ANNEX A

PUBLIC SELECTION BASED ON QUALIFICATIONS AND INTERVIEW FOR THE AWARDING OF NO. 1 EXPERIENCED GRANT LASTING 19 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) (CUP: F52F16001350001) TYPE A WITHIN THE FRAMEWORK OF THE 2017/2018 STARS PROGRAMME
PICA CODE: 20AR006

announced with decree of the Chancellor Rep. no. 28/2020 of 16.01.2020 and posted on the official registry of the University on 23.01.2020

RESEARCH PROJECT
"Parametric methods for efficiency frontiers estimation with temporary and persistent random components"

Research structure: Department of Management, information and production engineering

Duration of the grant: 19 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

The aim of the research project is to define a method of estimating efficiency boundaries based on the stochastic method with four random components elaborated by Colombi et al. (Journal of Productivity Analysis, 2014). The model allows to estimate a theoretical frontier of benchmarks, and to compared firms performance. It is expected to estimate a cost limit - to identify cost-effectiveness - and a production boundary - to identify total factor productivity. Efficiency is studied thanks to the properties of the Colombi et al. (2014) through 4 dimensions:
1. short-term or temporary efficiency
2. Long-term or persistent efficiency
3. The typical effect of the firm due to the influence of latent variables that can not be observed
4. the presence of random shocks not subject to management control.

Short-term and long-term efficiency allows management to identify how enterprise performance can be improved as a result of actions on variable and flexible factors (eg work) and changes with longer time horizons. It is also of utmost importance for defining the regulatory mechanisms and reducing the impact of information asymmetry and therefore of adverse selection and moral hazard phenomena (Dormont and Milcent, 2005). It is essential to be included in the project a good knowledge of R.