

Gregory Tasse

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EDUCATION

McDaniel College (formerly Western Maryland College): B.A., physics
George Washington University: Ph.D., economics

AREAS OF RESEARCH

Technology policy and related economic growth policies, economics of technological change, economics of standards, economic impact assessment

PROFESSIONAL EXPERIENCE

Senior Economist, National Institute of Standards and Technology (NIST). Engaged in analyses of the economics of and policies affecting high-tech industries; strategic planning studies and economic impact assessments.

Personally conducted or managed policy-related research in the areas of technology-based growth, economics of standards, government research as a growth policy mechanism, methods for evaluation of government research, and comparative analyses of foreign government programs for industrial innovation and international competitiveness.

Represented NIST at high-level government and industry deliberations dealing with technology-based growth strategies and policies. Brief and advise Executive Branch and Congressional staff on economic and technology policy issues.

Designed economic impact and strategic planning studies, selected or approved impact assessment methodologies and managed conduct of studies; prepared summaries of

results for several levels of management and external policy, industry, and academic audiences.

PROFESSIONAL ACTIVITIES

National Academy of Sciences Committee on Assessing the Value of Federal R&D

Co-Chair of White House Committee to advise on advanced manufacturing technology strategies (developed National Strategic Plan for Congress)

Referee manuscripts for *Research Policy, Economics of Innovation and New Technology, Industrial and Corporate Change, Journal of Technology Transfer, Empirica: Journal of European Economics, Science and Public Policy, International Journal of Technology and Globalization*

Board of Directors, Nymeo Federal Credit Union (1992-2003)

Publications

Books:

The Technology Imperative. Edward Elgar, 2007

The Economics of R&D Policy. Greenwood Publishing Group, 1997 (translated into Chinese in 2003)

Technology Infrastructure and Competitive Position. Kluwer Academic Publishers, 1992

Cooperative Research and Development: The Industry, University, Government Relationship (co-editor). Kluwer Academic Publishers, 1989

Strategies for Technology-Based Competition: Meeting the New Global Competition (co-author). Lexington Books, 1987

Monographs:

Methods for Assessing the Economic Impacts of Government R&D (NIST Planning Report 03-1), September 2003 (translated into Chinese in 2004)

R&D and Long-Term Competitiveness: Manufacturing's Central Role in a Knowledge-Based Economy (NIST Planning Report 02-2), February 2002

R&D Trends in the U.S. Economy: Strategies and Policy Implications (NIST Planning Report 99-2), April 1999

Technology and Economic Growth: Implications for Federal Policy (NIST Planning Report 95-3), October 1995

Articles:

- "The Economic Nature of Knowledge Embodied in Standards for Technology-Based Industries,"** *Routledge Handbook of the Economics of Knowledge* (forthcoming)
- "A Neoschumpeterian R&D Policy Model for Advanced Manufacturing,"** *Journal of Economic Perspectives* (2014)
- "The Policy Experiment Mechanism in Innovation Policy,"** *Science and Public Policy* (2013)
- "Technology Life Cycles,"** in D. Campbell and E. Caryannis, eds., *The Encyclopedia of Creativity, Invention, Innovation, and Entrepreneurship*. New York/Heidelberg: Springer (2013).
- "The Future of National Manufacturing Policy,"** *Innovations* 7:3 (2012)
- "Beyond the Business Cycle: The Need for a Technology-Based Growth Strategy,"** *Science and Public Policy* 40:3 (2013)
- "Rationales and Mechanisms for Revitalizing U.S. Manufacturing R&D Strategies,"** *Journal of Technology Transfer* 35:3 (2010).
- "Complex Standards and Sustained Innovation: the Internet Protocol,"** *International Journal of Technology Management* (2009)
- "Globalization of Technology-Based Growth: The Policy Imperative,"** *Journal of Technology Transfer* 33 (2008).
- "Modeling and Measuring the Roles of Technology Infrastructure,"** *Economics of Innovation and New Technology* 17:7 (2008)
- "Tax Incentives for Innovation: Time to Restructure the R&E Tax Credit,"** *Journal of Technology Transfer* 32 (2007)
- "The Disaggregated Technology Production Function: A New Model of Corporate and University Research,"** in A. N. Link and D. Siegel, eds., *University-Based Technology Initiatives, Research Policy* 34 (May 2005)
- "Underinvestment in Public Good Technologies,"** in F. M. Scherer and A. N. Link, eds. *Essays in Honor of Edwin Mansfield, Journal of Technology Transfer* 30:1/2 (January 2005)
- "Policy Issues for R&D Investment in a Knowledge-Based Economy,"** *Journal of Technology Transfer* 29:2 (2004)
- "R&D Investment Trends: U.S. Needs More High-Tech,"** *Research*Technology Management* 46:2 (March–April, 2003)
- "The Economics of Science and Technology,"** (co-author), *Journal of Technology Transfer* 27: 155-203 (2002)
- "R&D Policy Models and Data Needs,"** in M. Feldman and A. Link, editors, *Science and Technology in the 21st Century: Toward a Global Policy Agenda*. Kluwer (2001)
- "Standardization in Technology-Based Markets,"** in A.N. Link and D. Roessner, eds., *The Economics of Technology Policy, Research Policy*, 20 (2000)
- "Lessons Learned about the Methodology of Economic Impact Studies: The NIST Experience,"** *Evaluation and Programming Planning*, 22 (1999)

- “Choosing Government R&D Policies: Tax Incentives vs. Direct Funding,”** *Review of Industrial Organization* 11 (1996)
- “Technological Infrastructure and the Role of Government: Comparative Perspectives,”** in J. McIntyre, editor, *Japan’s Technical Standards: Implications for Global Trade and Competitiveness*. Westport, CN: Greenwood Publishing Group, Inc., 1996
- “Infratechnologies and Economic Growth,”** in M. Teubal et al, editors, *Technological Infrastructure Policy (TIP): An International Perspective*. Norwell, MA: Kluwer, 1996
- “Encouraging Long-Range Industrial Research,”** *ISSUES in Science and Technology* (Fall 1995)
- “The Roles of Standards as Technology Infrastructure,”** in R. Hawkins, R. Mansell, and J. Skea, eds., *Standards, Innovation, Competitiveness: The Politics and Economics of Standards in Natural and Technical Environments*. Brookfield, VT: Edward Elgar (1995)
- “The Technology Infrastructure of Firms: Investments in Infratechnology”** (co-author), *IEEE Transactions on Engineering Management* 40:3 (August 1993)
- “Investment in Product Quality: A Descriptive Study of the U.S. Optical Fiber Industry”** (co-author), *OMEGA: The International Journal of Management Science* 19 (1991)
- “The Functions of Technology Infrastructure in a Competitive Economy,”** *Research Policy* 20 (1991)
- “Structural Change and Competitiveness: The U.S. Semiconductor Industry,”** *Technological Forecasting and Social Change*, 37:1 (1990)
- “Industry and Government Strategies for Product Quality,”** *International Journal of Technology Management* 4:2 (1989)
- “Standards and the Diffusion of Advanced Technologies,”** (co-author) *Evaluation and Program Planning* 11 (1988)
- “The Impact of Standards on Technology-Based Industries: the Case of Numerically Controlled Machine Tools in Automated Batch Manufacturing”** (co-author) in, H. Landis Gabel, ed., *Product Standardization and Competitive Strategy*. Amsterdam: North-Holland, 1987
- “The Role of the National Institute of Standards and Technology in Supporting Industrial Innovation,”** *IEEE Transactions on Engineering Management* (August 1986)
- “The Technology Policy Experiment as a Policy Research Tool,”** *Research Policy* 14:1 (February 1985)
- “Analysis of the Effects of Recent Tax Law Changes on Technology-Based Economic Growth”** (co-author), in *Strategic Management of Industrial R&D: Interdisciplinary Perspectives*, Lexington, MA: Lexington Books, 1984
- “Competitive Strategies and Performance in Technology-Based Industries,”** *Journal of Economics and Business* 35:1 (January 1983)
- “The Induce versus Purchase Decision: An Empirical Analysis of Industrial R&D”** (co-author), *Decision Sciences* (January 1983)
- “Measurement Standards, Technology-Based Economic Growth, and the Role of Government,”** *Standards Engineering* (February 1982)

“Infratechnologies and the Role of Government,” *Technological Forecasting and Social Change* 21:3 (July 1982)

“The Role of Government in Supporting Voluntary Measurement Standards for High-Technology Industries,” *Research Policy* 11:5 (October 1982)

“The Effectiveness of Venture Capital Markets in the U.S. Economy,” *Public Policy* 25 (Fall 1977)

“Industry Structure, Models of Concentration, and Phase II Wage and Price Controls” (co-author), *Journal of Economics and Business* 26:4 (October 1974)

Talks/Presentations

Guest lectures at universities, think tanks and industry groups

Briefings to high-level government policy groups, presentations at domestic and international academic conferences