
Making the most of scarcity? The role of natural assets in Japanese economic development (1874-1940)

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Abstract

What role did natural assets play in the rise of living standards in industrialising nations during the 19th and 20th century? From a theoretical viewpoint, the relevant indicator of sustainable wellbeing, and therefore of its improvement, is not a flow (e.g. gross or net per capita domestic product) but the total stock of assets per capita, the comprehensive wealth, which includes human and natural assets (Dasgupta 2001, 2009). In a weak sustainability approach, the consumption of natural capital is justified if it results in an accumulation of physical produced capital, machinery and infrastructure, and human capital, and therefore in an increase of the total stock per head. This paper adopts a comprehensive wealth approach for investigating the Japanese economic miracle that took place after the Meiji restoration/revolution of 1868. It is well known that Japan emerged unexpectedly as the first non-western industrial nation in late 19th century. But the role of natural assets is usually overlooked, although initial (i.e. pre-Meiji) conditions were characterized by an exceptionally efficient use, by the international standards of the time, of scarce natural resources, particularly in forestry and silviculture (Totman 1989; Saito 2009, 2014). We build on the methodology pioneered by researchers of the World Bank (Hamilton and Clemens 1999) to measure 'genuine saving'. We devise new methods for expanding the coverage and improving the measurement of the different types of natural and human assets. We propose estimates by type of asset and by ownership and use these series for assessing the role of the different components of the total stock of capital, and changes in wealth distribution during the period 1874-1940.

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