



## ***Government Management Research Catalog***

*Spring 2022*

The University of Maryland's Robert H. Smith School of Business is proud to have delivered talent, training, and ideas to the federal government for more than a century. As common imperatives facing public and private sector leaders evolve, we remain committed to sustaining this legacy of service and partnership for our United States.

The following summarizes areas of research expertise among current Maryland Smith faculty of potential interest to federal and local government agencies.

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We welcome exploring new opportunities and engagements on these or other timely topics. For more information on any individual or program referenced, please contact:

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## Artificial Intelligence and Big Data

**Impact of Artificial Intelligence on Firms:** Research on the impact of artificial intelligence technologies on firm organization, production innovation, and workforce composition.

- Alex He; Department of Finance

**Big Data, Artificial Intelligence and Customer Engagement:** research on issues related to online consumer behavior, digital advertising, social media analytics, and customer engagement, with implications for how consumers engage with AI. Develops statistical models for big data in these contexts.

- Wendy Moe; Department of Marketing

**Alternative Data and Competitive Advantage:** how the explosion in alternative data (such as social media messages, satellite imagery, geolocation data, etc.) is creating new opportunities to use machine learning for creating and capturing value.

- Anil K. Gupta; Department of Management and Organization

**Algorithmic Bias from Artificial Intelligence:** assessing how people from disadvantaged groups are harmed by bias from AI and the implications for regulations that restrict what personal information can be used when making high-impact decisions on things like bank loans.

– Roland Rust, Department of Marketing

**Impact of Artificial Intelligence Applications on the Economy and Society:** research on societal and market impacts of AI taking over more thinking tasks, to include a market focus of human intelligence (HI) on feeling tasks and people skills, changes in the mix of jobs available in the economy, and shifts in economic investments to prepare for outcomes..

– Roland Rust; Department of Marketing

## Career and Talent Management

**Fostering Individual and Collective Enterprise:** Research and instruction on how to purposefully lead yourself and teams as the CEO of ME, Inc: identifying problems of interest, defining what success looks like at an individual and group level, creating value propositions, and building win-win relationships.

- Rajshree Agarwal, Department of Management and Organization

**Managing Career Resilience:** how employees are affected by career setbacks that involve losing an amount of status in the eyes of their coworkers

- Jennifer Marr; Department of Management and Organization

**Professional Social Patterns:** research on the impact of social interactions in the workplace, to include aversive social encounters and social hierarchies.

- Trevor Foulk; Department of Management and Organization

**Organizational Learning:** implications of employee participation on leadership, teams, and organizational learning, to include what organizations can do to facilitate candid exchange of ideas at the workplace.

- Subra Tangirala; Department of Management and Organization

**Communications and Conflict Resolution:** communication strategies such as negotiating, third party-dispute-intervening, networking strategies, or reward-allocating strategies to enhance conflict resolution among workplace employees and stakeholders.

- Debra Shapiro; Department of Management and Organization

## Climate Finance

**Climate Finance & Risk Training:** assessing impact of climate risk on financial services industry: stress testing, statistical analysis of hurricane frequency and severity on mortgage default

- Cliff Rossi; Department of Finance

**Climate Finance Risk Assessment of Investment Portfolios:** measurement and impact of the risks of climate change on investor stock portfolios.

- Russ Wermers; Department of Finance

**Cost-Benefit Analysis of Climate Finance:** understanding costs and benefits by applying economic analysis to policy decisions, including climate finance.

- Albert S. Kyle; Department of Finance

## Enterprise Risk Management

**Federal Risk Academy:** cross-disciplinary executive education program on best practices in risk management

- Cliff Rossi; Department of Finance

**Economics and Risks in Pharmaceutical Enterprise:** assessing risks and opportunities in leveraging advanced technologies and implementing quality rating systems for pharmaceutical manufacturers.

- Cliff Rossi; Department of Finance

**Federal Housing Enterprise Risk and Reform:** understanding counterparty risk at Ginnie Mae, and assessing reform at Fannie Mae, Freddie Mac and the FHA

- Cliff Rossi; Department of Finance

**Variance Risk:** developing methodologies to manage and hedge variance risk.

- Steven Heston; Department of Finance

**Economics of Cybersecurity:** accounting for enterprise-wide costs, risks, and incentives for cybersecurity investments.

- Larry Gordon, Marty Loeb & Lei Zhou; Department of Accounting & Information Assurance

**Social consequences of corporate innovation and investments:** characterizing mis-aligned private enterprise incentives relative to public interests, examining the role of institutions and corporate taxes, and assessing negative and positive externalities depending on sectors (e.g., Covid-19 vaccine production).

- Lemma Senbet; Department of Finance

## Entrepreneurship

**Impact of Noncompete and Nondisclosure Agreements on Entrepreneurship:** Use and regulation of employment restrictions (e.g., noncompete and nondisclosure agreements) and how they affect workers, firms, and markets.

- Evan Starr; Department of Management and Organization

**Venture Capital and Startup Financing:** How venture capitalists match with startups and affect startup outcomes and product market interactions

- Richmond Mathews; Department of Finance

**Team Diversity and Firm Growth:** How the composition of industry experiences in entrepreneurial teams affects start-up firms' early-stage successes.

- Geoffrey Tate and Liu Yang; Department of Finance

**Startup Team Formation:** how to balance composition of experiences and prior relationships to enable startup success.

- Brent Goldfarb, Gilad Chen, and Rajshree Agrawal; Department of Management and Organization

**Dynamics of Firm Growth:** Best practices in organization of new ventures for growth.

- David Kirsch, Department of Management and Organization

## Ethics and Emotional Intelligence at Work

**Workplace Ethics:** research on individual employee ethics, motivations to behave unethically at work, how leaders can promote ethical environments, how people evaluate and judge organizations based on perceptions of engagement with unethical behavior, and how ethics relates to selection processes.

- Rellie Derfler-Rozin; Department of Management and Organization

**Emotional Intelligence at Work:** how moods and emotions that people experience at work affect their thoughts, choices, and behaviors as well as how management of such emotions via emotional intelligence (EI) at the individual level and/or via emotional climates at the group or organizational level, affects various individual, group, and organizational performance outcomes.

- Myeong-Gu Seo; Department of Management and Organization

## Federal Budget Analysis

**Social Security and Medicare Trustees Reports** – Analysis of policy implications of the growth of Social security and Medicare programs.  
- Michael Faulkender; Department of Finance and former Assistant Secretary of the Treasury

## Financial Market Trading and Data Flows

**Financial Market Manipulation:** understanding how strategic trading of securities and commodities affect prices and commodity supplies and assessing policies and practices to deter manipulation.  
- Albert S. Kyle; Department of Finance

**Financial Market Crashes:** understanding how market crashes and volatility can result from the trading of financial assets and derivatives contracts, and analysis of trading data to understand sources of crash events.  
- Albert S. Kyle; Department of Finance

**Financial Effects of Economic Sanctions:** understanding intended and unintended effects of economic sanctions on markets for goods, services, and financial assets.  
- Albert S. Kyle; Department of Finance

**The Value of Off Exchange Data:** examining how off-exchange trades contribute to the price discovery process.  
- Tom Ernst; Department of Finance

**Payment for Order Flow And Asset Choice:** understanding the payments from wholesalers to retail brokers, and how these payments give brokers incentives to encourage client asset choices.  
- Tom Ernst; Department of Finance

**Financial Market Bubbles and Crashes in New Technology Industries:** Understanding which technologies make for good stories and how these narratives impact investments in public and private new technology securities markets.  
-Brent Goldfarb & David Kirsch, Department of Management and Organizations

## Future of Work Trends

**Accounting for Remote Work:** studying determinants and consequences of remote and hybrid work on agencies and companies.

- Rebecca Hann, Department of Accounting & Information Assurance

**Accounting Technology:** understanding effects of emerging technologies on skills demanded by accounting firms as well as audit outcomes.

- Rebecca Hann, Department of Accounting & Information Assurance

**Remote Teaming:** studying organizational advantages and disadvantages among remote, cross-organizational, and co-located teams in terms of diversity of knowledge and skills, coordination costs, standards, efficiency, and resource expenditure.

- Dave Waguespack, Department of Management and Organization

**Future of Work Decisions:** explaining biases in machine learning and work-from-anywhere programs.

- Evan Star, Department of Management and Organization

## Innovation and Change Leadership

**Leader Empowerment and Creativity Enhancement:** research on areas of leader empowerment, shared leadership in teams, and enhancing creativity and innovation in organizations.

- Kathryn Bartol; Department of Management and Organization

**Complex Organizational Teaming:** research on new forms of teams and teamwork in modern and complex organizations, to include methods empowering individual members to exert more influence on team processes and new venture creation across settings, including healthcare, technology R&D, and consulting.

- Gilad Chen; Department of Management and Organization

**Fostering Innovation:** Effectiveness of methods to enhance employee creativity and innovation, such as leadership use of social networks, inter-team competition, and structuring the pattern of internal interactions.

- Vijaya Venkataramani; Department of Management and Organization

**Research Funding and Innovation Outcomes:** how federal and industry funding shape the innovation and commercialization of innovation by university researchers.

- Alex He; Department of Finance

**Immigration Policy and Innovation Outcomes in Banks:** how stricter immigration policies limiting banks' ability to hire high-skilled foreign nationals affect their ability to produce cutting-edge FinTech innovation.

- Liu Yang; Department of Finance

## Macro-economic Resilience

**Building Resilience to Global Shocks:** policies and practices for global businesses to develop competitive resilience to international market shocks such as pandemics, cyber-attacks, global financial crisis, and climate change.

- Kislaya Prasad; Department of Decision, Operations, and Information Technologies

**Accounting for Macroeconomics:** use of aggregated accounting information to predict macroeconomic indicators.

- Rebecca Hann, Department of Accounting & Information Assurance

## Managerial Data and Decision Science

**Automation and Machine Learning in Finance:** application of machine learning techniques to financial services industry analysis and mortgage valuation; applied statistical modeling for financial services analysis including mortgage default and prepayment; loss severity analysis; automated underwriting; and collateral valuation.

- Cliff Rossi; Department of Finance

**Applied Simulation Modeling and Analysis:** predictive modeling for a range of applications, including decision processes, epidemic outbreaks, military force models, and options pricing.

- Michael Fu; Department of Decision, Operations, and Information Technologies

**Applied Statistical Optimization:** application of integrated statistical analysis and optimization to humanitarian operations, non-profit management, transportation, medical decision-making.

- Ilya Ryzhov; Department of Decision, Operations, and Information Technologies

**Applied Predictive Analytics:** integration of probabilistic forecasting, text mining for prediction, and experts' opinions for applications in product life-cycle modeling, aviation management and healthcare management.

- Xiaojia Guo; Department of Decision, Operations, and Information Technologies

**Business and Network Analysis:** use of business analytics tools for study of public sector, non-profit, and illicit market activity (e.g. narcotic trafficking)

- S. Raghu Raghavan; Department of Decision, Operations, and Information Technologies

**Network Modeling and Combinatorial Optimization:** mathematical and computational modeling for networked transportation, logistics, scheduling, and healthcare management.

- Bruce Golden; Department of Decision, Operations, and Information Technologies

## Market Design and Competition Policy

**Procurement, Contract, and Auction Design:** market impacts of varying designs for procurement vehicles, auctions, price contracts and sourcing events.

- Wedad Elmaghraby; Department of Accounting & Information Assurance

**Litigation and SEC Enforcement Effects:** how shareholder litigation and SEC Enforcement actions affect the amount and quality of information firms release to investors.

- Michael Kimbrough; Department of Accounting & Information Assurance

**Investor Conference Impact:** the impact of broker-held conferences on various capital market outcomes, including analyst following, bid-ask spreads, Tobin's q, analyst forecast accuracy and timeliness.

- Musa Subasi; Department of Accounting & Information Assurance

**Credit Ratings and Options:** how credit rating agencies use the information from the options market (such as implied volatility and skewness) to predict firms' default risk.

- Musa Subasi; Department of Accounting & Information Assurance

**Psychological Biases in Disclosure and Investment:** how accounting standards cause managers to make poor investment decisions, how sentiment/optimism spread through markets, how management guidance can temper sentiment, and how CEO / CFO personality can impact company reporting and investment decisions.

- Nick Seybert; Department of Accounting & Information Assurance

**Deterrent Effect of Bank Regulation:** how regulatory enforcement actions can have a deterrent effect on peer banks.

- Rebecca Hann; Department of Accounting & Information Assurance

**Online Market Regulation:** Examination of antitrust considerations for dominant internet-based businesses.

- Bobby Zhou; Department of Marketing

**Corporate Governance and Block holder Trading:** how large corporate block holders and their monitoring and trading activities impact corporate governance

- Richmond Mathews; Department of Finance

**Banking Regulation and Managerial Incentives:** understanding the role of incentive features of bank management compensation in the design of incentivized banking regulation.

- Lemma Senbet; Department of Finance

**Money Laundering Regulation:** Assessing unintended consequences of Anti-Money Laundering regulations

- Pablo Slutzky; Department of Finance

**Common Ownership and the Macroeconomic Consequences of Oligopoly:** assessing impact of stock ownership concentration on product market competition, as presented at the Federal Trade Commission in May 2022, and general equilibrium models of oligopoly.

- Bruno Pellegrino; Department of Finance

**Intangible Capital, Star Firms, and Competition:** understanding the role of intangible capital (e.g., R&D; brands) on value creation, to include analysis of firm success on value delivery to customers, fair competition and returns measurements.

- Vojislav Maksimovic; Department of Finance

**Dynamics of Foreign Competition in Export Markets:** The role of institutions, policy on access to financing, and industrial policy on creating high performance firms in developing countries and capacity to compete with U.S. firms in export markets.

- Vojislav Makimovic, Department of Finance

**Identification of Competitive Market Structure and Product-Market Boundaries:**

Quantifying competition between brands, products and services, identifying sub-markets where competition is intense as compared to across submarket competition; using big-data from multiple sources - customer purchase data, survey and conjoint data, social media engagement data, online click-stream data, geographical location data; using AI and Machine Learning and Econometric Methods.

- P. K. Kannan, Department of Marketing

## Online Platform Strategy and Operations

**Online Behavior, Tracking, and Analytics:** applied research in online text analytics, biases in social media data and metrics, behavioral dynamics in online environments, consumer engagement with online content, and platform use of artificial intelligence.

- Wendy Moe, Department of Marketing

**Online Platform Management:** optimization of online platforms with a focus on growth and matching frictions, operations of micro-mobility business models, food waste and returns in retailing.

- Ashish Kabra; Department of Decision, Operations, and Information Technologies

**Online Platform Pricing and Innovation:** policies and regulations of online platform operations in online retailing, ride hailing, social media, and crowdsourcing to address competition, pricing, quality, privacy, and fairness

- Yi Xu; Department of Decision, Operations, and Information Technologies

**Using Freemium Models to Subsidize Services to Citizen Groups**

Designing different types of Freemium models - provision of free content/services along with premium offerings - to develop sustainable business models; mechanism design to subsidize disadvantaged groups through freemium models; using data from various sources and using econometric and machine learning methods.

- P. K. Kannan, Department of Marketing

## Small Business Development

**Seizing Opportunities: Social Capital, Finance and the Promotion of Small Business**

**Dynamism Across the United States:** Research on why small businesses in some communities are better at taking advantage of opportunities than in others – the role of local culture, financing, and skills.

- Vojislav Makimovic and Liu Yang, Department of Finance

**Job-Preservation Effects of Paycheck Protection Program Loans:** Examines the number of jobs preserved as a result of the Paycheck Protection Program (PPP) launched by Small Business Administration and Department of Treasury as part of the COVID-19 Economic Relief (CARES) Act.

- Michael Faulkender; Department of Finance and former Assistant Secretary of the Treasury

## Supply Chain Optimization

**Integrated Supply Chain Scheduling:** optimization of production and outbound distribution scheduling, jobs and maintenance activities scheduling, and parallel machine scheduling.

- Zhi-Long Chen; Department of Decision, Operations, and Information Technologies

**Air Transport Competition and Policy:** competitive environment in air transport and how varying factors influence performance.

- Martin Dresner, Department of Logistics, Business and Public Policy

**Retail Management in Disasters and Emergencies:** understanding consumer behavioral changes and purchasing habits through disasters and other emergencies and how retailers can best manage operations to meet the changing demands.

- Martin Dresner, Department of Logistics, Business and Public Policy

**Electrification of Transport:** researching the intersection of public and private sector concerns about electric vehicles, to include path-dependent technological choice, large-scale technological systems, and infrastructure for the support of electrification.

- David Kirsch, Department of Management and Organization

## Technology Communication and Engagement

**Scientific Guideline Communications:** analysis of best practices in communicating scientific guidelines to the general public.

- Rebecca Ratner; Department of Marketing