

Company performance and environmental efficiency: A case study for shipping enterprises

Abstract

Traditional performance evaluation seldom considers the side-effects of a production process—the negative impact of pollution. Even when taking this into consideration, a high ranking is not necessarily equivalent to greater environmental efficiency, as the latter is based on outputs per environmental resource used. This may create anomalies in a company's environmental performance evaluation, as well as in its setting of environmental management standards. This study illustrates the problem by evaluating the economic and cargo efficiencies of shipping companies both with and without considering the negative impact of emissions, and compares this with their environmental efficiencies. The efficiency measures with and without adjusting for the negative environmental impacts are found to be similar, which are different to the environmental efficiency. The container shipping sector has greater economic efficiency, while bulk shipping has greater cargo efficiency. The similarities and inconsistencies among these three measures are highlighted, with possible explanations as to the performance of individual companies. Implications are provided for public policy makers to assist in reducing emissions from shipping, as well as marketing strategies for shipping companies and strategies for shipping investors.