Organization of Operations of a Transport Company Registered in the City of Ruse

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***Abstract*—The transport policy of the European Union (EU) aims to ensure smooth, efficient, safe, and free movement of people and goods throughout the EU via integrated networks that utilize all modes of transport (land, rail, water, and air). The EU's policy also addresses broader issues such as climate change, passenger rights, clean fuels, and the reduction of customs bureaucracy at ports. The selection of drivers in transport companies is crucial for operational performance. Implementing driver selection rules helps in choosing the most qualified and reliable candidates, enhancing overall effectiveness and contributing to increased road safety. The report analyzes the operations of a transport company headquartered in the city of Ruse, revealing that effective driver management has led to reduced trip durations and consistent fuel consumption rates, regardless of external conditions. Strategic driver selection and management directly influence productivity, reputation, and compliance with regulations, ultimately leading to improved customer satisfaction and profitability.**

***Keywords*—transport policy, driver selection, operational efficiency, fuel consumption, road safety**

I. Introduction

[1]International transport emerges and evolves as a result of the development of productive forces on a global scale and the international division of labor. This leads to the specialization of individual countries in the production of various goods and services based on absolute and comparative advantages in resource ownership and production costs. The advancement of international economic relations spurs the development of international transport and significantly determines the volume of cargo and passenger flows, and consequently, the volume of transportation between different countries [1].

The European Union's (EU) transport policy aims to ensure the smooth, efficient, safe, and unrestricted movement of people and goods throughout the EU via integrated networks that utilize all modes of transport (land, rail, water, and air) [2],[3]. The EU's policy also addresses broader issues such as climate change, passenger rights, clean fuels, and the reduction of customs bureaucracy at ports [4].

Transport is one of the EU's most strategic common policies and is governed by Title VI (Articles 90 - 100) of the Treaty on the Functioning of the European Union. Future policy will be largely based on the 2011 White Paper, which includes 40 initiatives designed to stimulate growth, create jobs, reduce reliance on oil imports, and cut carbon emissions in the sector by 60% by 2050 [5].

Europe requires efficient transport connections to stimulate business, growth, and employment, facilitate tourism and leisure, and maintain interpersonal connections. Transport makes a vital contribution to the economy by providing direct employment for approximately 10 million people [6],[7]. The EU's transport policy is focused on creating a crisis-resilient single European area with cleaner, greener transport and fair competition.

The logistics of freight transport is a driving force for competitiveness in the European Union [8]. It encompasses the planning, organization, management, control, and execution of freight transport operations.

This report analyzes the operational efficiency of a transport company headquartered in the city of Ruse, with a particular focus on driver management and the impact of driver selection strategies on trip durations, fuel consumption, and customer satisfaction. The aim is to evaluate the effectiveness of current management practices and propose potential improvements that would increase productivity and competitiveness within the sector.

II. Exhibition

The transport company was established in 2016 as a single-member Limited Liability Company (LLC). The company's primary activity is freight transport, with 99% of its operations focused on international freight transport. These international freight transports are conducted in accordance with international treaties and agreements to which the Republic of Bulgaria is a party [9],[10], while adhering to the domestic laws of each country where the transport is carried out [11].

The company’s commercial operations are conducted in its office. All necessary documents are prepared, and contacts with institutions and other companies that affect the company's operations are established. In the company office, all documents necessary for the driver are prepared: valid identification and a driver's license, vehicle registration certificate, valid “Third Party Liability” insurance and green card, a valid certificate for passing a technical vehicle inspection, transport documents (CMR waybill), and a copy of the company's freight transport license.

Choosing the right drivers is crucial for ensuring operational efficiency and reducing risks in transport companies. Establishing clear selection criteria helps identify the most skilled and dependable candidates, which enhances overall performance and road safety.

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The main benefits for the company include improved safety, increased productivity, a stronger reputation, compliance with legislation, and higher customer satisfaction.

Before the start of each journey, the driver is required to check:

- the presence of all necessary documents;
- tire pressure;
- oil level, as well as for leaks and oiliness on the engine;
- coolant level and the availability of windshield washer fluid;
- the functionality of all lights and indicators;
- the condition of the vehicle's first aid kit;
- the condition of the vehicle's fire extinguisher.

To carry out its activities, the company must meet certain conditions: be a licensed motor carrier, have vehicles that meet transport roadworthiness requirements, and be operated by drivers who meet minimum age and psychological fitness requirements and possess the appropriate driver's license for the vehicle category. Requirements for vehicles pertain to both their age and environmental friendliness. For international freight transport, at the time of licensing and initial vehicle registration, no more than five years should have passed since the date of the first registration. Environmental requirements mandate that vehicles must have issued certificates of conformity with technical standards and safety regulations [12].

Requirements for drivers of vehicles transporting goods include their competence and suitability, specifically: possessing a valid driver's license for the respective vehicle category; being psychologically fit; the minimum age for drivers transporting goods with a maximum permissible vehicle weight exceeding 7.5 tons is 21 years; not being disqualified by a final conviction from the right to engage in transport activities. The use of control devices for recording vehicle movement data and crew activities — tachographs — is mandatory for freight transport [13].

The freight includes all types of goods except food products, goods requiring controlled temperature, and bulk goods. The commonly transported items are office equipment, electronics, home furniture, household appliances, air conditioning equipment, car tires, gardening machinery, materials for building playgrounds, motorcycles, generators, and many others. Spare parts, for example, are often transported in cargo containers, as shown in Fig. 1.

Fig. 1. Cargo - spare parts.

A significant portion of transport companies have only one vehicle (Fig. 2) and one driver, making them unstable and vulnerable to changing market conditions. Certain companies with good work organization and a large fleet of cargo vehicles have established themselves in the industry and operate intensively in the market. These are mainly transport enterprises with foreign participation. They own logistics and forwarding centers and invest in new, modern transport management technologies [14].

Fig. 2. Company Vehicle.

In the following series of photos (Fig. 3), some of the routes taken by the driver during his last 36-day journey are presented.

Fig. 3. Some routes from the driver's 36-day journey.

In 2023, the driver covered over 75,000 kilometers both domestically and internationally. He carried out loading and unloading activities in 15 countries and over 400 cities (Fig. 4).

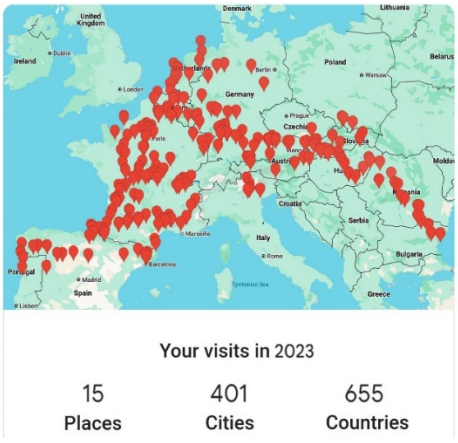

Fig. 4. Information on the locations visited by the driver during a 36-day journey [15].

For the optimal performance of its operations, the company has a vehicle (Fig. 2) that undergoes technical inspections in accordance with regulatory requirements. Additionally, before starting a journey, the vehicle is subjected to a thorough inspection. The company has contracts with other firms representing manufacturers who perform inspections and necessary repairs.

Table 1 presents an extract detailing the days, routes, and distances traveled from June 26, 2021, to October 26, 2023. The data is derived from the driver's logbooks.

TABLE 1
DATA SUMMARY ON NUMBER OF DAYS, ROUTES, AND DISTANCE TRAVELED FOR THE PERIOD JUNE 26, 2021 – OCTOBER 26, 2023

Period	Number of Days	Route	Distance Traveled (km)
June 26, 2021 - July 30, 2021	4	Ruse – Vienna – Sofia – Ruse	2650
July 2, 2021 - July 10, 2021	7	Ruse – Paris – Ruse	5244
July 16, 2021 - July 23, 2021	7	Ruse – Paris – Ruse	5395
July 29, 2021 - August 6, 2021	9	Ruse – Sofia – Paris – Frankfurt – Ruse	5430
August 12, 2021 - August 23, 2021	11	Ruse – Sofia – Paris – Ruse	5505
September 10, 2021 - September 17, 2021	7	Ruse – Paris – Luxembourg – Amsterdam – Sofia – Ruse	5806
September 22, 2021 - October 1, 2021	9	Ruse – Sofia – Paris – Amsterdam – Thessaloniki – Ruse	6651
October 8, 2021 - October 13, 2021	5	Ruse – Gabrovo – Sofia – Paris – Ruse	5088
October 15, 2021 - October 25, 2021	10	Ruse – Sofia – Paris – Sofia – Ruse	5572
November 9, 2021 - November 22, 2021	13	Ruse – Sofia – Malta – Sofia – Ruse	4860
November 26, 2021 - December 3, 2021	7	Ruse – Paris – Luxembourg – Amsterdam – Thessaloniki – Sofia – Ruse	6412
December 10, 2021 - December 17, 2021	7	Ruse – Paris – Amsterdam – Thessaloniki – Ruse	6168
December 22, 2021 - December 23, 2021	2	Ruse – Sofia – Bucharest – Ruse	848
January 14, 2022 - January 21, 2022	7	Ruse – Paris – Amsterdam – Thessaloniki – Ruse	6295
January 28, 2022 - February 7, 2022	10	Ruse – Paris – Cologne – Sofia – Ruse	5512
February 11, 2022 - February 16, 2022	5	Ruse – Paris – Lyon – Ruse	5203
February 18, 2022 - February 28, 2022	10	Ruse – Sofia – Paris – Amsterdam – Sofia – Ruse	5965
March 4, 2022 - March 12, 2022	8	Ruse – Paris – Nuremberg – Ruse	5150
March 19, 2022 - March 25, 2022	6	Ruse – Sofia – Ljubljana – Turin – Ruse	4517
April 19, 2022 - April 25, 2022	6	Ruse – Pleven – Ruse – Bordeaux – Ruse	6713
June 24, 2022 - July 4, 2022	10	Ruse – Pernik – Tordera – Lyon – Paris – Frankfurt – Sofia – Ruse	8295
July 8, 2022 - July 28, 2022	20	Ruse – Pravets – France – Ruse	10040
August 5, 2022 - August 15, 2022	10	Ruse – Tvarditsa – Nuremberg – Berlin – Amsterdam – Ruse	6385
September 19, 2022 - October 8, 2022	19	Ruse – Tvarditsa – Hamburg – Paris – Lyon – Amsterdam – Sofia – Ruse	12220
October 21, 2022 - November 6, 2022	16	Ruse – Sofia – Berlin – Vienna – Hamburg – Ruse	7070
November 16, 2022 - December 16, 2022	30	Ruse – Hamburg – Paris – Lyon – Stuttgart – Sofia – Ruse	10540
February 17, 2023 - March 16, 2023	30	Ruse – Germany – France – Spain – Ruse	10720
March 16, 2023 - April 12, 2023	27	Ruse – Hungary – France – Ruse	11350
May 15, 2023 - June 15, 2023	31	Ruse – Budapest – Lyon – Barcelona – Paris – Frankfurt – Ruse	11398
June 28, 2023 - July 31, 2023	33	Ruse – Budapest – Paris – Barcelona – France – Germany – Austria – Ruse	14022
September 20, 2023 - October 26, 2023	36	Ruse – Slovakia – Belgium – France – Spain – Ruse	14470

The analysis depicted in Fig. 5 shows an increase in the number of days for recent trips. This trend is attributed to the company's strategic shift aimed at achieving higher profitability.

The light commercial vehicle is equipped with a fuel tank capacity of 120 liters. The average fuel consumption is 11 liters per 100 kilometers. Regardless of atmospheric conditions or the type of cargo being transported, the average fuel consumption remains within a specific range.

Table 2 presents several trips, detailing the distance traveled, the amount of fuel consumed, and the visually calculated average fuel consumption for the light commercial vehicle, confirming that the fuel consumption remains within a specific range regardless of atmospheric conditions or cargo type.

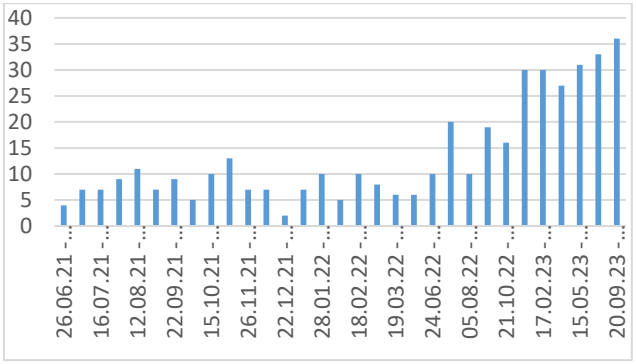

Fig. 5. Comparative analysis of trip duration by number of days.

TABLE 2
SUMMARY OF TRIPS WITH DISTANCE TRAVELED, FUEL CONSUMED, AND AVERAGE FUEL CONSUMPTION

Route	Distance Traveled (km)	Fuel Consumed (liters)	Average Fuel Consumption (liters/100 km)
Ruse (Bulgaria) – Lyon (France)	2370	255	10,76
Barcelona (Spain) – Porto (Portugal)	1160	130	11,21
Lyon (France) – Paris (France)	460	50	10,87
Bordeaux (France) – Marseille (France)	670	70	10,45
Porto (Portugal) – Emden (Germany)	2320	250	10,78
Nice (France) – Turin (Italy)	250	26	10,40
Bremen (Germany) – Mulhouse (France)	780	90	11,54
Montauban (France) – Vienna (Austria)	1710	195	11,40
Dresden (Germany) – Ruse (Bulgaria)	1560	168	10,77
Total:	11 280	1234	10,94

III. CONCLUSION

The decisive factor in elevating the quality of transport services is the organization and management of the transportation process, which characterizes the technological level of transportation production.

The light commercial vehicle is equipped with a 120-liter fuel tank and consumes an average of 11 liters per 100 kilometers. This fuel consumption rate remains consistent, irrespective of weather conditions or the type of cargo being transported.

The duration of trips depends on the driver and their personal commitments or the need for vehicle maintenance. The driver determines when they can start and end a trip. The company that intermediates for cargo finding coordinates with this schedule.

The observed increase in the number of days in the latest trips is attributed to the company's strategic shift towards achieving higher profits.

Driver selection plays a crucial role in transport companies by ensuring safety, efficiency, and compliance with regulations. The data from recent trips (Table 1 and Table 2) demonstrate that the choice of skilled and responsible drivers has a direct impact on key performance indicators such as fuel consumption, adherence to schedules, and overall trip duration. The observed consistency in fuel efficiency and the increasing number of days per trip suggest that experienced drivers contribute to optimizing resource utilization and minimizing operational risks. Establishing and following strict selection criteria helps companies improve road safety while maintaining high operational standards.

Beyond enhancing safety and efficiency, a structured driver selection process also strengthens the company's long-term sustainability. Effective trip planning and careful recruitment lead to increased productivity, better cost management, and improved customer satisfaction. By prioritizing these aspects, transport companies gain a competitive edge, ensuring reliability in service delivery and fostering long-term business growth.

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