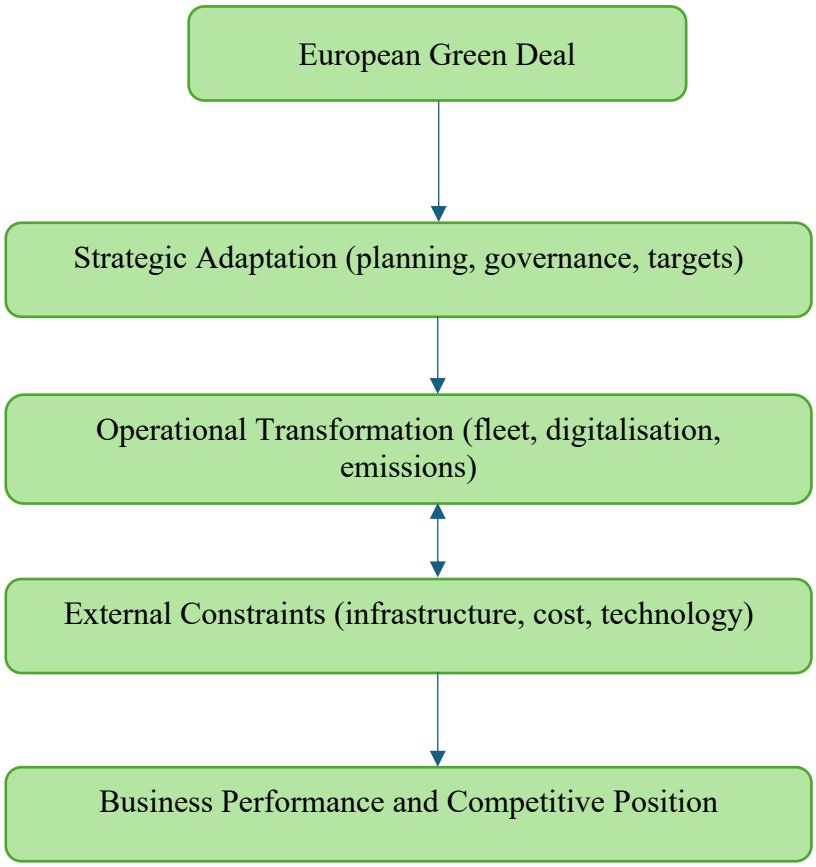
Furthermore, more generally, the analysis has identified that organisational responses to the European Green Deal have been dominated by external factors, which directly related to the second research objective. The low availability of electric vehicles, insufficient charging infrastructure and the high investment costs were identified as major challenges across all four case studies as the three main obstacles. These limitations were not just observed as single perspectives, but were repeatedly noted throughout the materials, particularly in talking about challenges, risks and future projections. Smaller companies said it was much tougher to shoulder the financial risks associated with the green investments, while the larger firms fretted that they could not sustain the growing demand because the existing technologies were not up to the mark for meeting it.

Meanwhile, The European Green Deal opened up new pathways for companies that can create and implement sustainability as a competitive advantage. DPD Lietuva marketed sustainability as something to bring to the table for customers, and Girteka Logistics pointed to the prospect of intermodal transport and digital optimisation as long-term growth prospects for the companies in its portfolio. In this case, such opportunities were less apparent for Transimeksa and Finėjas Group, where less had to be done and therefore, the potential to create policy-driven innovation was limited by the resource constraints which prevented companies from capitalising on these opportunities.

The interaction between policy pressure, organisational response, and external constraints is summarised conceptually in Figure 1. This figure constitutes a conceptual-theoretical model derived from the findings of the research. It is the main result of the exploratory research endeavour concerned with answering the overarching research question of how has the European Green Deal influenced business operations of organizations in Lithuania's transportation sector.

Figure 1

Visual Representation of the EGD's Impact on Business Operations through case studies



Source: compiled by the author, based on findings

This study aimed to determine the effect of the European Green Deal on the transport industry in Lithuania based on a general business environment of Lithuania within the transport sector. The results show that the European Green Deal substantially and variably influenced a wide variety of organisational behaviour, including shaping not only the practice and strategy on a strategic level with the business side but also on operational level. This impact is distributed differently and it is indirect, shaped by the various aspects of the firm and by extrinsic elements of the environment.

Figure 1 was designed inductively through thematic analysis, and is the conceptualisation of the empirical findings obtained from the four in-depth case studies studied in this thesis, specifically DPD Lietuva, Girteka Logistics, Transimeksa, as well as Finėjas Group.

The figure was not derived from a pre-existent theoretical model, but rather emerged through comparisons of coded segments across the case studies and represents the main patterns observed after analysis. Figure 1 is drawn up from the final stages of thematic analysis as suggested by Braun and Clarke (2006), which involves the stages of review, definition, naming of

themes. The researcher noted that following the generation and grouping of initial codes into broader themes, organisational responses to the European Green Deal could be well understood as a process triggered by an external policy driver and mediated by internal organisational mechanisms and outside contextual constraints. This point of view has resulted in the development of a visual model to express how policy, organisational strategy, change in operation, and external constraining factors interact on an iterative basis.

The figure frames the European Green Deal as the main external stimulus affecting organisational behaviour in the transport sector in Lithuania. The gradual downward trajectory from the European Green Deal to a model of strategic adaptation illustrates how EU-level climate policy manifests itself as internal organisational responses such as the embedding of sustainability priorities into strategic planning, internal governance frameworks, and long-term decision processes. The connection between sustainability and corporate strategy was most apparent in the case studies of DPD Lietuva and Girteka Logistics, wherein sustainability goals were directly linked to European climate goals and were built into corporate strategy.

The subsequent association of strategic adaptation with operational transformation mirrors the empirical result that strategic intentions were operationalised through concrete business activity changes. These ranged from fleet modernisation and electrification of transport operations to digitalisation and the implementation of emission monitoring systems. The analysis indicated operational transformation was the clearest example of the European Green Deal's influence across all four case studies, albeit in organisations in which strategic integration remained relatively limited.

There is a bidirectional relationship between operational transformation and the external constraints which is key to Figure 1. Such an interplay underscores that organisations seek operational changes, although the degree and speed of these changes are tempered by such external factors as limited availability of electric vehicles, insufficient charging infrastructure, high investment costs and technological readiness. These constraints were consistently observed in all the case studies and account for the incremental nature of operational transformation rather than radical or full scale transformation.

The final outcome shown in the figure, business performance and competitive position, is the combined effect of strategic and operational responses shaped by external constraints. The study found that businesses with more resources and stronger stakeholder pressure were able to take advantage of sustainability initiatives as a competitive advantage compared to smaller organizations, which had a more compliance-driven impact. This finding also speaks directly to the research question and not only illustrates how the European Green Deal applies to internal business processes but also to the broader implications for business performance.

Figure 1 is significant for this research in that it harmonizes and combines the study's findings into a coherent conceptual framework that reflects the characteristics of the Lithuanian transportation sector. The figure meets the third research aim by contributing its own conceptual representation of the effect of the European Green Deal on business in order to serve as an academic interpretation and practical application reference. The model provides a visual framework to connect policy drivers, organisational responses, and contextual constraints, thereby strengthening our understanding of how sustainability policy can be translated into practice in the business world while establishing the foundations for further empirical research.

Data from the interviews were analysed with the same thematic framework considered for the case studies and used to directly compare and triangulate methods. Incorporation of qualitative interview evidence enhanced the observational strength of results through verification of themes found in organisational documents whilst also offering practitioner-level explanations to observed strategic and operational responses. Interview findings were thus not separated as separate analytical streams but were included in the overall results in order to increase interpretive richness and credibility.

Interview transcript analysis identified many overall themes that were consistent with what was found within case study analysis. The themes encompassed strategic pressure resulting from the European Green Deal, operational adaptation as the key organisational measure, infrastructure and technology-related limitations, unequal consequences for firms with diverse sizes, and increasing stakeholder-driven sustainability expectations. These themes are summarised in Table 6, containing a summary of main findings and brief descriptions and illustrative comments of the findings of the interview. The table shows that interviewees consistently framed the European Green Deal as a form of regulatory impetus shaping the organisational agenda, including long-term planning, fleet investment and compliance readiness. Simultaneously, the interviews confirmed that operational changes like fleet renewal, alternative fuel use and efficiency optimisation were the most likely and immediate responses to sustainability requirements.

Table 6

Key Themes Identified Inductively from Interview Data

Theme	**Description**	**Illustrative Quotes from Interviews**
Strategic pressure from the European Green Deal	Policy acted as a driver of organisational priorities	Sustainability increasingly shaped strategic discussions due to EU regulatory expectations
Operational adaptation as primary response	Focus on feasible operational adjustments	Fleet renewal, alternative fuels, and efficiency improvements were prioritised
Infrastructure and technology constraints	External barriers limited transformation	Limited Electric vehicle range and insufficient infrastructure constrained electrification
Unequal impact across firms	Organisational capacity influenced adaptation	Larger firms were better positioned to absorb transition costs
Stakeholder-driven sustainability	Market pressure reinforced policy impact	Customer demand for emission reduction influenced decisions

Source: compiled by the author, based on findings

The convergence between interview findings and case study evidence is further illustrated in Table 7, which compares insights derived from both data sources across key analytical dimensions. The table shows a high degree of alignment between documentary evidence and practitioner accounts, particularly in relation to strategic integration, operational change, and external constraints. For example, while case study documents indicated limited electrification in long-haul transport, the interviews provided detailed explanations linking this pattern to infrastructure gaps, vehicle range limitations, and technological uncertainty. This convergence strengthened the validity of the findings and demonstrated that organisational reports accurately reflected operational realities rather than presenting purely aspirational narratives.

Table 7

Convergence Between Case Study and Interview Findings

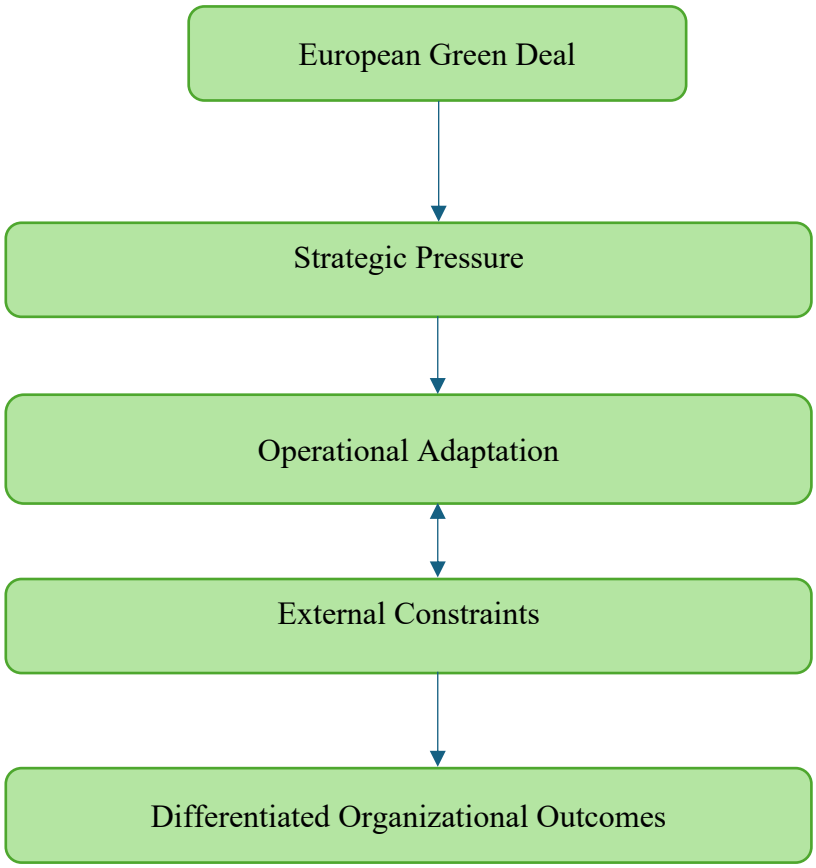
Analytical Dimension	**Evidence from Case Studies**	**Evidence from Interviews**
Strategic integration of sustainability	Stronger in large firms; limited in SMEs	Confirmed as dependent on resources and policy pressure
Operational change	Fleet modernisation and digitalisation	Confirmed through concrete operational examples
Electrification	Advanced in last-mile delivery	Explained by infrastructure and range limitations
External constraints	Infrastructure and cost barriers	Identified as primary operational challenges
Stakeholder influence	Customer expectations noted	Reinforced as a key driver of adaptation

Source: compiled by the author, based on findings

Figure 2 provides a further way to conceptualise these integrated findings, in that it visualizes how interview and case study evidence provide the context to jointly explain the impact of the European Green Deal on business operations. In the illustration below, the European Green Deal is described as an all-encompassing policy driver that has applied strategic pressure to organisations causing operational adaptation. The bidirectional relationship between operational change and external constraints demonstrates the empirical fact that organizational responses were repeatedly constrained by infrastructure readiness, financial capacity, and workforce availability. The end product of this process differentiated organisational adaptation and is characterised by varying responsiveness to sustainability pressures by firms.

Figure 2

Visual Representation of the EGD's Impact on Business Operations through interviews



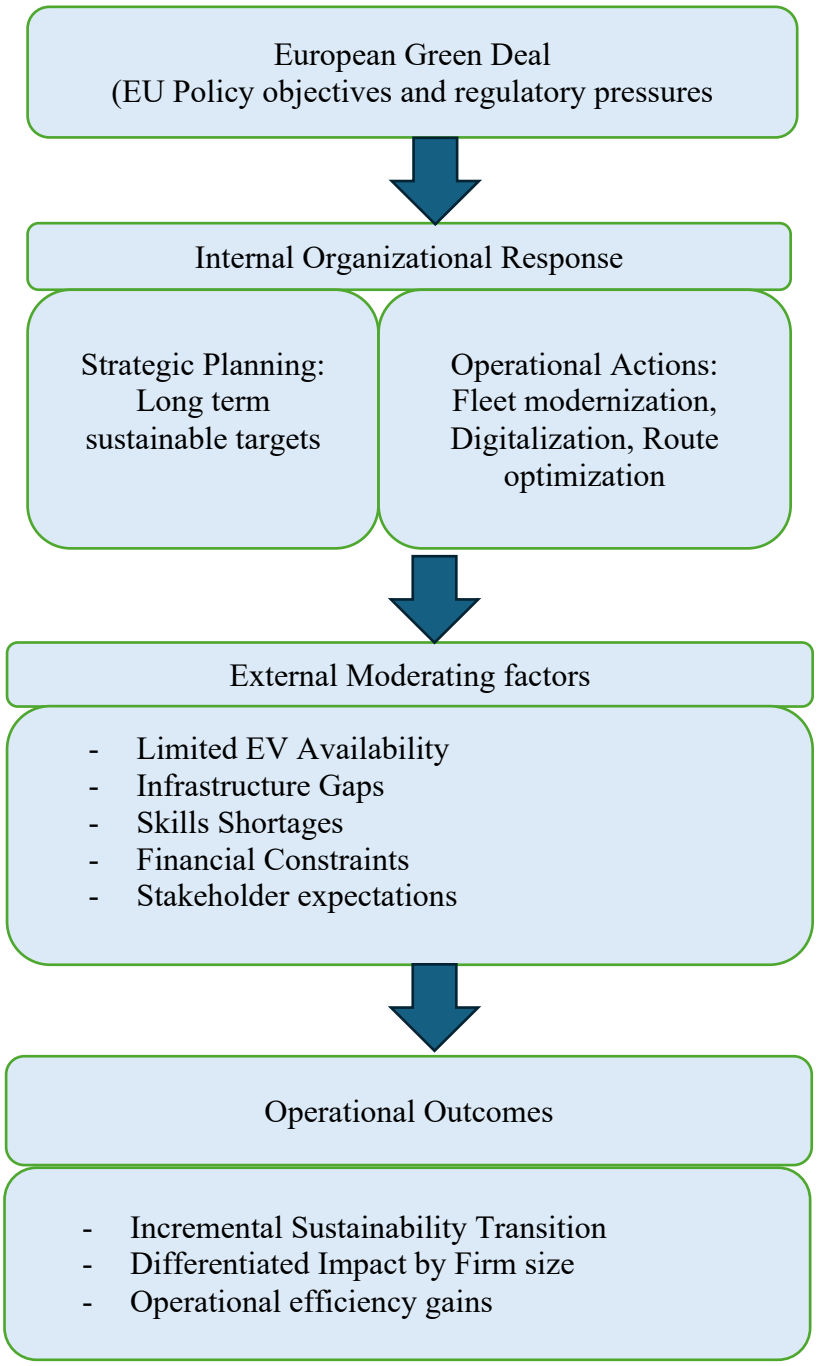
Source: compiled by the author, based on findings

In general, the use of interview evidence corroborated and strengthened the findings obtained from the qualitative case studies. Through the interviews, documentary evidence offered explanatory depth by revealing the rationale behind organisational decisions and by demonstrating the challenges faced while executing the changes. This triangulated analysis met the research aim and objectives in direct respect of how internal business factors, external constraints, and stakeholder pressures together set the stage for the impact of the European Green Deal on the business operations in Lithuania's transportation sector.

The theoretical model depicted in Figure 3 results from the last comprehensive analysis considering the case studies and interview data. The model shows that the European Green Deal was the main external policy driver to affect the business operations of the whole transportation sector in Lithuania. The results indicated that this policy pressure mostly caused internal organizational responses, which were accompanied by both strategic planning adjustments and operational decision-making.

Figure 3

Theoretical Model Derived from Empirical Findings



Source: compiled by the author, based on findings

As depicted in Figure 3, the strategic responses differed among the firms, with the bigger one incorporating sustainability into its long-term planning while the smaller ones took a more compliance-oriented stance. On the other hand, the operational actions were more or less the same across the cases and included the modernization of the fleet, digitalization, route optimization, emission monitoring, and switching to alternative fuels. These operational responses were the

most evident and immediate organizational adjustments to the European Green Deal. The model additionally reveals that the internal responses were impacted by external factors such as the limited supply of electric vehicles, infrastructure deficits, lack of skilled labor, financial constraints, and stakeholder expectations. These hindrances consequently provided an explanation as to why sustainability transitions were gradual instead of radical. Therefore, the organizational outcomes were different across the firms, resulting in different levels of operational efficiency gains and sustainability integration. To sum it up, Figure 3 illustrates how the policy pressure, organizational responses, and external constraints interacted to determine the European Green Deal's impact on the sector's business operations.

4 . DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

4.1 Discussion

Based on the findings and aligned with the research objectives, several practical recommendations can be proposed for transportation sector companies seeking to improve business operations in response to the challenges and opportunities presented by the European Green Deal.

This research elucidates the European Green Deal in Lithuania's transport sector and the latter's business practices through the lens of sustainability and transition processes. The results indicate that mainly through the decision-making process regarding operations did sustainability pass into the organizational practice, rather than in the form of universal strategic revamping. While some companies, particularly the bigger ones with more international exposure, incorporated sustainability into their long-term plans, others saw it more as a compliance-driven obligation. This difference points out the fact that sustainability in the sector was determined by the capacity of the organization and operational feasibility rather than by a single, unique approach.

The findings, from the sustainability viewpoint, suggest that the concept was turned into practice through minor and not very 'green' measures such as the modernization of fleets, the optimization of routes through digital means, and monitoring of emissions. These actions were considered as possible replies to the existing operational and infrastructural limitations. Thus, the study illustrates how sustainability was being implemented in the transportation sector mostly through daily operations rather than radical changes in concert with the whole business model. Stakeholder expectations, especially those of customers, have further supported such responses by making the demand for measurable environmental performance stronger.

Regarding the transition processes, the results presented a picture where the organisational responses to the European Green Deal were slow and inconsistent. The move to the more sustainable transportation operations was limited by a number of reasons such as the small number of electric vehicles available, lack of charging stations, and unskilled workers. Consequently, the organisations resorted to transitional solutions such as alternative fuels and efficiency improvements instead of completely opting for the zero-emission technologies. Also, the differences between the large and small firms affected the transition pathways, with the bigger ones being able to pilot the new technologies and taking the burden of transition costs.

The research indicates that the European Green Deal's influence on business practices was influenced by a mix of internal organisational factors and external constraints. In Lithuania’s transportation sector, sustainability transition was an incremental and dependent on the context process that was pushed by the regulatory pressure and market expectations but restrained by the

structure and technology. These results provide a solid understanding of how the sustainability goals set up by the policy were put into practice within the sector.

4.2 Recommendations

Based on the findings and aligned with the research objectives, several practical recommendations can be proposed for transportation sector companies seeking to improve business operations in response to the challenges and opportunities presented by the European Green Deal.

1. First, transport firms need to integrate sustainability aspects more consistently into the strategies in their design process rather than treating them as only a mandatory compliance tool. This involves embedding environmental goals into long-term investment strategies, risk management frameworks, and business performance measure systems. Including even smaller companies with limited or no vast resources can still consider adopting incremental strategic planning techniques that align performance improvements as part of an approach for increasing efficiency and sustainability.
2. Second, organisations should emphasise operational action with tangible effects from both an environmental and economic standpoint. New fleet modernisation, digital route optimisation, fuel efficiency tracking and eco-driving programs are real, achievable opportunities for the 'entry point' to transition to sustainability, and can provide fast operational results. These actions give companies the opportunity to address the European Green Deal requirements in advance and help reduce cost pressures.
3. Third, as such external constraints, found in this study, remain persistent, transportation companies should actively engage in joint sustainability efforts. Infrastructure and technology limitations can be mitigated through partnership with logistics networks, vehicle manufacturers, infrastructure providers and industry associations. Collective engagement can also bolster the sector's voice in that process, giving the sector a stronger voice in policy discussions and ensure that rules, policies and regulations are more closely matched to the practicalities of how they will be enforced.
4. Fourthly, companies should invest and strengthen workforce training in emerging skills such as the management of sustainability, digital technologies and regulatory compliance to overcome the issues faced by the sector that will be required for new graduates. Training programs and knowledge-sharing efforts can improve organisational capacity in the future to respond to new policy needs and technology advances.
5. Last but not least, the transportation companies must use stakeholder expectations as an opportunity. It can also increase customer relationships and strengthen competitive

positioning, especially where international markets are concerned with sustainability performance and it has become more relevant towards procurement decisions for companies, through effective and honest disclosure of sustainability projects, emission reduction efforts and operational improvements.

4.3 Conclusions

1. When it comes to the first research objective, the results indicate that the European Green Deal has had an observable impact on the businesses' internal factors, with the most direct impact being on the strategic planning and the decision-making at the operational level. The analysis showed that the larger and the ones with international connections transportation companies were the most affected by sustainability considerations that executed the processes of long-term planning, investment, and performance evaluation as well. The alignment of the strategies with the European climate objectives was primarily where the companies had enough financial resources, good technological capabilities, and were subjected to stakeholder scrutiny. Nevertheless, the European Green Deal's effect on strategic planning was not the same across the board. Smaller companies usually considered sustainability mainly as a compliance issue and not as a strategic opportunity that could lead to transformative change. On the other hand, decision-making at the operational level was, to a greater extent, influenced by this across all cases with companies making concrete changes like fleet renewal, digital routes optimization and emissions monitoring. So, these results demonstrate that while strategic retuning continues to depend on the ability of the organization, the operational change reflects the fastest and the easiest response to the European Green Deal.
2. Concerning the second research objective, the study revealed Lithuanian transportation companies' pragmatic and constraint-aware response to external European Green Deal factors. The systemic barriers identified across documentary and interview data included the scarcity of electric vehicles, insufficient charging and refuelling infrastructure, shortages of skilled personnel, and high capital investment requirements. These constraints significantly moderated the pace and scope of sustainability transitions, especially for long-haul and freight-intensive operations. Simultaneously, stakeholder expectations—particularly from customers and international partners—were highlighted as a powerful reinforcing force that amplified regulatory pressure. Organisations saw sustainability not only in terms of regulation but also as a market expectation, which contributed to driving operational priorities even in the absence of immediate technological feasibility. This dual pressure reflects the complex external environment within which transportation companies operate under the European Green Deal.

3. In fulfilment of the third research objective, this study developed a conceptual framework that captures the dynamic interaction between policy-driven pressure, internal organisational responses, and external contextual constraints. The framework conceptualises the European Green Deal as an overarching policy driver that initiates strategic reflection and operational adaptation, while simultaneously interacting with infrastructural, technological, and financial limitations. Further, the framework depicts how organisational size and resource availability moderate outcomes, leading to differentiated levels of adaptation across firms. This conceptual contribution provides a structured lens through which future research and practitioners can better understand sustainability transitions in the transportation sector, particularly in economies characterised by infrastructural and technological asymmetries.

4. Overall, the study concludes that the European Green Deal has reshaped business operations within Lithuania's transportation sector in a gradual, uneven, and context-dependent manner. While the policy has successfully initiated operational improvements and heightened sustainability awareness, its transformative potential remains constrained by systemic barriers that extend beyond individual organisational control. Meaningful and equitable sustainability transitions within the sector therefore require not only ambitious policy frameworks but also coordinated support mechanisms addressing infrastructure development, skills formation, and technological readiness.

4. FUTURE RESEARCH

Future research could build on the findings of this study in several important ways by extending both the temporal scope and methodological breadth of analysis. One promising avenue involves longitudinal research designs that examine how organisational responses to the European Green Deal evolve over time. As regulatory requirements become more stringent and supporting infrastructure and vehicle technologies mature, longitudinal studies could capture shifts from incremental operational adjustments toward more transformative strategic change. Such research would enable scholars to assess whether early compliance-oriented responses develop into more proactive sustainability strategies and how organisations adapt to policy milestones, such as interim emission targets or changes in subsidy frameworks. Further studies could also broaden the empirical scope by including additional transportation subsectors, such as rail, maritime, and intermodal logistics operations. Expanding the sample in this way would provide a more comprehensive sectoral perspective and allow comparative analysis of how different modes of transport respond to the European Green Deal's objectives. This approach could reveal whether subsectors with lower baseline emissions or greater public investment support experience different transition pathways compared to road-based transport, thereby enriching understanding of sector-specific policy impacts.

Quantitative research represents another valuable direction for future investigation. While this study provided in-depth qualitative insights into organisational perceptions and responses, quantitative analyses could complement these findings by examining measurable performance indicators such as carbon emissions, fuel consumption, operating costs, and asset utilisation. Large-scale surveys or econometric analyses could assess the relationship between sustainability investments and operational or financial performance, helping to determine whether and under what conditions European Green Deal related initiatives generate economic as well as environmental benefits..

Finally, comparative cross-country studies could offer further insights by examining how transportation companies in different European contexts respond to the same policy framework. Differences in national infrastructure development, regulatory enforcement, and financial support mechanisms may lead to divergent organisational outcomes. Comparing Lithuania with other EU member states could therefore contribute to a deeper understanding of how contextual factors shape the implementation and impact of the European Green Deal.

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IMPACT OF EUROPEAN GREEN DEAL ON THE BUSINESS OPERATIONS OF AN ORGANZATION IN LITHUANIA'S TRANSPORTATION SECTOR

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Master Thesis

Business Process Management programme

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Vilnius, 2026

SUMMARY IN ENGLISH

47 pages, 7 tables, 3 figures, 88 references

The main aim of this research was to analyse, based on the literature review the impact of perception of service, cleanliness, organization of point of sale and food healthiness on customers' perceived quality of service and product, with fast-food restaurants as the choice of point-of-sale organisation for this research. This research was conducted due to the increasing growth in fast-food industry and its role in the economic development of most nations. This research paper consists of three parts: the literature review, the research methodology and its results, conclusions, and recommendations

The European Green Deal is a framework of broad policy to transition to a climate-neutral economy within the European Union by 2050. Since transport contributes a large percentage to greenhouse gases within the EU, it is also one of the regulated, technological and operational sectors that is affected by significant changes. In this Master's thesis, I explore how the policy of the European Green Deal affects how business operates in the Lithuanian transportation sector, looking especially closely at how companies modify their strategies and procedures in reaction to sustainability-oriented policy demand. The objective of the research is to examine how the European Green Deal has affected the business activities of Lithuanian transport companies. The study investigates organizations' reactions to internal and external changes emerging from the implementation of European climate policy. Therefore, we have used a qualitative research design, which is based on sustainability theory and transition theory to accomplish this objective. The study employed a multiple case study approach and conducted an analysis of the sustainability documents produced by four Lithuanian transportation and logistics firms, complemented by two semi-structured expert interviews. Data was thematically analysed using Braun and Clarke's (2006) framework.

The results show that, with the European Green Deal, effects on the running of business operations are varied but far reaching. Bigger companies with more money, global exposure and stakeholders were the most likely to have embedded sustainability plans more strategically as an explicit consideration of the

climate in the long-term planning and investment decisions. Smaller firms, in contrast, tended to view sustainability mainly as a regulatory issue rather than a strategic opportunity. Operational changes were larger than strategic ones across all cases, as businesses undertook fleet modernization, digital route optimisation, emissions monitoring systems and efficiency improvements.

The analysis shows the importance of external barriers, especially shortage of electric vehicles (i.e., lack of availability of charging infrastructure, cost of investment, skilled staffing shortage etc.), in determining responses by the organisation. These limitations moderate the speed and size of sustainability changes, particularly in SMEs. Simultaneously, growing stakeholder demands, such as customer interest in environmentally friendly practices, further underpinned regulatory mandates and informed operational decision-making. It gives us a theoretical framework which represents an understanding of the interaction between policy pressure with European Green Deal, organisational response in EU member states and external contextual constraints.

The study has ultimately observed an overall positive impact of the European Green Deal on an operational level as well as environmental sustainability awareness across all the sectors of Lithuania's transport sector, yet the potential change for the European Green Deal is bound by structural limitations. The results provide useful practice for businesses and public policy makers interested in improving efficiency and equity as they facilitate a more efficient and equitable transition to sustainable transportation.

EUROPOS ŽALIOJO KURSO POVEIKIS ORGANIZACIJOS VERSLO VEIKLAI LIETUVOS TRANSPORTO SEKTORIUJE

KASHIF MUBARAK KHAN

SANTRAUKA LIETUVIŲ KALBA

47 puslapis, 7 lentelės, 3 paveikslai, 88 literatūros šaltiniai

Pagrindinis šio tyrimo tikslas buvo, remiantis literatūros analize, išnagrinėti paslaugos suvokimo, švaros, pardavimo vietos organizavimo ir maisto sveikumo poveikį klientų suvokiamai paslaugų ir produktų kokybei, kaip tyrimo objektą pasirenkant greitojo maisto restoranus. Šis tyrimas buvo atliktas atsižvelgiant į sparčiai augančią greitojo maisto pramonę ir jos vaidmenį daugumos šalių ekonominėje plėtroje. Šį mokslinį darbą sudaro trys dalys: literatūros apžvalga, tyrimo metodologija ir jos rezultatai, išvados bei rekomendacijos.

Europos žaliasis kursas yra plataus masto politikos sistema, skirta pereiti prie klimatui neutralios ekonomikos Europos Sąjungoje iki 2050 metų. Kadangi transporto sektorius sudaro didelę dalį šiltnamio efektą sukeliančių dujų emisijų ES, jis yra vienas iš labiausiai reguliuojamų technologinių ir veiklos sektorių, kuriam tenka reikšmingi pokyčiai. Šioje magistro tezėje nagrinėjama, kaip Europos žaliojo kurso politika veikia verslo veiklą Lietuvos transporto sektoriuje, ypatingą dėmesį skiriant tam, kaip įmonės keičia savo strategijas ir veiklos procesus reaguodamos į tvarumą skatinančius politikos reikalavimus.

Tyrimo tikslas – ištirti, kaip Europos žaliasis kursas paveikė Lietuvos transporto įmonių verslo veiklą. Tyrime analizuojamos organizacijų reakcijos į vidinius ir išorinius pokyčius, kylančius įgyvendinant Europos klimato politiką. Siekiant šio tikslo, buvo pasirinktas kokybinis tyrimo dizainas, paremtas tvarumo teorija ir pereinamojo laikotarpio (tranzicijos) teorija. Tyrime taikytas daugybinių atvejų analizės metodas: buvo analizuojami keturių Lietuvos transporto ir logistikos įmonių tvarumo dokumentai bei atlikti du pusiau struktūruoti ekspertų interviu. Duomenys buvo analizuojami teminės analizės metodu, remiantis Braun ir Clarke (2006) sistema.

Tyrimo rezultatai rodo, kad Europos žaliasis kursas daro įvairiapusį, tačiau toli siekiantį poveikį verslo veiklai. Didesnės įmonės, turinčios daugiau finansinių išteklių, tarptautinės patirties ir suinteresuotųjų šalių, dažniau strategiškai integravo tvarumo planus, aiškiai įtraukdamos klimato aspektus į ilgalaikį planavimą ir investicinius sprendimus. Mažesnės įmonės, priešingai, tvarumą dažniau vertino kaip reguliacinį reikalavimą, o ne kaip strateginę galimybę. Visais nagrinėtais atvejais veiklos (operaciniai) pokyčiai buvo reikšmingesni nei strateginiai – įmonės modernizavo transporto parką, diegė skaitmenines maršrutų optimizavimo sistemas, emisijų stebėsenos sprendimus ir veiklos efektyvumo didinimo priemones.

Analizė atskleidė išorinių barjerų svarbą, ypač elektrinių transporto priemonių trūkumą (įkrovimo infrastruktūros nepakankamumą, dideles investicijų sąnaudas, kvalifikuotų darbuotojų trūkumą ir kt.), kurie lemia organizacijų reakcijas. Šie apribojimai ypač mažose ir vidutinėse įmonėse riboja tvarumo

pokyčių tempą ir mastą. Tuo pat metu augantys suinteresuotųjų šalių lūkesčiai, tokie kaip klientų susidomėjimas aplinkai draugiškomis praktikomis, sustiprino reguliacinius reikalavimus ir darė įtaką veiklos sprendimų priėmimui. Tyrimas pateikia teorinį pagrindą, leidžiantį suprasti politikos spaudimo (Europos žaliojo kurso), organizacinių reakcijų ES valstybėse narėse ir išorinių kontekstinių apribojimų sąveiką.

Galutinės tyrimo išvados rodo, kad Europos žaliasis kursas turėjo bendrą teigiamą poveikį tiek verslo operaciniam lygmeniui, tiek aplinkosauginio tvarumo suvokimui visuose Lietuvos transporto sektoriaus segmentuose, tačiau šio pokyčio potencialą riboja struktūriniai apribojimai. Tyrimo rezultatai yra naudingi tiek verslo atstovams, tiek viešosios politikos formuotojams, siekiantiems didinti efektyvumą ir teisingumą, palengvinant perėjimą prie tvarios transporto sistemos.

APPENDICES

Appendix A

DPD Lietuva. (2024). *DPD Lietuva sustainability strategy*. DPD Lietuva.

Finėjas Group. (2024). *Sustainability report*. Finėjas Group.

Girteka Logistics. (2021). *Corporate social responsibility report*. Girteka Group.

Transimeksa. (2024). *Sustainability report*. Transimeksa.

Appendix B

This appendix presents the semi-structured interview guide used to collect primary qualitative data for this study. The interview instrument was designed to align directly with the research aim and objectives, ensuring that data collected would be relevant to understanding how the European Green Deal influenced business operations within Lithuania's transportation sector.

The interview guide consisted of open-ended questions organised into thematic sections. This structure enabled consistency across interviews while allowing flexibility for participants to elaborate on issues of particular relevance to their organisational context. The questions were informed by sustainability transition literature and policy frameworks related to the European Green Deal and were reviewed prior to data collection to ensure clarity and relevance.

Section 1: Organisational Context

- Can you briefly describe your role and responsibilities within the organisation?
- How would you describe your organisation's core transportation activities?

Section 2: Strategic Impact of the European Green Deal

- How has the European Green Deal influenced your organisation's strategic planning?
- Have sustainability or emission reduction targets affected long-term investment decisions?

Section 3: Operational Decision-Making

- What operational changes has your organisation implemented in response to sustainability or EU climate policies?
- How have fleet management, route planning, or fuel choices been affected?

Section 4: External Constraints and Challenges

- What challenges does your organisation face in implementing sustainability initiatives?
- How do infrastructure availability, technology readiness, and workforce skills affect decision-making?

Section 5: Stakeholder Expectations and Opportunities

- How do customer or partner expectations influence sustainability initiatives?

- Do you see opportunities arising from the European Green Deal for your organisation?

The interview guide ensured that responses could be systematically analysed and compared with findings from document-based case studies.