

Laboratorio di valutazione delle decisioni di investimento

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1 Exercise about Data Envelopment Analysis

Download the STATA data file `deaex_1.dta`.

Make sure that input variables are renamed with prefix "i_" and the output variable with the prefix "o_".

Q1: Plot the frontier using the input to output ratio, like in the picture of slide n. 13 of the lecture notes.

Q2: Find in the graph the weak efficiency point and the strong efficiency point of DMUs C and G.

Q3: Calculate the θ s for all the DMU assuming CRS.

Q4: What are the efficient DMUs, that is to say the DMUs on the frontier? Are them the same of your graph?

Q5: Comment the first three position in the ranking. Are the three DMUs equally efficient?

Q6: How much is the input reduction needed by DMU G to reach the weak efficiency point? Show it in the graph.

Q7: How much is the input reduction needed by DMU G to reach the strong efficiency point? Show in the graph.