

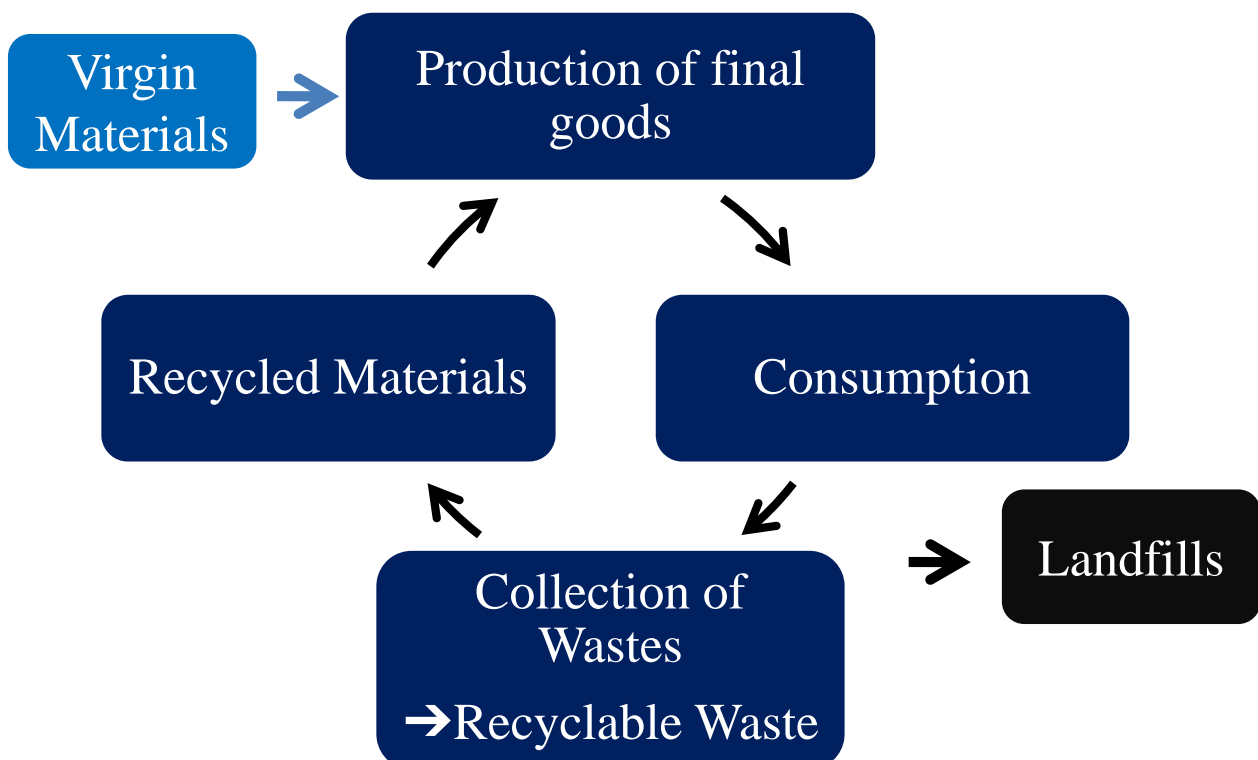
# Is (In)formal Trade Good for Environment?

Shunsuke Managi  
Associate Professor  
Faculty of Business Administration  
Yokohama National University &  
IGES Fellow

*Joint works with  
Takayoshi Shinkuma (Kansai University),  
& Keisaku Higashida (Kwansei Gakuin University)*

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## What are Recyclable Wastes?



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# Is Informal trade good for economy & environment?

see Takayoshi Shinkuma, Shunsuke Managi. 2010. "On the effectiveness of a license scheme for E-waste recycling: The challenge of China and India"  
*Environmental Impact Assessment Review, In Press*

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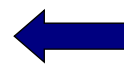
# Background

1. In Japan, there is less value of recycling (high labor cost) and reuse (less demand)
2. Although governments in China & India banned improper recycling by mandatory removal of illegal recycling facilities, their actions failed to eradicate the polluters and improper recycling activities moved to other places

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## Buying prices of PCBs (printed circuit boards) per ton

Informal sector in China (Guiyu town, Guangdong Province)	An authorized recycling firm in China (Hangzhou)	Informal sector in (Chennai)	An authorized recycling firm in India (Chennai)
\$420 - \$1900	\$250	\$3000 - \$3600	\$750 - \$1200



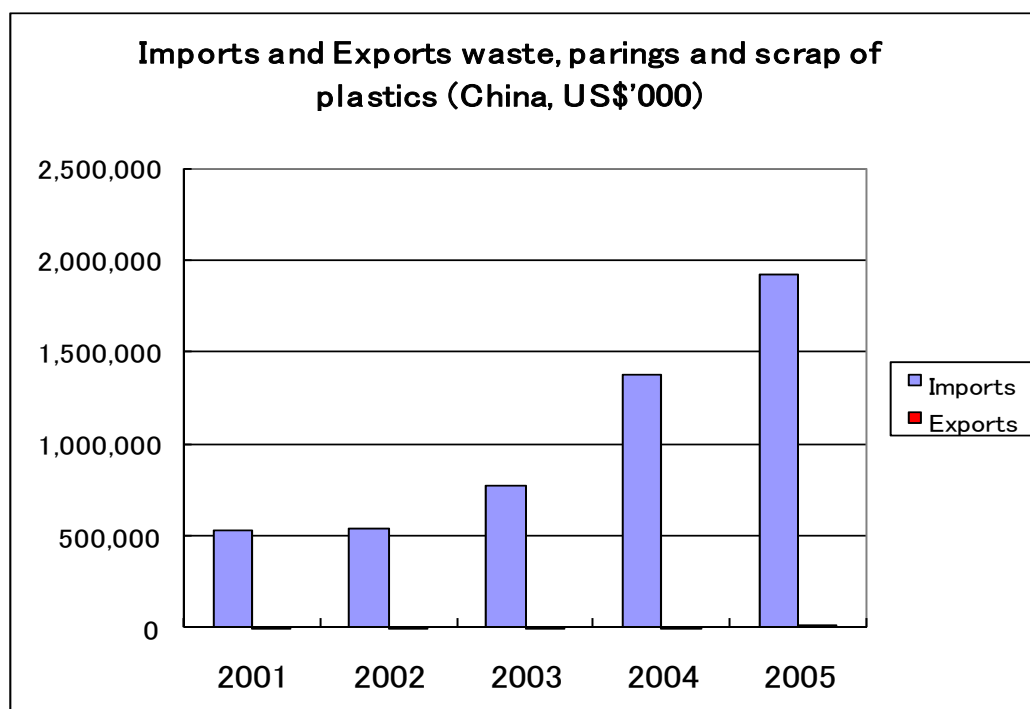
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# Is (Formal) trade good for economy & environment?

see Higashida, Keisaku & Managi, Shunsuke, 2009. "Determinants of Trade in Recyclable Wastes between Developing and Developed Countries," CCES Discussion Paper Series 15

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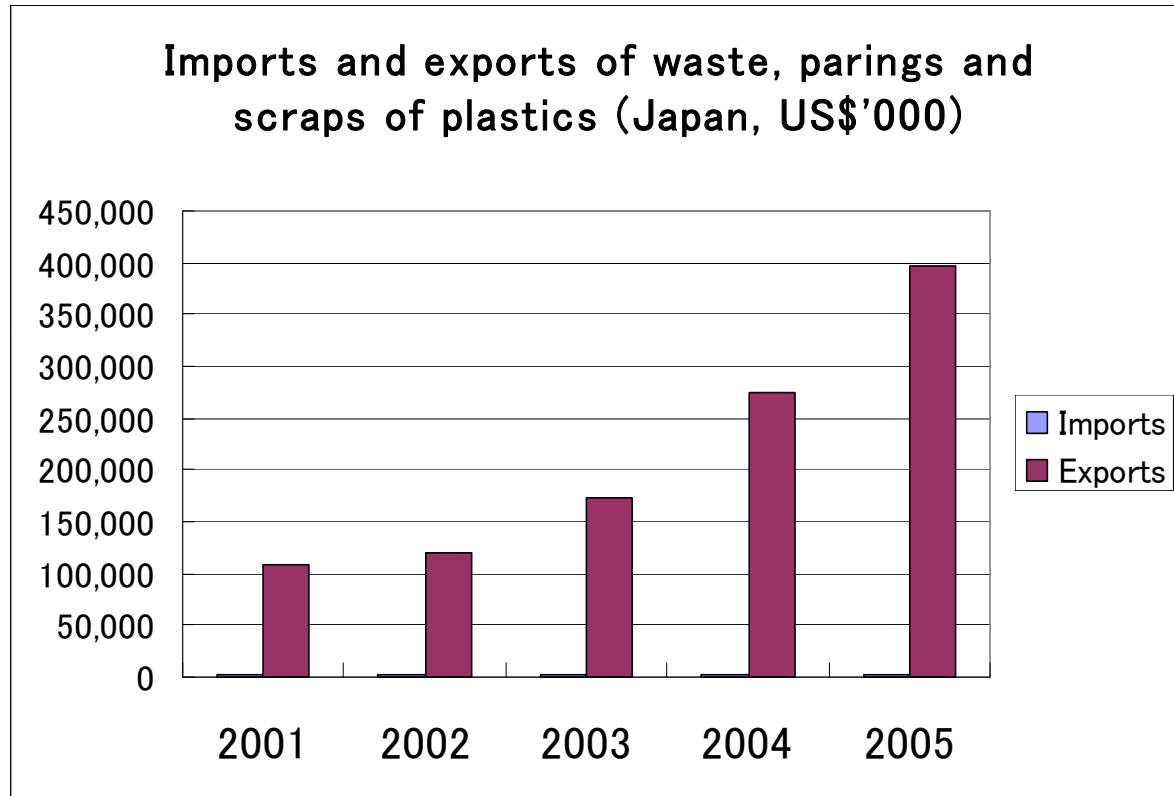
## Trade in Recyclable Wastes



International Trade Centre

(<http://www.intracen.org/tradstat/sitc3-3d/er842.htm>)

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International Trade Centre

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## Why are they traded?

### ■ Economic Growth

→ Demand for recycled materials has increased in developing countries.

### ■ Recovery Rate

→ In developed countries, recovery rates has increased, and the supply has become greater than the domestic demand.

### ■ Vertical Disintegration of Production Processes

→ A recycling process can be separated from the production process of final goods or/and the consumption process.

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# Gains and Losses from Trade in Recyclable Wastes

## ■ Gains from Trade

- Trade liberalization makes it easier for industries in importing (developing) countries to procure materials.

## ■ Loss from Trade

- Usually, recycling activities in “less developed” developing countries are unskilled labor intensive, and people in those countries do not have knowledge on toxicity of materials.

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## Main Results

1. There is no evidence that recycling sectors expand in less developed developing countries more rapidly than in more developed developing countries.
2. Trade restrictions entail significant losses in production efficiency because production costs in more developed developing countries greatly increase.
3. Reject Pollution heaven.

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