عنوان مقاله:

The Impact of Environmental Consideration on The Technological Productivity of South Pars Gas Refinery

محل انتشار:

اولین کنفرانس و نمایشگاه مدیریت فناوری محصولات دانش بنیان در صنعت نفت ایران با رویکرد چالش ها و فرصت ها (سال: 1401)

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خلاصه مقاله:

This study analyses the environmental productivity of South Pars natural gas refinery in Iran. For this purpose, we measured Malmquist Productivity Index (MPI) based on data envelopment analysis through multiple inputs and outputs, i.e., labor, capital, feedstock and fossil fuel as inputs, refined gas as the desirable output, and environmental pollution as the undesirable output. Data collected form National Iranian Gas Company, Central Bank of Iran, Statistical Center of Iran, World Bank, Energy Information Administration, Intergovernmental Panel on Climate Change and BP statistics. We used DEAP computer program to calculate MPI. The results indicate that South Pars gas refinery has the high level of environmental productivity over the study period. Moreover, the results show that the undesirable output (pollution) has significant effect on productivity. The results of comparison between MPI with and without environmental consideration shows that MPI has declined for all periods with environmental consideration i.e. the average productivity without and with environmental considerations was ۱.۱۳۱ and ۱۰۲۲, respectively. Thus, it seems necessary to consider environmental issues in measuring the productivity of polluting refineries.

کلمات کلیدی:

Malmquist Productivity Index, South Pars Gas refinery, Environmental Considerations, Data Envelopment Analysis, Technological and Technical Productivity