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Assessment of the transport sustainability performance in the European Union countries

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Abstract

The transport sector plays a fundamental role in the European economy. By 2017, the transport sector employed directly more than 11 million people, around 5% of the total workforce, and its activities accounted for about 5% of Europe's Gross Domestic Product (GDP). Promoting efficient transport services and infrastructure is fundamental for making the most of the European's economic strengths, supporting the internal market and its growth. Unfortunately, the European Union transport sector still remains heavily dependent on oil resources and, therefore, it is responsible for a large part of the air pollution. The emissions from the sector have reduced in the last decade, but not enough to limit its impact on the environment and climate. Reducing its pressure on the environment is critical to achieve long-term sustainability. The European Union has been promoting diverse initiatives towards sustainable transport development and environment protection by setting targets for changes in the sector, as those proposed in the 2011 White Paper on transport [1]. This study aims at evaluating the sustainable performance of the transport sector in the 28 European Union countries, from 2015 to 2017, towards the policy agenda established in strategic documents. The assessment of the transport environmental performance was made through the aggregation of seven sub-indicators into a composite indicator using a Data Envelopment Analysis approach. The model used to determine the weights to aggregate the sub-indicators is based on a variant of the Benefit of the Doubt model with virtual proportional weights restrictions as proposed by Färe et al. [2]. The results indicate that, overall, the European Union countries had almost no variation on its transport environmental performance during the time span under analysis. The inefficient countries can improve the transport sustainability mainly by drastically reducing the greenhouse gas emissions from fossil fuels combustion, increasing the share of freight transport that uses rail and waterways and also the share of transport energy from renewable sources.

References

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