



**International Input-Output Association**

**Working Papers in Input-Output Economics**

**WPIOX 09-003**

**Michael Sonis and Geoffrey J.D. Hewings**

**Coefficient Change and Innovation Spread  
in Input-Output Models**

## **Working Papers in Input-Output Economics**

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**Title: Coefficient Change and Innovation Spread in Input-Output Models**

**Abstract:**

The purpose of this paper is to explain that main source of change in the direct input coefficients is not the errors in measurement and evaluation of direct inputs but innovation spread of emerging new technologies and emerging new types of organization of economic process. This innovation spread generates the adjustment input-output economic dynamics. A simple analytical model is proposed describing the Schumpeterian wave of adjustment of direct inputs in one leading sector (in one sector column). The analytical apparatus of fields of influence of the changes in one sector is used to describe the spread of Schumpeterian wave within the Leontief inverse of Input-Output system.

**Keywords:** Input-output economic dynamics, Fields of influence of coefficient changes, Schumpeterian wave of innovation diffusion

**Archives:** Structural change; Methods and mathematics; R&D, technology and growth

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