Impact assessment of green investment on environmental sectors in Japan using input-output analysis

Topic: Environmental Input-Output Analysis
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Abstract

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In June 2010, the Japanese government announced the "New Growth Strategy" for the purpose of achieving a strong economy and social security system, robust public finances, and a 20% reduction in national GHG emissions by 2020 through the creation of additional demand and employment in four priority areas: green innovation, life innovation, Asian economy and tourism. Green innovation, as one of four priority areas, is targeted to create demand over 50 trillion JPY in new environmental market, about 1.4 million new environmental jobs, and 1.3 billion tons of CO_2 emission reduction. In order to spread green innovation, the Japanese government is currently focusing their main policies on green investment and technological innovation through several supported policies such as green carbon tax, green gift, feed-in tariff on renewable energy and others. As a result, the amount of the Japanese government's budget on environmental sectors (green investment) in year 2012 has reached 1.5 billion JPY (Ministry of Environment of Japan, 2013). Most of the previous studies in this area focused either only on a single sector (e.g. renewable energy) or on a specific impact assessment (e.g. job creation). However, it is necessary to assess the comprehensive impacts of green investment (socio and economic impacts) on all environmental sectors related to the green innovation in Japan. To complement the previous studies, this study will estimate the socio-economic impacts of green investment on all of environmental sectors within the scope of the green innovation area using input- output analysis. The main research questions of this study are as follows. First, "What are the job, income and economic impacts of an additional green investment on all environmental sectors in Japan" Second, "Which sectors and economic agents within the economic structure of Japan will get the larger benefits from the additional green investment on environmental sectors" Third, "Which sectors among all of environmental sectors will give larger benefits for socio and economics in Japan" This study utilizes the Japanese government's classification of environmental sectors (EGSS) and maps it with the sector classifications in the 2005 Japanese input-output table. The multiplier effects (income, job, value added and output multipliers) and structural path analysis will be calculated in this study to answer the three mentioned questions. The results of this study will have important implications for better and more efficient green investment policy design in Japan.