Interdisciplinary Collaboration: Drivers and Outcomes

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Convinced that interdisciplinary research is probably the most viable avenue to address many of today's multi-faceted challenges such as climate change, researchers, funding organizations and science policy makers are increasingly calling for more collaboration among scientists from different domains (Ledford, 2015; Rylance, 2015). Indeed, research suggests that interdisciplinary collaborations in academia are steadily growing (Van Noorden, 2015; Porter and Rafols, 2009; Rhoten and Pfirman, 2007). Moreover, interdisciplinary collaboration is not limited to academia. Other organizations have also long experimented with forming teams of individuals from different knowledge and functional backgrounds in the hope that such efforts would lead to creative and superior solutions (Howard-Grenville and Carlile, 2006; Edmondson, 2003).

Despite this enthusiasm for interdisciplinary collaborations, past findings evaluating its performance are equivocal. While some scholars have shown a positive correlation between interdisciplinary publications and their quality (Leahey, Beckman and Stanko, 2017), others have reported no correlation between the two (Rinia et al., 2001) or even a negative correlation (Yegros-Yegros, Rafols, D'Este, 2015). In addition, studies have documented considerable challenges involved with interdisciplinary research. These include difficulties in securing funding (Bromham, Dinnage and Hua, 2016), costs of navigating the political economy of involved departments (Kaplan, Milde and Cowan, 2017) and productivity penalties for those engaged in interdisciplinary research due to higher barriers to proving the quality of their research outcomes to disciplinary audiences (Leahey, Beckman and Stanko, 2016).

These seemingly inconsistent findings are partly driven by fundamental challenges involved with empirically analyzing the impact of interdisciplinary research on research outputs. In the absence of data on failed interdisciplinary collaborations, the positive association between interdisciplinary collaborations and the impact of their output could be severely biased. More importantly, one needs to consider that those who engage in interdisciplinary research do not randomly engage in such collaborations. Without an understanding of the true nature of selection into such collaborations, initiatives to push more people into interdisciplinary research could be misguided and lead to wasteful investments.

In addition, there isn't a robust theoretical understanding of the contingencies under which interdisciplinary collaborations would lead to better or worse research outcomes. On one hand, a large stream of research on innovation has argued for the importance of access to diversified knowledge through collaboration and network brokerage in boosting individuals' and firms' innovative performance (Burt, 2004; Audia and Goncalo, 2007; Fleming, Mingo, and Chen, 2007). On the other hand, several recent empirical findings show that combining knowledge across different domains may be negatively correlated with the novelty or impact of innovation outputs (Kaplan and Vakili, 2015; Teodoridis et al., 2018).

This research project attempts to address the above challenges by exploiting a particularly strong norm in economics research, that of alphabetical ordering of authors on publications (Engers et al., 1999), as an instrument that influences the interdisciplinary collaboration behavior of economists. More specifically, past research shows that alphabetical ordering in the field of economics leads to credit allocation discrimination against authors with surnames later in the alphabet (Einav and Yariv, 2006; van

Praag and van Praag, 2008; Efthyvoulou, 2008). Einav and Yariv (2006), for example, show that faculty with later surnames are less likely to receive tenure in their institutions or to receive prestigious prizes such as the Clark Medal and the Nobel Prize. Thus, in the presence of alphabetical discrimination, we expect economists to adjust their collaboration patterns based on the position of their surnames in the alphabet. Since individuals have little choice in selecting their surnames, their alphabetical order can be used as an exogenous instrument that influences their collaboration patterns.

To analyze the inter-disciplinary collaboration choices of economists, we would first develop a theoretical model of collaboration choice based on prior research on team production (Becker and Murphy, 1992) and credit allocation in academia (Bikard, Murray and Gans, 2015; Gans and Murray, 2015). Subsequently, we would use the exogenous variance in alphabetical ranking of economists' last names as an instrument for the amount of credit they would receive from different types of collaborations. In particular, we would exploit the fact that in collaborating with scientists outside economics, economists would have the opportunity to break the alphabetical ordering norm and instead follow other norms, such as listing authors based on contribution or hierarchical structure of the research team. The core idea behind our instrumental variable setup is that whereas alphabetical ranking of last names could directly influence the likelihood of interdisciplinary collaborations among economists, it would not influence the performance of such collaborations through any other channels.

With this instrumental variable setup, we would be able to estimate the impact of interdisciplinary research on the type, composition, and impact of the research output produced through such collaborations involving economists. We would also be able to investigate distributional effects such as the role of knowledge complementarity, physical distance, gender, ethnicity, and language on the collaboration choice and research output of scientists.

The findings would have direct implications for theory and practice. From a theoretical standpoint, the findings can provide insight into how interdisciplinary research can shape the direction, novelty, and quality of research outcomes. The results can also shed light on the contingencies under which interdisciplinary collaborations may lead to breakthrough research. The findings can also contribute to our understanding of how institutional discrimination would influence the collaboration patterns of researchers and their output. While this is not the main objective of our project, we believe our findings can provide valuable insight into the heterogeneous impact of institutional discrimination on individuals' creative output. Specifically, we expect institutional discrimination to create incentives for higher-quality creative workers to engage in costly search outside their social or institutional circle, leading to more distant collaborations and hence more diverse knowledge recombinations.

From a practical standpoint, the findings can directly inform the policies aimed at encouraging interdisciplinary research. We aim to go beyond measuring a net effect of interdisciplinary collaboration on the rate, direction, and quality of research output, to providing nuanced insight into the circumstances under which interdisciplinary research may succeed or fail. Our findings can thus help funding organizations and science policy makers better design the incentive mechanisms and evaluation criteria for interdisciplinary projects.

Budget Plan

We collect data for this analysis from different sources. In the first step, we collect data on approximately 5,000 PhD graduates in economics from top economics programs in the United States between 1990 and 2010 from the ProQuest Dissertation & Theses Global Database, the largest repository of graduate dissertations and theses. Using the sample of PhD graduates (instead of current faculty in economics departments) helps us alleviate the potential survival bias that may be systematically correlated with the alphabetical ranking of individuals. In the second stage, we collect the career history of each individual using public sources (such as their academic, company, and LinkedIn profiles). Third, we collect the full publication history of individuals who have pursued a career in academia using the Scopus database and their CVs. Fourth, we use the article level data to identify the list of co-authors on each publication and their affiliations. We may need to use public sources to complement the data on co-authors. Our aim is to have a usable final sample size of 2,000 economists with their full career history, publication records, and collaboration patterns.

We have already started the data collection process and collected the list of 5,000 PhD graduates from the ProQuest database along with their publication records from Scopus. We also have collected and cleaned the career history of about 1,000 individuals in our sample. We still need to collect and clean the career history data for the rest of the individuals. We may also need to expand the original list of individuals to make sure our final sample is large enough for our analysis. The most time-consuming task is to collect the affiliation data on the full set of co-authors from publication records and public sources. Based on our data collection efforts so far, we speculate that we need approximately 500 hours of RA help (at an hourly rate of $25 per hour) with the remaining data collection and processing tasks. Based on experience, we need to use graduate students in economics (or economics related areas) for most of the tasks. We also expect to spend approximately $5,000 on presenting the paper at various venues and receiving feedback on it. We have also allocated $2,500 to miscellaneous items such as buying access to certain data sources or hiring a computer programmer to write a specific piece of code for data collection/processing.

500 hours of RA work ($25/hour)	$12,500
Presenting the work and receiving feedback at various venues	$5,000
Miscellaneous (purchasing data, hiring a computer programmer, etc.)	$2,500
Total	**$20,000**

References

Audia, P. G., & Goncalo, J. A. (2007). Past success and creativity over time: A study of inventors in the hard disk drive industry. ***Management Science***, *53*(1), 1-15.

Becker, G. S., & Murphy, K. M. (1992). The division of labor, coordination costs, and knowledge. *The* ***Quarterly Journal of Economics***, *107*(4), 1137-1160.

Bikard, M., Murray, F., & Gans, J. S. (2015). Exploring trade-offs in the organization of scientific work: Collaboration and scientific reward. ***Management Science***, *61*(7), 1473-1495.

Bromham, L., Dinnage, R., & Hua, X. (2016). Interdisciplinary research has consistently lower funding success. ***Nature***, *534*(7609), 684.

Burt, R. S. (2004). Structural holes and good ideas. ***American Journal of Sociology***, *110*(2), 349-399.

Edmondson, A. C. (2003). Speaking up in the operating room: How team leaders promote learning in interdisciplinary action teams. ***Journal of Management Studies***, *40*(6), 1419-1452.

Efthyvoulou, G. (2008). Alphabet economics: The link between names and reputation. ***The Journal of Socio-Economics***, *37*(3), 1266-1285.

Einav, L., & Yariv, L. (2006). What's in a surname? The effects of surname initials on academic success. ***Journal of Economic Perspectives***, *20*(1), 175-187.

Engers, M., Gans, J. S., Grant, S., & King, S. P. (1999). First-author conditions. ***Journal of Political Economy***, *107*(4), 859-883.

Fleming, L., Mingo, S., & Chen, D. (2007). Collaborative brokerage, generative creativity, and creative success. ***Administrative Science Quarterly***, *52*(3), 443-475.

Gans, J., Murray, F. (2015). Credit History: The Changing Nature of Scientific Credit, in A. Jaffe and B. Jones (eds), The Changing Frontier, Chapter 4, NBER.

Howard-Grenville, J. A., & Carlile, P. R. (2006). The incompatibility of knowledge regimes: consequences of the material world for cross-domain work. ***European Journal of Information Systems***, *15*(5), 473-485.

Kaplan, S., Milde, J., & Cowan, R. S. (2017). Symbiont Practices in Boundary Spanning: Bridging the Cognitive and Political Divides in Interdisciplinary Research. ***Academy of Management Journal***, *60*(4), 1387-1414.

Kaplan, S., & Vakili, K. (2015). The double-edged sword of recombination in breakthrough innovation. ***Strategic Management Journal***, *36*(10), 1435-1457.

Leahey, E., Beckman, C. M., & Stanko, T. L. (2017). Prominent but less productive: The impact of interdisciplinarity on scientists' research. ***Administrative Science Quarterly***, *62*(1), 105-139.

Ledford, H. (2015). Team Science: Interdisciplinarity has become all the rage as scientists tackle society's biggest problems. But there is still strong resistance to crossing borders. ***Nature***, *525*(7569), 308-311.

Porter, A., & Rafols, I. (2009). Is science becoming more interdisciplinary? Measuring and mapping six research fields over time. ***Scientometrics***, *81*(3), 719-745.

Rhoten, D., & Pfirman, S. (2007). Women in interdisciplinary science: Exploring preferences and consequences. ***Research Policy***, *36*(1), 56-75.

Rinia, E. J., Van Leeuwen, T. N., Van Vuren, H. G., & Van Raan, A. F. J. (2001). Influence of interdisciplinarity on peer-review and bibliometric evaluations in physics research. ***Research Policy***, *30*(3), 357-361.

Rylance, R. (2015). Global funders to focus on interdisciplinarity: granting bodies need more data on how much they are spending on work that transcends disciplines, and to what end. ***Nature***, *525*(7569), 313-316.

Teodoridis, F., Bikard, M., & Vakili, K. (2017). *The pace of Change and Creative Performance: Specialist and Generalist Mathematicians at the Fall of the Soviet Union*. Working Paper, Available at: https://ssrn. com/abstract= 2911141 or http://dx. doi. org/10.2139/ssrn. 2911141.

Van Noorden, R. (2015). Interdisciplinary research by the numbers. ***Nature***, *525*(7569), 306.

Van Praag, C. M., & van Praag, B. (2008). The benefits of being economics professor A (rather than Z). ***Economica***, *75*(300), 782-796.

Yegros-Yegros, A., Rafols, I., & D'Este, P. (2015). Does interdisciplinary research lead to higher citation impact? The different effect of proximal and distal interdisciplinarity. ***PloS One***, *10*(8), e0135095.

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Academic Appointments

London Business School, London, UK

- Assistant Professor of Strategy and Entrepreneurship, 2013-Present

Education

Rotman School of Management, University of Toronto

- Ph.D. in Strategic Management, 2008-2013
- Thesis Topic: Interaction between Competition, Collaboration and Innovation in Knowledge Industries
- Committee: Anita McGahan (chair), Ajay Agrawal, Sarah Kaplan, Brian Silverman

Sharif University of Technology, Iran

- Master of Business Administration, 2008
- B.Sc. in Electrical Engineering, 2006

Research Interests

Innovation and Collaboration, Specilization and Creativity, Knowledge Recombination, Science Policy

Publications

Bikard M, Vakili K, Teodoridis F. ***forthcoming***. When Collaboration Bridges Institutions: The Impact of University-Industry Collaboration on Academic Productivity. ***Organization Science***

- Covered by Nature: Savage, N. 2017. Industry links boost research output. ***Nature***, 554(7693): 423-423.

Vakili K, Zhang L, ***forthcoming***. High on Creativity: The Impact of Social Liberalization Policies on Innovation. ***Strategic Management Journal***.

- Best Paper Award Finalist, AOM Conference 2015, TIM Division
- Covered by HBR and US News

Vakili K, 2016. Collaborative Promotion of Technology Standards and the Impact on Innovation and Industry Structure: Evidence from Modern Patent Pools. ***Organization Science***, 27(6): 1504-1524.

Vakili K, McGahan A, 2016. Healthcare's Grand Challenge: Stimulating Basic Science on Diseases that Primarily Afflict the Poor. ***Academy of Management Journal***, 59(6): 1917-1939.

Vakili K, McGahan A, Rezaie R, Mitchell W, Daar AS, 2015. Progress in Human Embryonic Stem Cell Research in the United States between 2001 and 2010. ***PLoS ONE***, 10(3): e0120052.

Kaplan S, Vakili K, 2015. The Double-Edged Sword of Recombination in Breakthrough Innovation. ***Strategic Management Journal***, 36(10): 1435-1457.

- Lead article
- Best Paper Proceedings of the AOM Conference 2012
- Winner of the Best Paper Award at the DRUID Conference 2012

Other Publications

Vakili K, Zhang L. 2018. Research: Legal Marijuana and Gay Marriage Have Been Good for U.S. Innovation. ***HBR.org***, available at: https://hbr.org/2018/03/research-legal-marijuana-and-gay-marriage-have-been-good-for-u-s-innovation.

Working Papers & Papers Under Review

The pace of change and creative performance: Specialist and generalist mathematicians at the fall of the Soviet Union (with Micheal Bikard and Florenta Teodoridis)

- Under 3rd review at *Administrative Science Quarterly*
- Best Paper Proceedings of the AOM Conference 2017 (under the title Can Specialization Foster Creativity? Mathematics and the Collapse of the Soviet Union

An Inside Look: Modeling Heterogeneity in the Organization of Scientific Work (with Hazhir Rahmandad)

- Under 2nd review at *Organization Science*

Topic Modeling: Method, Theory, and Application in Management Research (with Dev Jennings, Sarah Kaplan, Tim Hannigan, Richard Haans, Venn Glaser, and Milo Wang)

- Proposal accepted at *Academy of Management Annals*

Organizing for Innovation: A Contingency Perspective on Innovative Team Composition (with Sarah Kaplan)

- Under 1st review at *Strategic Management Journal*

The Research Money Can't Buy: The Impact of Federal Funding on Scientists' Research Behavior (with Michael Blomfield)

- Preparing for journal submission

Work in Progress

Collaborating out of Discrimination

- Data collection and analysis in progress

IP Rights and the Diffusion of Basic Science

- Data collection and analysis in progress

Cases and Teaching Materials

Mylonadis Y, Vakili K. 2018. *Valve enters the game console industry.* London Business School.

Ethiraj S, Vakili K, Zuzul T. 2015. *The Petroleum Industry in the UK.* London Business School.

Ethiraj S, Vakili K, Zuzul T. 2015. *Tesco and UK Food and Grocery Retail Industry in 2015.* London Business School.

Ethiraj S, Vakili K, Zuzul T. 2015. *Transocean and Patterson-UTI.* London Business School.

Ethiraj S, Vakili K, Zuzul T. 2015. *Red Bull Enters the United States.* London Business School.

Teaching

London Business School

- 2017-2018: Digital Strategy, MBA Programme
- 2013-2018: Core Strategy, MBA Programme
- 2016-2018: Core Strategy, EMBA Programme
- 2015-2017: London Business Experience, MBA Programme
- 2015-2016: Strategy, Master in Finance Programme
- 2015-2016: Global Business Experience, EMBA Programme
- 2015-2016: Innovation & Entrepreneurship, PhD Programme

Honors, Awards, & Scholarships

- 2017: Listed in The Favorite Professors Of Top MBAs by Poets and Quants
- 2015: AOM TIM Division Best Paper Award Finalist
- 2014: AOM BPS Division Best Dissertation Award Finalist
- 2012: Winner of the Best Paper Award (joint with Sarah Kaplan), DRUID Conference 2012
- 2012: REER Conference Best Student Paper Award Finalist

Invited Presentations

- 2017: Grenoble School of Management; University of Bath; ESMT Berlin; Rotman (UofT)
- 2016: 7th Annual Economics of Strategy Workshop at NYU Stern School of Business; Maryland Entrepreneurship Conference; Tilburg University; ESSEC University
- 2015: NBER Summer Institute, Innovation Policy and the Economy. Cambridge, MA
- 2013: Harvard Business School, Strategy Unit; Harvard Business School, Entrepreneurial Management Unit; University of Maryland, Management & Organization; University of Southern California, Management & Organization; Duke University, Strategy; HEC Paris, Strategy & Business Policy; IESE Business School, Entrepreneurship; CBS, Department of Innovation and Organizational Economics; Bocconi, Economics and Management of Innovation and Technology; London Business School, Strategy & Entrepreneurship; NUS Business School, Strategy & Policy; Singapore Management University, Strategy and Organization; Temple University, Strategic Management;

Conference Presentations

- Academy of Management Conference (AOM 2010, 2011, 2012, 2014, 2015, 2016, 2017), Strategic Management Society Conference (SMS 2011, 2012, 2014, 2017), DRUID Conference (2012, 2014), Tuck Summer Camp (2014, 2016), Consortium for Competitiveness and Cooperation (CCC 2012, 2014), Smith Entrepreneurship Research Conference (2012, 2016), NBER Entrepreneurship Research Bootcamp (2011)

Professional Activities

- Member of the Editorial Board of the Strategic Management Journal (2015-present)
- Member of the Editorial Board of the Organization Science (2018-present)
- Member of the Editorial Board of the Strategic Entrepreneurship Journal (2017-present)
- Representative-at-Large at AoM, Technology & Innovation Management Division (2018-2021) - Representative-at-Large at Strategic Management Society, Knowledge & Innovation Interest Group (2018-2021) - Member of the BPS Research Committee (2015-2017), Academy of Management
- Ad hoc reviewer for Management Science, Industrial and Corporate Change, and Research Policy;

RECENT Non-Academic Experience

- 2014-present: Member of the Advisory Board, Blanclink Inc.
- 2016-present: Member of the Advisory Board, PersiangGig Corp.
- 2007-2008: Founder and CEO, Afiction Games Inc.

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Appointments:

2014 – Assistant Professor, Strategy; Management and Organizations, Marshall School of Business, University of Southern California
2016 – Affiliate, Lloyd Greif Center for Entrepreneurial Studies, Marshall School of Business, University of Southern California

Education:

Ph.D. Strategic Management and Economics, Rotman School of Management, University of Toronto, 2014
Dissertation: "Three Essays on the Impact of Knowledge Accumulation on the Process of Knowledge Creation with a Focus on Collaboration"
Committee: Ajay Agrawal (chair), Joshua Gans, Avi Goldfarb, Brian Silverman
MBA Strategic Management and International Business, Schulich School of Business, Toronto
B.Sc. Mathematics, University of Bucharest
B.Sc. Computer Science, University of Bucharest

Research Activity:

Refereed Publications:

- "Understanding the Changing Structure of Scientific Inquiry" (with Ajay Agrawal and Avi Goldfarb), *American Economic Journal: Applied Economics*, 2016 8(1): 100-128
- "Understanding Team Knowledge Production: The Interrelated Roles of Technology and Expertise", *Management Science*, forthcoming
- "When Collaboration Bridges Institutions: The Impact of University-Industry Collaboration on Academic Productivity" (with Michael Bikard and Keyvan Vakili), *Organization Science*, forthcoming

Under Review:

- "The Pace of Change and Creative Performance: Specialist and Generalist Mathematicians and the Fall of the Soviet Union" (with Michael Bikard and Keyvan Vakili)
  - *Academy of Management Best Paper Proceedings* (2017)
- "Startup Commercialization Strategies of Disruptive Technologies: Implications for the Rate of Scientific Discovery"
- "Jack of All Trades and Master of Knowledge: The Role of Diversity in Knowledge Integration" (with Frank Nagle)
- "The Cost of Research Tools and the Direction of Innovation: Evidence from Computer Science and Electrical Engineering" (with Jeff Furman)

Working Papers:

- "Collaboration Norms and Implications for Knowledge Creation" (with Michael Bikard and Keyvan Vakili)
- "Collocation, Collaboration and the Direction of Innovation" (with Valentina Tartari)
- "Impact of AI on Labor Markets: Evidence from AI Adoption in Radiology" (with Avi Goldfarb)

- "Changes in Law Discourse and Regional Economic Growth" (with Kristina Lerman and Beverly Rich)
- "Do Citations Capture Knowledge Flows?" (with Jeff Furman)

Awards:

- NSF Science of Science & Innovation Policy: "Collaborative Research: The Impact of Research Costs on the Rate and Direction of Scientific Discovery" (2016-2019)
  - Co-PI (with Jeff Furman) for approx. $500,000
- Grief Research Award, 2016
- Finalist, AOM TIM Dissertation Award, 2015
- Semi-finalist, ISPIM Innovation Management Dissertation Award, 2015
- Steven Klepper Award for Best Young Scholar Paper, DRUID, Copenhagen, 2014
- Research Program on the Economics of Knowledge Contribution and Distribution funded by the Sloan Foundation, Research Grant, 2014
- Best Student Paper Award, Roundtable for Engineering Entrepreneurship Research (REER), Scheller College of Business, Georgia Tech, Atlanta, 2013
- SGS Conference Grant, University of Toronto, 2013
- CCMF Doctoral Fellowship, 2009 to 2014

Conferences and Seminars:

- Social Science and Technology seminar, Stanford University (2018)
- Roundtable for Engineering Entrepreneurship Research (REER), Georgia Institute of Technology (2017)
- Duke Strategy Conference, Durham (2017)
- Academy of Management, Atlanta (2017)
- DRUID Society Conference, New York (2017)
- Smith Entrepreneurship Research Conference, Maryland (2017)
- Boston University (2017)
- West Coast Research Symposium on Technology Entrepreneurship, Foster School of Business, Seattle (2016)
- Roundtable for Engineering Entrepreneurship Research (REER), Georgia Institute of Technology (2016)
- Academy of Management, Anaheim (2016)
- DRUID Society Conference, Copenhagen Business School (2016)
- Individual and Collective Antecedents of Scientific Knowledge Production, Workshop (2016)
- Roundtable for Engineering Entrepreneurship Research (REER), Georgia Institute of Technology (2015)
- Academy of Management, TIM Doctoral Dissertation Competition (2015)
- Roundtable for Engineering Entrepreneurship Research (REER), Georgia Institute of Technology (2014)
- Washington University in St. Louis, Olin Business School (2014)
- University of California at San Diego, School of International Relations and Pacific Studies (2014)
- Carnegie Mellon University, Department of Engineering and Public Policy (2014)
- Georgia Institute of Technology, Scheller College of Business (2014), Atlanta
- DRUID Society Conference on Entrepreneurship, Copenhagen Business School (2014)
- National Bureau of Economic Research (NBER) Summer Institute (2014)
- Academy of Management, Symposium (2014)
- CCC Colloquium for Doctoral Student Research, (2013)
- DRUID, 35th Celebration Conference on Innovation, Strategy and Entrepreneurship, ESADE, Barcelona (2013)
- National Bureau of Economic Research (NBER), Productivity Seminar Series (2013)
- Economics of Knowledge Contribution and Distribution, Sloan Foundation and Georgia Tech (2013)
- Bocconi University, Milan (2013)
- IESE Business School, Barcelona (2013)

- Roundtable for Engineering Entrepreneurship Research (REER), Georgia Tech, Atlanta (2012)
- The Organization, Economics and Policy of Scientific Research, LEI & BRICK, Turin (2012)
- University of Toronto, Rotman School of Management, Strategy Seminar Series (2012)

Teaching:

2016 – Quantitative Research Methods (PhD)
2016 – Decision-Making and Problem-Solving: An Integrated Perspective (MBA)
2015 – Strategic Management (Undergraduate)
2009 – 2014 Teaching assistant (Strategic Management, MBA; Corporate Strategy, MBA; Venture Capital, MBA; Model-based Decision Making in Practice, MBA; International Business, MBA)

Professional Activities:

Editorial Review Board
Organization Science
Methods Advisory Committee @ Organization Science
California Management Review
Ad Hoc Referee
Management Science
Organization Science
Strategic Management Journal
Research Policy
Industry and Innovation
California Management Review
Academy of Management
DRUID Society Conference
Professional Affiliations
Academy of Management (BPS, TIM, Entrepreneurship)
American Economic Association (AEA)
Other
2017-2019 Research Committee member, Academy of Management, Strategic Management (STR) division
2013-2014 Fellow, Creative Destruction Lab at Rotman School of Management, University of Toronto

Non-Academic Experience:

Identified, designed and managed the full development life-cycle of various data-driven business decision-making applications (big data, business intelligence, data warehousing)

- Consultant/Project Manager (PMP), Harlequin Enterprises – TORSTAR, Toronto, 2006-2009
- Technical Project Manager, St. Elizabeth Health Care, Toronto, 2002-2005
- Project Lead/Software Developer, IPSOS-Reid, Toronto, 2000-2002

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ACADEMIC APPOINTMENT

Assistant Professor of Strategy and Entrepreneurship 2013-Present
London Business School

EDUCATION

PhD, Technological Innovation, Entrepreneurship and Strategy, MIT Sloan 2013
Diplôme des Grandes Écoles; MSc in Management; Diplom Kaufmann, ESCP Europe 2005
Classes Préparatoires, Lycée Notre-Dame du Grandchamp, Versailles, France 2002

PUBLICATIONS

In Refereed Journals

Bikard, Michaël, Fiona Murray, and Joshua Gans. 2015. "Exploring Trade-offs in the Organization of Scientific Work: Collaboration and Scientific Reward." *Management Science* 61:1473–1495.

Bikard, Michaël. 2018. "Made in Academia: The Effect of Institutional Origin on Inventors' Attention to Science." Forthcoming, *Organization Science*.

- Best Student Paper Award Finalist at AOM 2012 TIM Division and at DRUID 2012
- Academy of Management Proceedings 2012

Bikard, Michaël, Keyvan Vakili, and Florenta Teodoridis*. 2018."When Collaboration Bridges Institutions: The Impact of University-Industry Collaboration on Academic Productivity." Forthcoming, *Organization Science*.

Other Publications

Bikard, Michaël, and Scott Stern. 2010. "Review of *The Invention of Enterprise: Entrepreneurship from Ancient Mesopotamia to Modern Times*, edited by David S. Landes, Joel Mokyr, and William J. Baumol." *Journal of Economic Literature* 49: 164-168.

In *Routledge Handbook of Modern Israel*, edited by Alain Dieckhoff. French edition: Fayard, 2007. U.S. edition: Routledge, 2013. Two chapters: "An Economy on the Road to Independence?" and "The New Israeli Economy: Opting for High Technology" (with Daniel Rouach)

- Book awarded "Grand Prix du livre 2008" by the Sciences Po faculty

WORK IN PROGRESS

"The pace of change and creative performance: Specialist and generalist mathematicians at the fall of the Soviet Union" With Florenta Teodoridis and Keyvan Vakili

* Authors contributed equally

- Academy of Management Proceedings 2017
- Under 3rd review at *Administrative Science Quarterly*

"Hubs as Lampposts: Academic Location and Firms' Attention to Science." With Matt Marx
- Revise & Resubmit at *Management Science*

"Simultaneous Discoveries as a Research Tool: Method and Promise."

"Gender Differences in Publications and Patenting: Does Scientific Style Matter?" With Isabel Fernandez-Mateo

"The Division of Innovative Labor between Academia and Industry and Pasteur's Quadrant"

TEACHING

- Understanding General Management, MBA, 2017-18
- Discovering Entrepreneurial Opportunities, EMBA, 2014, 2017-18; MBA, 2014-17
- Entrepreneurial Management, MiM and MFA, 2016-18
- Topics in Entrepreneurship, PhD, 2014

INVITED PRESENTATIONS

- **2018**
  - Wharton Technology & Innovation Conference. Philadelphia, PA
  - ASSA/AEA Annual Meeting. Philadelphia, PA

- **2017**
  - Stockholm School of Economics. Stockholm, Sweden
  - Institutet för Näringslivsforskning (IFN). Stockholm, Sweden
  - INSEAD Strategy Seminar. Fontainebleau, France
  - Academy of Management annual meeting, Atlanta, GA
  - Dartmouth Tuck 2017 Research Summer Camp. Hannover, NH
  - University of Groningen, Netherlands

- **2016**
  - HEC Paris, Strategy & Business Policy. Paris, France
  - REER Conference, Atlanta, GA
  - Erasmus University, Rotterdam, Netherlands

- **2015**
  - London School of Economics. London, UK
  - UC Berkeley Innovation Seminar. Berkeley, CA
  - Duke Strategy Conference. Durham, NC
  - NBER Productivity Lunch. Cambridge, MA
  - Academy of Management annual meeting, Vancouver, BC
  - Israel Strategy Conference. Jerusalem, Israel.
  - Dartmouth Tuck 2015 Research Summer Camp. Hannover, NH.
  - 11th Annual Smith Entrepreneurship Research Conference, College Park, MD
  - USC Management & Organization Seminar. Los Angeles, CA
  - ESSEC Management Department. Paris, France.

- **2014**
  - Academy of Management annual meeting, Philadelphia, PA
  - Dartmouth Tuck 2014 Research Summer Camp. Hannover, NH
  - DRUID Society conference, Copenhagen, Denmark
  - KU Leuven; Managerial Economics, Strategy and Innovation. Leuven, Belgium

- **2013**
  - NBER Summer Institute, Innovation Policy and the Economy. Cambridge, MA
  - Singapore Management University, Strategy and Organization. Singapore
  - NUS Business School, Strategy & Policy. Singapore
  - HKUST, Department of Management. Hong Kong, China
  - Harvard Business School, Entrepreneurial Management Unit. Boston, MA
  - University of Toronto, Rotman School of Business, Strategy. Toronto, Canada
  - CBS, Department of Innovation and Organizational Economics. Copenhagen, DK
  - Bocconi, Economics and Management of Innovation and Technology. Milan, Italy
  - HEC Lausanne, Strategy. Lausanne, Switzerland
  - Universitat Pompeu Fabra, Economics and Business. Barcelona, Spain
  - IESE Business School, Strategy and Entrepreneurship. Barcelona, Spain
  - HEC Paris, Strategy & Business Policy. Paris, France
  - London Business School, Strategy & Entrepreneurship. London. UK

- **2012**
  - Boston University, Strategy & Innovation. Boston, MA
  - Technion, Industrial Engineering & Management. Haifa, Israel
  - Tel Aviv University, Recanati School. Tel Aviv, Israel
  - ESADE, Strategy & General Management. Barcelona, Spain
  - Stockholm School of Economics Ratio Institute. Stockholm, Sweden
  - Columbia Business School, Strategy. New York, NY
  - University of Michigan, Ross School of Business, Strategy. Ann Arbor, MI
  - INSEAD, Strategy. Fontainebleau, France
  - University College London, Management Science & Innovation. London, UK
  - IE Business School, Entrepreneurship. Madrid, Spain
  - Academy of Management annual meeting, Boston, MA
  - DRUID Society conference, Copenhagen, Denmark
  - Consortium for Cooperativeness and Competition, College Park, MD

- **2011**
  - Roundtable for Engineering Entrepreneurship Research, Atlanta, GA
  - Darden Entrepreneurship and Innovation Research Conference, Charlottesville, VA
  - Academy of Management annual meeting, San Antonio, TX
  - NBER Productivity Lunch, Cambridge, MA
  - INFORMS/Organization Science Dissertation Proposal Competition, Charlotte, NC
  - Kauffman Mentoring Workshop, Denver, CO

HONORS AND AWARDS

- 2017: AOM Best Papers Proceedings ("The pace of change and creative performance" paper)
- 2016: LBS Deloitte Institute of Innovation and Entrepreneurship Grant
- 2014: AOM TIM Division Best Dissertation Award Finalist
- 2013: MIT Sloan Doctoral Thesis Prize, 1st place
- 2012: NSF SBE Research Doctoral Dissertation Research Improvement Grant (#1158763)

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- 2012: AOM Best Papers Proceedings ("Made in Academia" paper)
- 2012: Best Student Paper Award Finalist AOM TIM Division
- 2012: J. Robert Beyster Fellowship
- 2012: Best Student Paper Award Nominee DRUID Annual Conference
- 2011: Kauffman Dissertation Fellowship
- 2011: INFORMS/Organization Science Dissertation Proposal Finalist
- 2011: Roberts E-Center Fund Award
- 2011: REER Conference Best Student Paper Award Finalist
- 2009: MIT Energy Fellowship
- 2007-2012: MIT Sloan Doctoral Fellowship

PROFESSIONAL SERVICES

- *Strategic Management Journal* Editorial Review Board
- Ad hoc reviewer for *Management Science, Organization Science, Academy of Management Journal, Research Policy, Scientometrics, Industry and Innovation*
- Co-organizer TIM Doctoral Research Development Workshop, AOM 2015

PRIOR WORK EXPERIENCE

- IsraelValley (2006-2007): France-Israel Chamber of Commerce newspaper: writer and editor
- Internships: McKinsey & Company (Munich, Germany, 2005); United Nations for Industrial Development Organization (Vienna, Austria, 2005); Molecular Profiles (Nottingham, UK, 2004); Cisco Systems IBSG (Paris, France, 2003)

LANGUAGES

- Fluent: French, English, German
- Intermediate: Spanish, Hebrew

REFERENCES

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