VOLUME 2, ISSUE 1

Growth and Employment Potentials of Chosen Technology Fields

Koller, Wolfgang; Luptáčik, Mikuláš; Mahlberg, Bernhard; Schneider, Herwig W.

Year: 2008 Volume: 2 Issue: 1 Pages: 41-75

Abstract: The development of European technology platforms is a valuable building block of European science and technology policy. Out of the range of technology platforms, seven technology fields were chosen and investigated for their potential impacts on selected economies of the European Union. The study is based on input-output analysis, thus enabling us to account for the complex interrelationships between the sectors related to technology fields, either as origin or as user sectors, and the other sectors of the economy. Multiplier analysis is used to quantify the impacts of demand for goods produced by the sectors related to technology fields. Key sector analysis yields suggestions as to whether these sectors play a key role within the network of intermediate inputs. By linking the input-output tables with data on business enterprise R&D technology flow matrices are calculated and evaluated with respect to the sectors related to technology fields. Subsystem minimal flow analysis (SMFA) is carried out in order to find out whether these sectors are part of growth bipols. Due to the principal difficulty to relate technologies which are not yet applied to actual economic data the results require great care in interpretation. Nevertheless, some patterns emerge from the analysis that suggest that some technology fields seem promising areas for future R&D efforts.

JEL classification: C67, O33

Keywords: technology fields, input-output analysis, key sector analysis, technology flows, subsystem minimal flow analysis

RePEc: http://ideas.repec.org/a/fau/aucocz/au2008_041.html

DOWNLOAD [PDF] Print Recommend to others