

University of Washington
Geography 349
Response Paper 6

Atkinson, G. and Hamilton, K. 2002. International trade and the 'ecological balance of payments.' *Resources Policy* 28: 27-37.

- 1) What definition of "sustainability" do the authors use? Put this in your own words (if starting with a quote helps you develop or explain your own interpretation, fine).
- 2) The authors don't formally define the concept of "ecological balance of payments." How would you define it?
- 3) What countries are the largest net importers of resources, under this framework?
- 4) How did this change between 1980 and 1990? Why?
- 5) What are the factors that influence the degree to which a country is a net importer or exporter of depletable resources?
- 6) What is the significance of the "genuine savings rate" which is estimated in Column 3 of Table 4?
- 7) Why might a country care about its "ecological balance of payments"? Why might a country care about the EBP of its trading partners?

Peters, G.P. and Hertwich, E.G. 2006. Pollution embodied in trade: the Norwegian case. *Global Environmental Change* 16: 379-387.

Don't worry about the technical side of the paper (Section 2); read it sufficiently to have an idea of what the authors are trying to do, with what sorts of data.

- 1) According to the authors, why might (a) consumption-based estimates of pollution (what you could also call a "place-of-consumption" basis) be a better basis for environmental negotiation than (b) estimates based on the location of production (what you could also call a "place-of-production" basis)?
- 2) Why might the benefit of one method over the other vary according to the type of pollution?
- 3) Which method did the Kyoto Protocol use?
- 4) What proportion of Norway's CO₂ emissions is because of domestic production for domestic consumption? Because of domestic production for export? Because of foreign production imported into Norway?
- 5) Do the authors account for the emissions resulting from the transport of traded goods?
- 6) How much larger is the estimate of Norway's CO₂ emissions from imported foreign production when (a) international differences in production technology are assumed, versus (b) when all countries are assumed to use the same technology?
- 7) What are the factors that influence whether a country's CO₂ emissions are greater when calculated on place-of-production basis or a place-of-consumption basis?

Liu, H., Xi, Y. Guo, J., and Li, X. 2010. Energy embodied in the international trade of China: an energy input-output analysis. *Energy Policy* 38: 3957-3964.

1) Considering China's imports and exports of energy and the energy embodied in its imports and exports, is China a net importer or exporter of energy?

2) Liu et al. identified five key factors causing the changes of energy embodied in exports:

- a) direct primary energy efficiency
- b) primary energy consumption structure
- c) structure of intermediate inputs
- d) structure of exports
- e) scale of exports

What was the trend for each of these factors, in China, over the study period?