Comments on
"The Effect of Technological Innovation on International Trade: A Non-Linear Approach".

The paper analyses the question whether (or not) innovations have a positive effect on exports. The motivation is too short. The examples on p.3 are only related to ICT. Why should I expect anything else than a positive effect on exports given the decennia long dominance of the Ricardian model in the empirical parts of international trade textbooks and structural change driven by the technological catching-up of newly industrialized countries? Absolute advantage ideas of Posner and Hufbauer only reinforce this. Some motivation from possibly different results should be given. Jones' (1970) article may give some orientation for comparative advantage models, if necessary, but most of the data come from differentiated products and require a different approach and absolute advantage aspects are closely related and worth consideration.

The same would hold for the interpretation of the results. If I get one result in some cases and a different result in others what does this tell us in terms of dominant forces at work? It is clear that we cannot expect definitive answers but some intuition should be provided. If we mostly get inverted u-shapes but sometimes u-shapes, than we have thresholds for positive signs to occur. Also here it would be nice to get some plausibility considerations although the evidence precedes the explanation in terms of logic.

The empirical part has a nice discussion of the relevant econometrics. The results are only implausible in regard to the 'colonial past' variable which has a negative impact on exports. This point is admitted by the authors but nothing is done about it. What is needed is an in-depth collinearity analysis, because with so many regressors collinearity might turn around the sign. Moreover, such an analysis also gives insights into the robustness of other results if one is willing to be critical of one's own results. Although collineanrity does not indicate a bias, a strong shift in the sign raises the question as to what the correct model (selection) is.

Minor points:
- The two lines of basic info on the TAI on p.8 (middle) should be moved to p.2.
- It remains unclear what is really done with the RCA of equ. (1) (p.4), because there is a break between this para and that on Rauch. Moreover, if you really want to look at comparative advantage you better use Wörz's (2005) version or the skeleton of the IIT index, dropping '1- ' and the absolute signs'.
- On p.6 it is stated that 'A representative country is chosen for each group'. It remains unclear why this is done.
- For the regressor 'diffusion of recent innovations' one of the indicators is 'exports of high tech ...'. With exports as the dependent variable the tackling as an IV problem is ok, but the concern of collinearity raised above is also plausible, because all regressors explain the LHS exports and therefore probably also those of this variable.
- The same symbol as used for the index (2) should show up in the regression. This is most easy when labeling the LHS of (2) as TAI. When talking about dummies and decomposed terms in the text, refer explicitly to the symbols used in regression (3).
- Explain why you use a zero/one variable for rich/poor rather than just GDPpc, and if you use 0 and1, explain what you do if one country is rich and the other is poor.
- Harvey (1976) does not appear in the references.
- P.14: 'not correlate with the error term' refers to the true residuals. You never know these. If OLS is biased then you know that the residuals are not the true ones.

- I could not make sense of the last sentence. A reformulation seems in order and easily

possible.

References

Jones, R.W, The Role of Technology in International Trade, in: R. Vernon (ed.), *The Technology Factor in International Trade*, National Bureau of Economic Research, 1970, 73-94.

Wörz, Julia; Dynamics of Trade Specialization in Developed and Less Developed Countries. Emerging Markets Finance and Trade, May-June 2005, v. 41, iss. 3, pp. 92-111.