

Impact Analysis of Transportation Modal Shift on Regional Energy Consumption and Environmental Level: Focused on Electric Automobiles

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Abstract : Many governments have tried to reduce CO₂ emissions which are believed to be the main cause for global warming. The deployment of electric automobiles is regarded as an effective way to reduce CO₂ emissions. The Korean government has planned to deploy about 200,000 electric automobiles. The policy for the deployment of electric automobiles aims at not only decreasing gasoline consumption but also increasing electricity production. However, if an electricity consuming regions is not consistent with an electricity producing region, the policy generates environmental problems between regions. Hence, this paper has established the energy multi-region input-output model to specifically analyze the impacts of the deployment of electric automobiles on regional energy consumption and CO₂ emissions. Finally, the paper suggests policy directions regarding the deployment of electric automobiles.

Keywords : electric automobiles, CO₂ emissions, regional imbalances in electricity production and consumption, energy multi-region input-output model

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