

R&D and Other Intangible Assets in an Input-Output Framework: A First look with U.S. Data

Topic: Supply-use tables and National Accounts (Special session organized by the IOSG-IIOA)

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As economic activity shifts in many national economies from manufacturing activity to service activity, intangibles such as research and development, computer software, and entertainment, literary and artistic originals products become increasingly important components of economic output. Unlike many other service activities, these intangibles also contribute to future economic output, and thus should be treated as capital assets. Computer software has been treated as a capital asset in the U.S. statistics since 1997. The U.S. and many other countries plan to adjust their official economic statistics in coming years to recognize R&D and several other intangibles as capital assets. In addition to the impact on aggregate GDP, this new treatment will change the way economists understand industry activity and contributions to growth. As Scherer (2003) and others have shown, the structure of input-output and capital flow tables provide a good framework for analyzing R&D-related technology flows. Our paper provides a first look at intangible assets in an input-output framework for 2002, the most recent last available year of benchmarked industry data. These newly recognized intangible assets include R&D expenditures, motion picture and television originals, musical compositions, and literary originals. We show Make, Use, and Capital flow tables, allowing users to 1) trace the production of these intangibles by industry sectors, 2) identify the input structure of the intangibles production activity itself, and 3) see the impact of intangible assets on adjusted capital flow measures for industries.