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Analysis and Comparison of Road Freight Transport Cost in 20 European Countries

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ABSTRACT

Road transport is one of the most popular and practical means of freight transport in the world today. However, the cost of road freight transport may differ from one country to the next due to variances in a number of cost factors, including fuels, wages, taxation, tolls, insurance, maintenance, tyres, repairs, parking spaces, etc. The goal of this research was to measure and compare the cost of road freight transport in the 20 European countries with the highest recorded volume of tonne-kilometres, in order to draw conclusions about the cost competitiveness of road freight transport among them. Cost competitiveness in the sample was measured by 4 main cost categories: fuels, drivers' wages, tyres, and tolls. The results show large cost variations between countries. The countries found to have the lowest road freight transport cost were Lithuania, Poland and Bulgaria, and those with the highest costs were Norway, Austria, and the UK. The largest differences in costs were met in tolls and other road taxes, followed by drivers' wages, fuels, and finally tyres.

KEYWORDS

Analysis, Cost, Europe, Freight, Road, Transport

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1. INTRODUCTION

Road transport is one of the most popular and practical means of freight transport in the world today. However, the cost of road freight transport may differ from one country to the next due to variances in a number of cost factors, including fuels, wages, taxation, tolls, insurance, maintenance, repairs, tyres, parking space etc. The goal of this research is to measure and compare the cost of road freight transport, in the 20 European countries with the highest recorded volume of tonne-kilometres, in order to draw conclusions about the cost competitiveness of road freight transport among them. Cost competitiveness is measured by 4 main cost categories: fuels, drivers' wages, tyres, and tolls. The research starts with a short literature review about the history of road transport, an analysis of the categories and the quantity of road transport in Europe and an analysis of previous researches on the topic of road transport cost comparisons among European countries. Next is a description of the research's methodology, followed by the results, their analysis and the conclusions of the research.

2. LITERATURE REVIEW

2.1. Road Transport History

Road transport has developed alongside the development and evolution of humans. The first steps of humans were made in order to seek food, discover the natural environment and for protection from various natural hazards. However, because human forces are limited by nature, man has, through the use of various transportation inventions, managed to achieve a much faster and more effective transfer. The first and most important invention of man, related to the development of road transport, is the discovery of the wheel, 3,500 years ago in Mesopotamia (Britannica, 2018). By using the wheel in combination with the power of domesticated animals (horses, oxen, mules, etc.), he was able to carry large quantities of goods. Furthermore, in order to facilitate the transportation of wagons, he has built roads and rails (Freitag, 1979).

As regards road transport, its historical references have been recorded many centuries ago. The requirements for the movement and distribution of goods by large-scale road transport were mainly used at war campaigns. Great military leaders of history, such as Alexander the Great, Genghis Khan and Napoleon, relied on the design and implementation of road transport for maintaining their campaigns. Other important periods for the development of road transport were the British and American industrial revolutions which supported the expansion or construction of new trade routes, as well as the first and second world wars, which greatly increased the need for logistics in order to meet the demands of the combat forces (Erb & James, 2017). According to Dell, Moseley & Rand (2014) one of the most important reasons for the development of transport was also the discovery of the steam engine.

In the 20th century, the development of road freight transport was favored further. This growing supremacy stemmed both from the economic growth of cities and from the development of private businesses. Especially since the 1970s, significant investments were made in the transport sector. These investments were related to the construction of motorways, better vehicle technology and the use of computer programs and databases in order to gather useful information to support road transport services (Banister & Berechman, 1999). Completing the reasons for the development of road transport in the modern world, one should also mention globalization. Globalization is the process of interaction and integration between people, companies and governments worldwide and has grown due to advances in transportation and communication technology. Companies try to benefit from globalization in order to find the best markets for their products and services while securing the lowest cost resources. The enormous benefits that a company can gain through globalization have played an important role in the development of logistics and road transport in particular (Branch, 2009; Harrison & Hoek, 2012).

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