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XXIII Congreso de Ingeniería de Organización



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Engineering
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BOOK OF ABSTRACTS

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**“13th International Conference on
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“XXIII Congreso de Ingeniería de
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European Union Air Navigation Projects: Impact on Airspace Operations Management

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Keywords: Air navigation system; air traffic control; Single European Sky; aviation policy; impact assessment.

1 Introduction

The financial support of the European Union (EU) to air navigation research projects is taking place since 1995 under the umbrella of the 4th, 5th, 6th and 7th Framework Programmes (European Commission, 2010), and Horizon 2020 for research, and via the TEN-T and the Connecting Europe Facilities funds for implementation. The operational performance of the European air navigation system has improved in the last 15 years (European Commission, 2011). However, there has been no success in establishing clear relations between the operational performance of the system and the execution of research, development, innovation and implementation air navigation projects supported by EU funds.

2 Objectives

The objective is to explore new approaches to analyse these relations and to reduce the gap between them, using the information available on the air navigation system from 2000 to 2015 consolidated around three of the four high-level objectives of the Single European Sky (European Commission 2008) that describe the operational performance of the air navigation system (safety, capacity and environmental impact). The relative efficiency of the use of EU funds in the

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improvement of the air navigation system operational performance will be assessed for each of these objectives.

3 Methods

To quantify the operational performance of the system in the period of study, reliable secondary databases are used. These include official documents and reports from EU agencies (EASA, EEA), from international organizations (ICAO) and from intergovernmental organizations (Eurocontrol). The relative efficiencies mentioned result from the use of a standard data envelopment analysis (DEA) (Charnes, et al., 1978) for each of the mentioned objectives.

4 Results

Safety performance shows a positive tendency in the period of study, capacity performance shows an improvement only after 2012, and environmental performance do not show any significant change. The relative efficiency of the use of EU funds shows in general a decreasing tendency that goes along with the increase of use of EU funds.

5 Conclusion

The performance results mentioned are strongly influenced by external effects such as the 2008 economic crisis. The decreasing tendency of the relative efficiencies could be the result of the positive effect of the launching of the Single European Sky initiative in the early 2000s, when the use of EU funds was relatively modest. This cannot be interpreted as a poor management of EU funds, but there is room for the improvement of the efficiency in the use of these funds for research, development, innovation and implementation projects in the air navigation domain, to be considered when planning the future in this field.

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