Dr. Michael Mandel Chief Economist Progressive Policy Institute 1919 M Street NW, Suite 300 Washington, DC 20036 <u>Mmandel@progressivepolicy.org</u> 973-738-6749

Current Positions

Progressive Policy Institute

Chief Economist, 2010-current Vice President 2021-Current

Directs domestic and global economic policy for centrist think tank, specializing in innovation, regulation, and growth.

Current research and policy topics:

- Competition policy applied to innovative industries.
- Pharmaceutical pricing and support for innovation.
- Why digital inflation has stayed low in an inflationary age
- Tracking global supply chains, and how they change our understanding of the national and global economies.
- How innovation creates jobs: The impact of ecommerce on job growth, and what policymakers should know.

Our research in this area explained why the expansion of ecommerce was generating net new jobs, analogous to the industrialization of the early 20th century. We received extensive coverage in the press, including a feature story in the *New York Times* ("E-Commerce as a Jobs Engine? One Economist's Unorthodox View," July 12, 2017), the *Wall Street Journal*, the *Financial Times*, the *Washington Post*, the *Economist* and the *PBS NewsHour*.

• The global jobs impact of mobile app development, and the implications for regulation.

Our ongoing global analysis of the "App Economy" now covers the United States, Europe, Canada, Mexico, Brazil, Colombia, Argentina, Chile, India, Morocco, Egypt, South Africa, Nigeria, Japan, South Korea, Australia, Vietnam, Indonesia, and Thailand. We develop new methodologies for estimating the job creation by mobile apps, and related this to government regulation. • The digital transformation of manufacturing in the United States, Europe and in countries such as India

With some exceptions, like the auto industry, manufacturers have shown exceptionally slow productivity growth in recent years, and little appetite to invest in digital technologies. We are studying the impact of manufacturing digitization on jobs and growth, especially in non-urban areas.

Related activities:

- Was principal investigator for Sloan Foundation grant on economic measurement of new industries. Was co-principal investigator for Sloan Foundation grant on measuring the impact of globalization.
- Was principal investigator for Kauffman Foundation grant on regulatory improvement.
- Served on National Academy of Sciences panel on measuring innovation.
- Served on National Academy of Sciences panel on measuring retail and ecommerce.
- Author of widely used survey-level economics textbook, *Economics: The Basics* (now in its 5th edition/2024 release).

South Mountain Economics LLC, President, 2010-current.

www.southmountaineconomics.com

Economic consulting firm specializing in emerging occupations and industries. SME studies have been cited by the White House and in such media outlets as the *New York Times, Bloomberg, Boston Globe, the Financial Times, the Atlantic, Time,* and *Forbes*.

- Examined impact of cloud computing on inequality
- Developed methodology for estimating innovative jobs using helpwanted ads.
- Studied evolution of tech hubs such as New York, London, and San Francisco

University of Pennsylvania, Wharton. Senior Fellow, Mack Institute for Innovation Management, 2010-current. Recent Mack Institute panels and talks include:

- "Supply Chain Innovation Panel" (March 2024)
- "Governance and Decision Making for Global Risk: The Changing Metrics for ESG" (May 2022)
- "Navigating the Data Value Chain" (June 2021)
- Guest lecturer at Wharton class on technology policy and regulation (February 2020, February 2019 and February 2018)
- "Technology, Governance, and Regulatory Implications" (November 2017)
- "Deployment and Regulation of New Technologies in Connected Ecosystems" (November 2015)
- "Navigating the Policy Environment" (Spring Conference 2014)
- "Framing the Big Data Challenge" (December 2012)

Past Positions

BusinessWeek. Chief Economist, 2001-2009; Economics Editor, 1992-2001; Associate Economics Editor, 1989-92.

- Helped direct national and global economics coverage for leading business publication, including the emergence of the tech-driven New Economy, the collapse of the tech bubble, the transformation of the global economy in the 2000s, and the 2008-09 financial crisis.
- Wrote more than 50 cover stories covering macroeconomics, monetary policy, growth, and innovation.
- Won multiple awards, including being named one of the top 100 business journalists of the 20th century.

New York University. Stern School of Business, Assistant economics professor, 1985-89.

Education

Harvard University. PhD, Economics, 1985; A.M., Economics 1981; A.B., Applied Mathematics summa cum laude, 1978.

<u>Books</u>

<i>Economics: The Basics</i> (5th edition) <i>Economics: The Basics</i> (4th edition) <i>Economics: The Basics</i> (3rd edition) <i>Measuring Globalization</i>	2024 2021 2017	McGraw-Hill McGraw-Hill McGraw-Hill
(ed. with Susan Houseman)	2015	Upjohn Institute
Economics: The Basics (2nd edition)	2011	McGraw-Hill/Irwin
Economics: The Basics	2008	McGraw-Hill/Irwin
Rational Exuberance	2004	Harper-Collins
The Coming Internet Depression	2000	Basic Books
The High Risk Society	1996	Times Business

Major Awards and Honors

Economic Journalist of the Year (2006) Gerald Loeb Award (1998, finalist 1994, 2009) Excellence in Economic Journalism (2002) Top 100 Business News Luminaries of the 20th century (2000) National Magazine Award (1994, finalist 1999)

Recent Op-Eds

"The Future of Anti-Obesity Drugs" Real Clear Health (July 18, 2024)

- "America's Productivity Disappointment" The International Economy (Winter 2024)(contribution)
- **"Who Deserves the Credit?"** *The International Economy (*Summer 2023) (contribution)
- "Making Sense of America's Chronic Disease Epidemic" International Business Times (July 24, 2022) (with Kenneth Thorpe)
- "The Complexity of The Supply Chain" *The International Economy* (Winter 2022 issue)
- "Why Tech & Broadband Prices Have Avoided Surging Inflation" Real Clear Policy (April 5, 2022)
- "Are Drug Prices Really Soaring?" Boston Sunday Globe, (November 22, 2020)
- "The 'Prescription Escalator' May Be to Blame For Rising Out-Of-Pocket Drug Spending" Stat (November 13, 2020)
- "The Covid-19 pandemic could mark the beginning of the 'biotech century'," *Stat, (*April 27, 2020)

"Get Ready for the Internet of Goods," Wall Street Journal (October 15, 2017)

"Robots Will Save the Economy," *Wall Street Journal (*May 14, 2017)(with Bret Swanson)

"The Folly of Targeting Big Pharma," *Wall Street Journal (*December 10, 2015) **"Obama's Corporate Tax Blunder,"** *New York Times* (June 9, 2015)

"Obama's Plan To Regulate The Internet Would Do More Harm Than Good," Washington Post (November 14, 2014)

"New York, the Silicon City" New York Times (January 6, 2014)

Forbes.com Columns on Digital Manufacturing

"Looking Back: The Worst Business Cycle Ever For U.S. Manufacturing" (June 10, 2020)

"How A New Wave of Digital Platforms Can Lift Growth" (May 28, 2020)

- "The Coronavirus Pandemic Showed Why We Need Shorter, Simpler Supply Chains" (May 12, 2020)
- "Keeping the Factories Running and the Lights On: How To Use \$500 Billion in 8 Months, Wisely" (April 9, 2020)

"War and Pandemic: Where the Factories Are Matters" (April 1, 2020)

- "Voters in Key States Support An Active Manufacturing Policy" (March 6, 2020)
- "Smart Factories' Hype Vs. Reality: Capgemini Report Says Only 14% of Smart Factory Deployments So Far Are Considered Successful" (November 13, 2019)

"Demand For Collaborative Robots Continues To Grow" (November 1, 2019)

"How Digital Manufacturing Can Help Modi's "Make in India" Program" (September 5, 2019) "Building the New Manufacturing Stack," (August 20, 2019)

- "The Trade War Spreads to Mexico, and The Window Opens Wider for Digital Manufacturing" (May 31, 2019)
- "How the China Trade War Will Jump Start Digital Manufacturing," (May 14, 2019)
- "Digital Manufacturing Has a China Dilemma," (March 29, 2019)
- "Broadening the Geography Of 3-D Printing" (January 31, 2019)
- "Why 2019 Will Be the Year of the Manufacturing Platform" (January 2, 2019)
- "Why Digitizing Food Manufacturing Can Boost Living Standards" (November 29, 2018)

"Digital Manufacturing and the Internet of Goods" (November 3, 2018)

Congressional Testimony

- "Common Carrier Regulation of the Internet: Investment Impacts", House Committee on Energy and Commerce, Subcommittee on Communications and Technology (October 27, 2015)
- "Toward a 21st-Century Regulatory System," Senate Homeland Security and Government Affairs (February 25, 2015)
- "Clearing the Way for Jobs and Growth: Retrospective Review to Reduce Red Tape and Regulations," House Committee on the Judiciary, Subcommittee on Courts, Commercial and Administrative Law (July 12, 2012)
- **"FDA Medical Device Regulation,"** House Committee on Energy and Commerce, Subcommittee on Oversight and Investigations (July 20, 2011)

Recent Book Contributions

- "Moving Beyond the Balance Sheet Economy," in *Policy Choices for a Digital Age,* Friends of Europe, June 2017.
- "Where is Innovation Falling Short?: Using Labor Market Indicators to Map the Successful Innovation Frontier," in *The New Entrepreneurial Growth Agenda,* Kauffman Foundation (2016)
- **"Data, Trade, and Growth,**" in *Measuring Globalization: Better Trade Statistics* for Better Policy - Volume 2. Factoryless Manufacturing, Global Supply Chains, and Trade in Intangibles and Data, Susan N. Houseman and Michael Mandel, eds. W.E. Upjohn Institute for Employment Research (2015).
- "Hacking the Regulatory State," in Reviving Economic Growth: Policy Proposals from 51 Leading Experts (Edited by Brink Lindsey), Cato Institute (November 2014) http://www.cato.org/publications/cato-onlineforum/hacking-regulatory-state

Progressive Policy Institute Papers and Policy Briefs

<u>2024</u>

"Closing the Digital Verification Divide" (September 2024)

"An Initial Look at the App Economy Across North and Sub-Saharan Africa' (September 2024)

"Investment Heroes 2024: Faith in the Future" (July 2024) (with Andrew Fung) **"Quantifying the Economic and Health Benefits from Rapid-Development**

COVID-19 Vaccines and Boosters" (January 2024) (with Robert Popovian and Wayne Winegarden)

<u>2023</u>

"Disability and Changes in the Workplace" (November 2023)
"EU App Economy: Skills for the Digital Age" (November 2023)
"Investment Heroes 2023" (October 2023) (with Jordan Shapiro)
"How the Economics and Regulation of Mobile Platforms Affects Japan's Digital Transformation and Cybersecurity "(March 2023)

2022

"Platform Work and the Care Economy" (November 2022)

"The World Needs Better Incentives to Combat Superbugs" (September 2022) (with Arielle Kane)

"Investment Heroes 2022: Fighting Inflation with Capital Investment" (July 2022) (with Jordan Shapiro)

"Europe App Economy Update, 2021" (May 2022)

"U.S. App Economy Update, 2022" (May 2022) (with Jordan Shapiro)

"ESG Ratings and the Regulation of Information Markets" (April 2022)

"Broadening Co-Pay Caps to Chronic Diseases in Medicare Part D" (April 2022)

"What Does the American Innovation and Choice Online Act Mean For Consumers and Competition" (January 2022) (with John Scalf and D. Daniel Sokol)

<u>2021</u>

"The Great Transatlantic Data Disruption" (October 2021) (with Kristian Stout and Mikołaj Barczentewicz)

"The State of U.S. and European Broadband Prices and Deployment" (August 2021) (with Elliott Long)

"Biotech Innovation: Two Important Questions" (June 2021) (with Alec Stapp)

"A Radically Pragmatic Agenda to Connect Rural America" (June 2021) (with Elliott Long)

"Investment Heroes 2021: Capital Spending During the Pandemic" (June 2021) (with Elliott Long)

"The Canadian App Economy In 2020" (April 2021)

"Innovative Job Growth in the 21st Century: Has the Tech-Ecommerce Ecosystem Become the New Manufacturing?" (April 2021)

"Mexico's App Economy In 2020" (March 2021) (with Elliott Long)

"The Australian App Economy, 2021 Update" (March 2021) (with Elliott Long)

- "Memo to President Biden: A Reality-Based Approach to Drug Pricing" (February 2021)
- "Beyond "Buy American": Why U.S. Manufacturing Needs a National Resilience Council" (January 2021)

<u>2020</u>

"New Jobs With a Future: Six Ideas for Harnessing Technology to Create Good Work For Americans" (November 2020)

"The Third Wave: How 5G Will Drive Job Growth Over the Next Fifteen Years" (September 2020) (with Elliot Long)

"Investment Heroes 2020" (July 2020) (with Elliot Long)

"Regulatory Improvement for Independent Workers: A New Vision" (July 2020) (with Alec Stapp)

"Credit Rating Agencies: Sending a Clear Signal" (July 2020)

"How Workplace Testing Can Get Us Back to Work" (May 2020)

"The Brazilian App Economy 2020" (April 2020)(with Elliott Long)

- "Helping Older Americans: The Role of Point-of-Sale Rebates" (March 2020)
- "Low-Income Borrowers and the Auto Loan Market" (January 2020) (with Douglas Holtz-Eakin and Thomas Wade)

<u>2019</u>

- "Investment Heroes 2019: Boosting U.S. Growth" (December 2019)(with Elliott Long)
- "The Prescription Escalator: The Real Reason Why Americans Pay More for Drugs Each Year, Why They Are So Upset, and What Can Be Done About It" (October 2019)

"The App Economy in India" (September 2019)(with Elliott Long)

"European App Economy Jobs Update, 2019" (September 2019)(with Elliott Long)

"U.S. App Economy Jobs Update, 2019" (September 2019) (with Elliott Long)

"The Declining Price of Advertising: Policy Implications" (July 2019)

- "The Economic Implications of State-Based Chemical Regulation: Two Approaches" (June 2019) (with Elliott Long)
- "The App Economy in Canada" (April 2019) (with Elliott Long)
- "The Australian App Economy: 2019 Update" (April 2019) (with Elliott Long)

"Escaping the Startup Trap: Can Policymakers Help Small Companies

Grow to Major Employers?" (February 2019) (with Elliott Long) "Investment Heroes 2018: Encouraging and Diffusing Innovation Throughout the Economy" (February 2019) (with Elliott Long) "New Ideas for a Do-Something Congress No. 2: Jumpstart a New Generation of Manufacturing Entrepreneurs" (January 2019)

<u>2018</u>

"Competition and Concentration: How the Tech/Telecom/Ecommerce Sector is Outperforming the Rest of the Private Sector (October 2018)

"How Will the Post-Brexit "Data Wall" Affect the European Union?" (October 2018)

"The Rise of the Internet of Goods: A New Perspective on the Digital Future for Manufacturers" (August 2018)

"An Economic Analysis of Japan's Current Mobile Communication Policy from the Competition and Innovation Perspective" (July 2018)

"Perceptions versus Reality: Regulating Digital Platforms" (June 2018) (with Desirée van Welsum)

"Korea's App Economy" (May 2018)

"The Argentina App Economy: 2018" (April 2018) (with Elliott Long)

"Chile: The Road to the App Economy" (April 2018) (with Elliott Long)

"State Drug Price Transparency and Price Gouging Laws: Why They May Raise Healthcare Costs" (March 2018) (with Elliott Long)

"The Case for Online Vision Tests" (March 2018) (with Elliott Long)

"The App Economy in Thailand" (January 2018) (with Elliott Long)

"The App Economy in Vietnam, 2017" (January 2018) (with Elliott Long)

"Regulation and the "Productivity Revolution" in Japan's Handset Market" (January 2018)

"The Internet of Goods and a Revitalized Economy: Upstate New York as a Template" (January 2018) (with Elliott Long)

<u>2017</u>

"The Next Ten Million Jobs: Energizing the Physical Industries in the Heartland States" (October 2017)

"Iowa's App Economy: A Summary" (October 2017) (with Elliott Long)

"The App Economy in Europe: Leading Countries and Cities, 2017" (October 2017) (with Elliott Long)

"How Ecommerce Creates Jobs and Reduces Income Inequality," (September 2017)

"An Analysis of Job and Wage Growth in the Tech/Telecom Sector," (September 2017)

"The Economic Impact of Data: Why Data Is Not Like Oil," (July 2017)

"How the Startup Economy is Spreading Across the Country – and How It Can Be Accelerated," (March 2017).

"The Coming Productivity Boom," (March 2017)(with Bret Swanson)

<u>2016</u>

"The App Economy in Europe: Leading Countries and Cities," (June 2016)

- "Long-term U.S. Productivity Growth and Mobile Broadband: The Road Ahead," (March 2016)
- "App Economy Jobs in the United States," (January 2016)

<u>2015</u>

- "Innovation in a Rules-Bound World: How Regulatory Improvement Can Spur Growth" (December 2015) (with Diana Carew).
- "The 2015 PPI Tech/Info Job Ranking" (December 2015) (with Michelle Di Ionno)
- "Should the United States Adopt an Innovation Box?: The Post-BEPS Landscape" (October 2015) (with Michelle Di Ionno)
- "U.S. Investment Heroes of 2015: Why Innovation Drives Investment" (September 2015)
- "Indonesia: Road to the App Economy" (September 2015)
- "Vietnam and the App Economy" (September 2015)
- **"The California Tech/Info Boom: How It Is Spreading Across the State"** (July 2015)
- "Dynamic Scoring and Infrastructure Spending" (July 2015) (with Douglas Holtz-Eakin)
- **"Uncovering the Hidden Value of Digital Trade**" (July 2015) (with Paul Hofheinz)
- **"The BEPS Effect: New International Tax Rules Could Kill US Jobs"** (June 2015)
- **"The Blame Game: Multinational Taxation in an Era of Knowledge"** (May 2015) (with Paul Weinstein & Sarah O'Byrne)
- "London Shines in Tech/Info Employment: The Rest of the UK Struggles" (April 2015)
- "Tech Opportunity for Minorities and Women: A Good News, Bad News Story" (April 2015) (with Diana Carew)
- "Copyright in the Digital Age: Key Economic Issues" (April 2015)
- "Taxing Intangibles: The Law of Unintended Consequences" (April 2015)

<u>2014</u>

- "U.S. Investment Heroes of 2014:Investing at Home in a Connected World" (September 2014) (with Diana Carew)
- "Jobs in the Australian App Economy" (July 2014)
- "Data, Trade and Growth" (April 2014)
- "Where are the Big Data Jobs?" (May 2014)
- "Bridging The Data Gap: How Digital Innovation Can Drive Growth and Jobs" (April 2014) (with Paul Hofheinz)
- "Infrastructure Investment and Economic Growth: Surveying New Post-Crisis Evidence" (March 2014) (with Diana Carew)

<u>2013</u>

- "The PPI Tech/Info Job Ranking" (October 2013)
- "U.S. Investment Heroes of 2013: The Companies Betting on America's Future" (September 2013) (with Diana Carew)
- "The Rebalancing Of The California Economy: How Internet/Tech Jobs Are Spreading Across The State" (May 2013)
- "Data, Trade, and Growth" (working paper) (May 2013)
- "Regulatory Improvement Commission: A Politically Viable Approach to U.S. Regulatory Reform" (May 2013) (with Diana Carew)
- "Student Debt Investment Fund (SDIF):A Preliminary Proposal for Addressing the Student Debt Crisis" (March 2013)(with Diana Carew and Jason Gold)

<u>2012</u>

- "Beyond Goods and Services: The (Unmeasured) Rise of the Data-Driven Economy" (October 2012)
- "Manufacturing in the App Economy: How Many Jobs Should We Aim For?" (May 2012) (with Diana Carew)
- "Hidden Toll: Imports and Job Loss Since 2007" (March 2012) (with Diana Carew)
- "Measuring the Real Impact of Imports on Jobs" (March 2012) (with Diana Carew)

2011 and earlier

"Scale and Innovation in Today's Economy" (December 2011)

- "Innovation by Acquisition: New Dynamics of High-Tech Competition" (November 2011) (with Diana Carew)
- "How A Competitiveness Audit Can Help Create Jobs" (November 2011) (with Diana Carew)
- "How the FDA Impedes Innovation: A Case Study in Overregulation" (June 2011)

"Telecom Investment: The Link to U.S. Jobs and Wages," (May 2011)

- "Reviving Jobs and Innovation: A Progressive Approach to Improving Regulation" (February 2011)
- "Taxing Capital in a Supply-Chain World" (November 2010)
- "The Coming Communications Boom?: Jobs, Innovation and Countercyclical Regulatory Policy" (July 2010)

South Mountain Economics Reports

<u>2018</u>

"How CFOs Can Lead the Coming Productivity Boom," February 2018

<u>2015</u>

"A Low-Cost and Flexible Approach for Tracking Jobs and Economic Activity Related to Innovative Technologies," Nesta Working Paper No. 15/11 (June 2015)(with Judy Scherer)

<u>2014</u>

"Connections As A Tool For Growth: Evidence From The Linkedin Economic Graph" (November 2014)

"London: Digital City On The Rise" (June 2014) (with Jonathan Liebenau) **"San Francisco And The Tech/Info Boom: Making The Transition to a**

Balanced and Growing Economy" (April 2014)

2013 and earlier

"Building A Digital City: The Growth and Impact of New York City's Tech/Information Sector" (September 2013)

"Focus on Denver-Boulder-Colorado Springs" (January 2013)(with Judy Scherer)

"The Geography of the App Economy" (October 2012) (with Judy Scherer) **"Where the Jobs Are: The App Economy"** (February 2012)

Selected BusinessWeek Cover Stories

"The GDP Mirage" (November 9, 2009)

"Innovation, Interrupted" (June 15, 2009)

"Can America Invent Its Way Back?" (September 10, 2008)

"How Real Was the Prosperity?" (January 23, 2008)

"The Coming Consumer Crunch" (November 26, 2007)

"The Real Cost of Offshoring" (June 18, 2007)

"What's Really Propping Up The Economy" (September 25, 2006)(part of winning entry for 2006 Economic Journalist of the Year Award)

"Unmasking the Economy" (February 13, 2006)(led to Congressional action;

part of winning entry for 2006 Economic Journalist of the Year Award) **"What the Election Won't Change"** (November 19, 2006)

"The Real Reasons You're Working So Hard..." (October 2, 2005) "Rethinking the Internet" (March 25, 2001)

"The New Economy: It Works in America. Will It Go Global?" (January 31, 2000)

"The 21st Century Economy" (August 31, 1998)(Conceived and edited this special issue; National Magazine Award finalist)

"How Long Can It Last?" (May 19, 1997)(part of winning entry for 1998 Loeb Award)

- "The New Business Cycle" (March 31, 1997)(part of winning entry for 1998 Loeb Award)
- "The Real Truth about the Economy" (November 7, 1994)

"The Economics of Crime" (December 13, 1993)(Part of winning entry for National Magazine Award for General Excellence; Loeb Award finalist)

"The Immigrants: How They're Helping to Revitalize the U.S. Economy." (July 13, 1992)