

環境政策研究室

SDGs達成に向けた取り組み



キーワード・研究テーマ Keywords・Research Themes

- **気候変動**
Climate Change
- **エネルギー経済学**
Energy Economics
- **環境政策**
Environmental Policy
- **効率性・生産性分析**
Efficiency and Productivity Analysis
- **環境経済学**
Environmental Economics

気候変動緩和に向けた企業・産業の生産性・効率性分析 Productivity and efficiency analysis toward climate change mitigation



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PROFILE

職位 Position	講師 Lecturer	担当講義科目 Charge of Subjects	データ分析、統計学 Data Analysis, Statistics
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FOR MORE



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研究概要 Research Outline

企業や産業レベルでの生産性・効率性分析を通して、地球温暖化をはじめとする環境問題の解決に向け有効なエネルギー・環境政策について研究しています。

We investigate effective energy and environmental policy toward environmental issues such as global warming through productivity and efficiency analysis.

進行中の研究内容 Research Contents in Progress

1 世界各国の製造業のサプライチェーン効率性分析を行っています。二酸化炭素排出量の削減に向けて、各国の製造業の生産技術改善とサプライチェーンマネジメントが果たす役割について研究しています。

We've been analyzing efficiency of supply chains of global manufacturing sectors. We discuss the role of production technology and supply chain management in reducing carbon emissions.

2 日本では企業平均燃費(CAFE)基準が導入されており、自動車メーカーはその基準を満たすように製品開発・販売戦略を考える必要があります。この研究では、自動車メーカーの燃費基準達成に向けた環境・経営戦略について分析しています。

The Japanese government adopts the CAFE standard, and automakers need to reconsider their product design and sales strategy. This study investigates corporate strategy to achieve the target.

3 日本の産業廃棄物の多量排出事業者の産業廃棄物処理計画と実施状況報告に関するビッグデータを用いて、プラント・自治体レベルでの産業廃棄物の排出抑制・適正処理に向けた分析を行っています。

This study investigates the possibility of fully utilizing the plans and status reports of large establishments for detailed material flow analysis of industrial waste in Japan.

最近の研究実績 Recent Research Results

〈論文 / Published Papers〉

- "Environmental efficiency analysis of China's coal-fired power plants considering heterogeneity in power generation company groups" T Nakaishi, H Takayabu, S Eguchi (2021) *Energy Economics* 102, 105511.
- "Determinants of technical inefficiency in China's coal-fired power plants and policy recommendations for CO₂ mitigation" T Nakaishi, S Kagawa, H Takayabu, C Lin (2021) *Environmental Science and Pollution Research* 28 (37), pp.52064-52081.
- "Proposing effective strategies for meeting an environmental regulation with attainable technology improvement targets" S Eguchi, H Takayabu, M Kaneko, S Kagawa, S Hienuki (2021) *Business Strategy and the Environment* 30 (7), pp.2907-2921.
- "Sources of inefficient power generation by coal-fired thermal power plants in China: A metafrontier DEA decomposition approach" S Eguchi, H Takayabu, C Lin (2021) *Renewable and Sustainable Energy Reviews* 138, 110562.
- "CO₂ mitigation potentials in manufacturing sectors of 26 countries" H Takayabu (2020) *Energy Economics* 86, 104634.
- "Impacts of productive efficiency improvement in the global metal industry on CO₂ emissions" H Takayabu, S Kagawa, H Fujii, S Managi, S Eguchi (2019) *Journal of environmental management* 248, 109261.
- "Production efficiency and cost reduction potential of biodiesel fuel plants using waste cooking oil in Japan" M Ogata, T Nakaishi, H Takayabu, S Eguchi, S Kagawa (2023) *Journal of Environmental Management* 331, 117284.
- "Production efficiency of animal feed obtained from food waste in Japan" T Nakaishi, H Takayabu (2022) *Environmental Science and Pollution Research* 29 (40), 61187-61203.