

PUBLIC SELECTION BASED ON QUALIFICATIONS AND INTERVIEW FOR THE AWARDING OF NO. 1 EXPERIENCED GRANT LASTING 24 MONTHS FOR CONDUCTING RESEARCH PURSUANT TO ART. 22 OF LAW NO. 240/2010 AT THE DEPARTMENT OF MANAGEMENT, INFORMATION AND PRODUCTION ENGINEERING (A.R.F. 13/A4 – APPLIED ECONOMICS - A.D. SECS-P/06 – APPLIED ECONOMICS - TYPE B

announced with decree of the Chancellor Rep. no. 710/2018 of 06.11.2018 and posted on the official registry of the University on 06.11.2018

RESEARCH PROJECT

“Towards a sustainable development of aviation: an analysis of the factors affecting pollution and noise emissions in Europe”

Research structure: Department of Management, information and production engineering

Duration of the grant: 12 months

Scientific Area: 13 – Economics and statistics

Academic recruitment field : 13/A4 – Applied economics

Academic discipline: SECS-P/06 – Applied economics

Scientific Director: Prof. Gianmaria Martini

Aviation is a growing industry with also growing environmental concerns related to pollutants emission (local such as NOx, PM10, etc. and global such as CO2) and noise generated by aircraft movements. For some time (and today more than ever), noise and emissions are one of the main causes of conflict between airports and local communities which they interact with. These problems, if not adequately addressed, can, on the one hand, produce negative effects on the health of citizens; on the other hand, limiting, in a significant way, the development of air traffic with repercussions on the economic and territorial system hosting a specific airport. The aim of this project is to study the factors influencing the environmental impact generated by European airlines and by different national airport systems in Europe. The environmental impacts are computed starting from updated certification data of aircraft and engine models combined to information coming from the OAG database. Such information regards scheduled flights at European airports. The dataset generated by such matching will allow to compute the environmental impacts for each airline and airport and produce indicators aimed at measuring the efficiency. It will be investigated the influence on these indicators of factors such as the operating aircraft fleet (weight, size, age, etc.), the network structure (hub-and-spoke vs point-to-point, long-haul vs short-haul, etc.), the price of fuel, regulatory interventions at both European and national level, etc. The final goal of the project is to provide some policy indications to sustain an environmentally-friendly development of aviation.