A General Equilibrium Approach to Nepal Earthquake Recovery Policy with Renewable Energy Implementation

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The study develops a practical and quantitative disaster impact assessment using a general equilibrium approach of a recursive model. The framework will provide the quantified economic impact and examine the effectiveness of implementing renewable energy on the recovery for 2015 Nepal Earthquake. More specifically, the research will estimate losses production factors (e.g. capital, labor) and a new composite of power generation with newly energy infrastructure invested. The evidence-based framework is expected to visualize its fiscal and social cost of the recovery process and actualize to build back better with resilient energy. The research will be conducted by using general equilibrium analysis to construct a disaster impact assessments and recovery framework through various policy simulations.

The study is based on Nepalese 2011 Input-Output Table, and furthermore, the compilation of the input-output table of renewable energy (e.g. solar power and Hydro power) will be conducted based on the field study survey for obtaining the realistic information of power capacity and costs of infrastructure. Finally, this model is applied to examine the effects of renewable energy to implementation as recovery policies in response to an earthquake disaster. The disaster impact assessments and the input-output table for renewable energy will make it possible to construct a CGE model for making the disaster recovery policy simulations with implementation of renewable energy.