

Chapter 5

Road Freight Transport Cost: Differences Between European Countries

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ABSTRACT

The goal of this research was to measure the cost of road freight transport in the 20 European countries with the highest recorded quantity of tonne-kilometres and assess their competitiveness. Cost competitiveness was measured by four main cost categories: fuels, drivers' wages, tyres and tolls, and the results show large cost variances between countries. The countries with the lowest road freight transport cost were Bulgaria, Poland, and Romania, 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.

INTRODUCTION

At a European level, freight transport has recorded a remarkable increase in the last decades. According to the European Commission (2020), the billions of tonne-kilometres (tkm) travelled in the European Union (EU) increased from 2,400 billion in 1995 to 3,353 billion in 2018, an increase of about 40% in a period of 24 years. Among freight transport methods, road transport was responsible for more than half of total freight transport across Europe, followed by shipping, trains and other transport means. As the quantity of Road Freight Transport (RFT) differs from one European country to the next, similar differences can be recorded in RFT cost due to variances in cost factors such as fuels, wages, insurance, taxation, tolls, maintenance, repairs, tyres, parking space etc. Even though scarce, previous research on the topic has pointed out such differences.

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Road Freight Transport Cost

In this context, the goal of the current research was to measure and compare RFT cost competitiveness in the 20 European countries with the highest recorded quantity of travelled tonne-kilometres and examine if there are cost differences between them, their size and size the factors that create them. Cost competitiveness was measured using four main cost categories: fuels, drivers' wages, tyres and tolls. This examination and its conclusions can be useful for European transport policy designers that wish to harmonize commercial road transport procedures and costs across European Union countries. The research starts with a short literature review about the history of road transport, the categories and the quantity of road transport in Europe and previous investigations on the topic of RFT cost. Next is a description of the applied methodology, followed by the results, their analysis and the conclusions.

LITERATURE REVIEW

Road Transport History

Road transport has developed alongside the development and evolution of humans. The first and most important invention of man related to the development of road transport was 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.), man was able to carry large quantities of goods across large distances. In order to facilitate the transportation of wagons, he started building roads and rails (Freitag, 1979). The requirements for the movement and distribution of goods by large-scale road transport increased drastically during war periods. Great military leaders of history, such as Alexander the Great, Genghis Khan and Napoleon, relied on the design and implementation of road transport of goods and materials for maintaining their war 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 needs of combat forces (Erb & James, 2017). One of the most important reasons for the development of transport was also the discovery of the steam engine (Dell, Moseley & Rand, 2014).

In the 20th century, the development of road freight transport was favored further. This growing supremacy stemmed from the growth of cities and the multiplication 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 computer programs and databases 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. The term refers to 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 resources at the lowest cost. 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). As for the rest of the world, the road freight transport sector is crucial for Europe.

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