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Abstract: Benchmarking is an important tool to organisations to improve their productivity, product quality, process efficiency or services. From Benchmarking the organisations could compare their performance with competitors and identify their strengths and weaknesses. This study intends to do a benchmarking analysis on the main Iberian Sea ports with a special focus on their container terminals efficiency. To attain this, the DEA (data envelopment analysis) is used since it is considered by several researchers as the most effective method to quantify a set of key performance indicators. In order to reach a more reliable diagnosis tool the DEA is used together with the data mining in comparing the sea ports operational data of container terminals during 2007. Taking into account that sea ports are global logistics networks the performance evaluation is essential to an effective decision making in order to improve their efficiency and, therefore, their competitiveness.

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