

Call for Sessions - WEHC 2015 [S20122]

Proposed title of the session

Innovation, the Diffusion of Technology and Frontier Analysis

Abstract

Technological change is essential, almost synonymous to modern economic growth. Technological innovation creates new products, extends consumption opportunities and, through new or improved production methods, raises the output potential of the economy. This session focuses on differences in the degree to which countries, regions or sectors tap into this potential. More specifically, we invite researchers to contribute to the following two themes in the 'choice of technology' literature.

The first objective of this session is to study the constraints to the diffusion of new technologies. A host of economic and non-economic factors have already been called forth, such as the potential impact of property rights, relative factor endowments, and the degree of openness to trade. Yet we feel that additional study is required, as there appears to be conflicting evidence on the extent to which the listed factors constrain the diffusion of technology. To illustrate: while recent studies downplay the traditional notion of a technological dichotomy between the U.S. and Germany in the early 20th century, other research observes considerable interregional and intersectoral variation in the use of multipurpose technologies within the U.S. during the same period.

The second objective of this session is to quantify the productivity effect of delayed technology diffusion. The Solow model, despite its many advantages, may not always provide the best tool of analysis for this purpose. It has recently been suggested that ever since the first industrial revolution innovation has been localized at relatively high capital-labor ratios, a feature of technological change that cannot be incorporated in the Solow model. To assess the productivity effect of technology diffusion a framework is needed that allows for localized innovation. In response to this challenge, non-parametric and semi-parametric approaches have been proposed, such as data envelopment analysis (DEA) and stochastic frontier analysis (SFA). This session aims to explore the potential of such alternative measures of technological change.

I. Corresponding Session Organiser

Dr. Joost Veenstra (University of Groningen [Netherlands])

II. Co-Organiser(s)

1. Corresponding Organiser.
2. Dr. Pieter J. Woltjer (Wageningen University [Netherlands])

III. Expected Participant(s)

1. same as correspondent.
2. Pieter J. Woltjer (Wageningen University [Netherlands])
3. Nicholas Crafts (University of Warwick [United Kingdom of Great Britain and Northern Ireland])
4. Les Oxley (University of Waikato [New Zealand])
5. Cristiano Ristuccia (University of Cambridge [United Kingdom of Great Britain and Northern Ireland])
6. Nicholas Zammit (University of Cambridge [United Kingdom of Great Britain and Northern Ireland])
7. No input.
8. No input.
9. No input.
10. No input.