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## **COMPARING DIFFERENT METHODS TO DETERMINE THE RELATIONSHIP BETWEEN ENVIRONMENTAL PERFORMANCE AND ECONOMIC PERFORMANCE. AN EMPIRICAL STUDY OF THE SOUTH AFRICAN MINING INDUSTRY**

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**Abstract.** The study investigated the South African mining industry and estimated the linear association between environmental performance and economic performance and developed a data envelopment analysis (DEA) model to estimate the relative technical efficiency of environmental performance to generate economic gains. The linear association method indicated to the mining-sectors whether it does / does not pay to be green. The point is that it does not really matter whether it does or does not pay to be green! Any mining activity puts pressure on the environment and using the environment must be done in the most efficient manner. The DEA method helped in this regard, i.e. the performance of the individual mining companies was estimated and the best practices in the sector were identified that can be used by inefficient companies in that sector as a benchmark. The practical implication is that the linear association method, which was used in all the previous related studies, should not be used on its own, but should be used complimentary to the DEA method.

**JEL Classification:** C61

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