Privacy law and Behavioral Targeting: a cross-national analysis of online investment

Dan Breznitz^{*} and Vincenzo Palermo^{**} December 14, 2012

1. Introduction

Online sales have become an essential and growing percentage of total sales for many businesses, In the United States alone annual online sales are estimated to be \$57 billion (U.S. Department of Commerce, 2012). Consequently, a recent study by the marketing agency ZenithOptimedia, found that online spending accounts for 18% of all advertising expenditure in 2012.¹ Knowledge has supposedly become the new "gold" in our so-called "age of big data" (World Economic Forum, 2012). This analogy should remind us that data, similarly to gold, requires mining and processing before it becomes a valuable and usable asset. In the context of online advertising, the low (sometime free) cost and easy availability of finely refined personal data, which can be analyzed, allows for a new investment strategy which has been defined as "behavioral targeting" (hereafter BT). This strategy allows advertisers to precisely tailor their online advertisements to buyers' needs and preferences. BT advertising, therefore, is an ideal case with which to study how firms use and exploit user data collected through new information and communication technologies. However, the usage of personal data, which is the backbone of BT, has been rising significant privacy concerns. As a result, governments are considering new privacy regulations, aiming to restrict the use and collection of individual data. Several European countries have already implemented restrictive laws, while the US government is still considering passing the "Do Not Track" bill to regulate the use of personal data for targeted ads.

Within this context, we propose to examine the how behavioral targeting performs under different privacy regimes. The examination of this question must consider the implications for both individual privacy and innovation and corporate performance, of different legislations. We argue that a study of this kind is needed to better understand the economics of privacy in the context of online advertising. While few studies have focused on the effect of targeted ads on the willingness to buy (Goldfarb & Tucker, 2011a; Goldfarb & Tucker, 2011b; Turow, King, Hoofnagle, Bleakley, & Hennessy, 2009; Wathieu & Friedman, 2009), there is still an important gap regarding the relation between regulatory changes and firms strategy. We argue that there is a trade-off between the adoption of BT and privacy protection: countries with more restrictive legislation may experience lower rate of online advertising investment, thus, having a negative impact on the growth and diffusion of online sales, advertising, technologies, and innovation.

2. Summary of Data Resources

One reason that studies on BT investment are difficult to implement is the lack of comprehensive data. Fortunately, we have been able to overcome this obstacle and secure access, provided by a well-established online marketing company with worldwide operations, to data which allow us to construct of a novel dataset. Our dataset consists of detailed weekly data on campaigns by firms, active in 20 different industrial sectors, which invested in multiple online advertising strategies between 2009 and 2012. Overall we have weekly observations, where for each the data includes online advertising investment decisions among several strategies, namely traditional advertising, BT, organic search and social networks (e.g. Facebook),

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¹<u>http://www.zenithoptimedia.com/zenith/</u> (last access 12/09/2012).

together with different measures of firm performance at the strategy level (such as clicks, impressions, conversions, revenues and price). In addition, we are able to identify the investments made in different countries, allowing testing for systematic differences among different privacy regimes.

3. Empirical objectives

The central goal of this study is to assess the impact of different privacy regulations on online advertising investments. To perform this assessment, we analyze three different questions. First, our analysis aims to investigate the difference between different privacy regimes (Europe vs. USA). We are able to exploit the enactment of the "ePrivacy Directive' in May 2011 by the European Union to test for differences across countries and different legislation. In particular, more restrictive laws may increase the cost of data collection thus leading to different investment strategies. Second, we can evaluate the impact of privacy laws across several advertising strategies. A restrictive legislation may reduce the efficiency of targeted advertising such as BT and social networks, while it favors the adoption of generic form of advertising. Third, different industries may experience diverse effects after the introduction of privacy laws. The loss in targeting efficiency may be more pronounced for companies that commercialize products customizable on individual's preferences (e.g. automobile, insurance and computers), while firms with more standardize products should suffer less from privacy law restrictions (e.g. telecommunication and consumer information).

4. Intellectual Merit

This study allows for a through and comprehensive empirical investigation of the impact of privacy laws on innovation and firm utilization of new technologies in online advertising arena. Privacy regulation increases the cost of appropriating the value generated by targeted advertising. This suggests that restricting access to personal data reduces the incentive to invest in new and innovative strategies such as BT and social network. Privacy regulation may limit the adoption of innovation in the context of internet advertising by increasing the cost, and lowering the effectiveness of using and developing specific technologies. As such privacy regulation represents a trade-off between the social benefits associated with the right of privacy and the economic welfare benefits associated with innovative usage of individual level data. Therefore, it is crucial that we base our policies on a precise theoretical and empirical understanding. This proposed study aims to fill existing gaps in both.

References

- Goldfarb, A., & Tucker, C. 2011a. Privacy and Innovation. *National Bureau of Economic Research Working Paper Series*, No. 17124.
- Goldfarb, A., & Tucker, C. E. 2011b. Privacy Regulation and Online Advertising. *Management Science*, 57(1): 57-71.
- Turow, J., King, J., Hoofnagle, C. J., Bleakley, A., & Hennessy, M. 2009. Americans Reject Tailored Advertising and Three Activities that Enable It. *SSRN eLibrary*.
- U.S. Department of Commerce. 2012. Quarterly Retail E-Commerce Sales 3rd Quarter *Press Release* (*Novemeber*, *16*, *2012*).
- Wathieu, L., & Friedman, A. 2009. An Empirical Approach to Understanding Privacy Concerns: ESMT European School of Management and Technology.

World Economic Forum. 2012. Big Data, Big Impact: New Possibilities for International Development.

Dan Breznitz

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Academic Pos	<u>itions</u>	
2012-13	Visiting Professor	Collegio Carlo Alberto and the University
		of Turin (Department of Economics S. Cognetti de Martiis). Turin, Italy
2012-	Associate Professor	Georgia Institute of Technology
		The College of Management
		PhD Director Strategy Group
2012-	Associate Professor	Georgia Institute of Technology
	(by courtesy)	The Sam Nunn School of International
		Affairs
2010-present	Associate Professor	Georgia Institute of Technology
	(tenured)	The Sam Nunn School of International
		Affairs &
		The College of Management
2010-	Associate Professor	Georgia Institute of Technology
	(by courtesy)	The School of Public Policy

2005-2009	Assistant Professor The S	-	gia Institute of Technology an School of International
		Affair	rs and The School of Public Policy
2009-2012	Academic Director	Georg	ia Institute of Technology
			Connect Initiative – The Enterprise ation Institute
2007-present	Program Director	The C	Center for International Strategy,
		Techn	ology and Policy (CISTP)
2005-present	Senior Researcher	Georg	a Institute of Technology's
		Progra	ce, Technology, and Innovation Policy am (STIP) The Enterprise Innovation ate and the School of Public Policy
2005-Present	Research Affiliate	MIT -	- Industrial Performance Center
Jan 2006-7	Visiting Scholar	Resea Regio	ord University Asia Pacific Area rch Center Stanford Project on ns of Innovation and preneurship
<u>Education</u> 1997 - 2005	Massachusetts Institute of Techr Ph.D.	ology	Department of Political Science
1996 - 1997 Gradu	Hebrew University of Jerusalem nate Studies		Department of Political Science
1993 – 1996	Hebrew University of Jerusalem BA – Summa Cum Laude		Department of Political Science Department of Sociology and Social
			Anthropology

Publications

Books

- 2011 <u>The Run of the Red Queen: Government, Innovation, Globalization, and Economic</u> <u>Growth in China.</u> (with Michael Murphree) New Haven: Yale University Press.
 - The Susan Strange Best Book in International Studies Award 2012 the British International Studies Association
 - Bronze Medal Globalization and International Business Axiom Book of the Year Awards, 2012

Translated to: Mandarin

- 2007 <u>Innovation and the State: Political Choice and Strategies for Growth in Israel, Taiwan,</u> <u>and Ireland.</u> New Haven: Yale University Press.
 - Winner The 2008 Don K. Price for the best book in Science and Technology Politics given by the American Political Science Association
 - Finalist ForeWord Magazine 2007 Book of the Year Award (Political Science Category)

Edited Books

2012 <u>A third Globalization: Can Wealthy Nations Stay Rich?</u> (Co-Editor with John Zysman) New York: Oxford University Press, *Forthcoming*.

Papers

2012	"The Revolutionary Power of Peripheral Agencies: Schumpeterian Development Agencies and Policy Innovation in Finland and Israel" <i>Comparative Political Studies</i> (With Darius Ornston), Forthcoming.
2012	"Coming Back Home After the Sun Rises: The Role of Returnees in the Growth of High Tech Industries in Emerging Economies." <i>Research Policy</i> (With Martin Kenney and Michael Murphree), Forthcoming.
2012	"Double Bind: Governing the Economy in an ICT Era." <i>Governance</i> (with John Zysman), Vol. 25(1): 129–150.
2012	"Ideas, Structure, State Action and Economic Growth: Rethinking the Irish Miracle." <i>Review of International Political Economy</i> , Vol. 19(1):87-113.
2011	"Ubiquitous Data Collection: Rethinking Privacy Debates." <i>IEEE Computer</i> (With Michael Murphree, and Seymour Goodman), Vol. 40(6):100-102.
2011	<u>"Value Capture and Policy Design in a Digital Economy</u> ." <i>Journal of Industry, Competition and Trade</i> (With Martin Kenney, Petri Rouvinen, John Zysman, and Pekka Ylä-Anttila), Vol 11 (3): 203-207
2010	"The Limits of Capital: Transcending the Public Financer – Private Producer Split in R&D." <i>Research Policy</i> (With Amos Zehavi), Vol. 39 (2): 301-312.
2009	"National Institutions and the Globalized Political Economy of Technological Change – An Introduction" <i>Review of Policy Research</i> , Vol. 26(1-2): 1-11.
2008	"The State as a Strategic Manager? A Dynamic Capabilities View." <i>Challenge</i> . (with Carsten Zimmermann), Vol. 51(4): 70-88.
2007	"Industrial R&D as a National Policy: Horizontal Technology Policies and Industry- State Co-Evolution in the Growth of the Israeli Software Industry" <i>Research Policy</i> , Vol. 36 (9): 1465–1482.

- 2006 "Innovation-Based Industrial Policy in Emerging Economies? The Case of Israel's IT industry." *Business and Politics*, Vol. 8 (3) Article 3: 1-38.
- 2005 "Development, Flexibility, and R&D Performance in the Taiwanese IT industry Capability Creation and the Effects of State-Industry Co-Evolution." *Industrial and Corporate Change*, Vol. 14 (1): 153-187.
- 2005 "Collaborative Public Space in a National Innovation System: A Case Study of the Israeli Military's Impact on the Software Industry." *Industry and Innovation*, Vol. 12 (1): 31-64.

Special Issues

- 2011 Value Capture and Policy Design in a Digital Economy. *Journal of Industry, Competition and Trade* Special Issue Vol. 11 (3). Co-Editor with Martin Kenney, Petri Rouvinen, John Zysman, and Pekka Ylä-Anttila
- 2009 National Institutions and Political Economy of Industrial Technological Change. *Review of Policy Research* Special Double Issue Vol. 26 (1-2). Co-Editor with Mark Zachary Taylor.

Papers in Foreign Language Journals

2007 "Le miracle high-tech. Retour sur une politique industrielle exemplaire." *La Vie des Idées*, 21:57-70.

Book Chapters

- 2010 "Strategic Management Theory and the State: Insights from the Dynamic Capabilities View." (with Carsten Zimmermann). In Stuart Wall, Carsten Zimmermann, Klingebiel, R. and Lange, D. (eds.) 'Strategic Reconfigurations: Developing Dynamic Capabilities in Rapid-Innovation-Based Industries. Pp. 107-129. Edward Elgar.
- 2009 "Slippery Paths of (Mis)Understanding? Historically Based Explanations in Social Science." In Georg Schreyögg and Jörg Sydow (eds.) *Hidden Dynamics of Path Dependency: Organizational and Institutional Path Processes*. Pp. 13-34. Palgrave.

- "Globalization, Coopetition Strategy, and the Role of the State in the Creation of New High Technology Industries: The Case of Israel and Taiwan." In Giambattista Dagnino and Elena Rocco (eds.) *Coopetition Strategy: Theory Experiments and Cases.* Pp. 103-127. Rutledge.
- 2008 "The Dynamics of an Emerging Entrepreneurial Region in Ireland" in Philip Phan, Sankaran Venkataraman, and Rama Velamuri, (ed). *Entrepreneurship in Emerging Regions around the World: Theory, Evidence and Implications*. Pp. 9-46. Edward Elgar. (with Frank Roche, Rory P. O'Shea, and Thomas J. Allen).
- 2005 "Software Tooling: The Development of The Israeli Software Industry." In Ashish Arora and Alfonso Gambardella (eds.) *From Underdogs to Tigers: The Software Industry in Emerging Countries.* Pp. 72-98. Oxford University Press.
- 2005 "Innovation and the Limits of State Power: IC Design and Software in Taiwan." In Suzanne Berger and Richard Lester (eds.). *Global Taiwan*. Pp. 194-227. M.E. Sharpe.

Book Reviews

2011 "Delete: The Virtue of Forgetting in the Digital Age by Viktor Mayer-Schönberger. Princeton University Press 2009" *Review of Policy Research*. Vol 27(3): 307-308.

Papers in non-Refereed Journals

- 2011 "Innovation in Emerging Economies: China's Run of the Red Queen" *The World Financial Review*. (with Michael Murphree), Sept/Oct 2011.
- 2010 "How China Innovate: The Run of the Red Queen" *China Economic Quarterly*. (with Michael Murphree), Vol 14 (3):21-25.
- 2009 "Structure, Action, Change and Agency: The Living Lab of Public Policy" *States, Power and Societies* - The Newsletter of the Political Sociology Section of the

American Sociological Association. Pp. 4-5. Summer 2009 Special Symposium on Public Policy.

2000 "High Tech, Innovation, and the Periphery: The Role of the Military in the Israeli Success." *PreCIS.* Vol. X Number 4: 8-10.

National Policy Documents

- 2012 National Academies Project: intellectual property management in standard-setting processes – <u>Essential IP in China's Technology Standards Policy</u> (with Michael Murphree)
- 2012 Twenty First Century Manufacturing. Vienna. United-Nations Industrial Development Organization (UNIDO) (With John Zysman, Martin Kenney, and Paul Wright)
- 2012 <u>U.S.-Israel Innovation Index.</u> Jerusalem. US-Israel Science & Technology Foundation (Advisory Committee)
- 2009 <u>Evaluation of the Finnish National System Full Report</u>. Helsinki. The Ministry of Employment and the Economy and The Ministry of Education, Finland (team leader)
- 2008 <u>Israel 2028 Vision and Social-Economic Strategy in a Global World</u>. Jerusalem. US-Israel Science & Technology Foundation and the Office of the Chief Scientist of the Ministry of Trade, Industry and Employment, Israel (team member)

Congressional Testimony

2012 *China's Innovation and Economic Growth: Implication for the United States.* US-China Economic and Security Review Commission of the U.S. Senate. Testimony Submitted May 2012. 10pp.

2010 *Supporting Innovation in the 21st Century Economy.* Technology and Innovation Subcommittee of the Committee on Science and Technology U.S. House of Representatives. Testimony submitted March, 2010. 16 pp.

Other Publications

- 2012 America's Two Systems of Innovation: Recommendations for Policy Changes to Support Innovation, Production and Job Creation. (With Peter Cowhey), Connect Innovation Institute
- 2010 "Flashes de Paris Humeurs et modes" In Luc Gwiazdzinski et Gilles Rabin (eds.) (preface de Theodore Zeldin) Urbi et Orbi Paris appartient à la ville et au monde. Pp. 98-100. Editions de l'Aube
- 2006 Lead Author: Suzanne Berger; Team Member: Breznitz, Dan. How We Compete? What Companies around the World <u>Are Doing to Make it in Today's Global Economy</u>. New Work: Doubleday

French Translation:

2006 <u>Made in Monde</u>. Paris, Seuil

Also translated to: Japanese, Italian, Chinese, Romanian, and Spanish

 "Innovation and the State- Development Strategies for High Technology Industries in a World of Fragmented Production: Israel, Ireland, and Taiwan" *Enterprise and Society*, Vol. 7 (4): 675-686. Herman E. Krooss Prize Best Dissertations in Business History Summaries

Work in Progress and Manuscripts Published in Conference Proceedings

- 2012 "What Does Politics Have To Do With IT? Economic Distribution and Innovation Policy in OECD Countries," (With Amos Zehavi), under review
- 2012 "California Dreaming? Cross-Cluster Embeddedness and the Systematic Non-Emergence of the 'Next Silicon Valley" (With Mollie Taylor), under review

2012	"Standardized Confusion? The Political Logic of China's Technology Standards Policy," (With Michael Murphree), under review
2012	"Small States and Big Bubbles: Asymmetric Adjustment in Nordic Europe," (With Darius Ornston)
2010	"Cutting Through the Fog: Understanding the Competitive Dynamics in Cloud Computing," (With Kenji Kushida and John Zysman). Berkeley Roundtable on the International Economy Working Paper # 190
2009	"Building on the Past, Imagining the Future: Competency Based Growth Strategies in a Global Digital Age," (with John Zysman, Niels Christian Nielsen, and Derek Wong). Berkeley Roundtable on the International Economy Working Paper # 181
2007	"Understanding "The Last Mile" – A Micro-Level Analysis of State-Induced Technological Entrepreneurship: The Development of the Irish Information Technology Industry" (With Carsten Zimmermann)
2007	"Capability Creation Through Force? Perception versus Reality of Engagement in International Entrepreneurship" (With Carsten Zimmermann)
2006	"Untapped Wealth? R&D and Industrial Innovation in Ile de France" (with Suzanne Berger).
2003	"Rethinking Polanyi: The Role of Political Economy Theories in the Enactment of the 1834 Poor Law."
2002	"Conceiving New Industrial Systems: The Different Emergence Paths of the High- Technology Industry in Israel and Ireland." <i>Science, Technology and the Economy</i> <i>Program Working Paper Series</i> : STE-WP-11-2002.

Awards and HonorsMar 2012Presidential Distinguished Lecturer Series, Singapore Management University,
Singapore, March 7th, 2012

Dec 2011	GTRC 75th Anniversary Innovation Award for Public Service, Leadership, and Policy
Nov 2011	Fernand Braudel Senior Fellow 2012-13, European University Institute, Florence (Firenze), Italy (Declined)
Oct 2011	Professor of Excellence – an Institute Wide Award for exemplary sustained educational and research achievements – Given during the homecoming game of the Yellow Jackets
Apr 2011	Ivan Allen College – Georgia Institute of Technology – Gold Star Award for Excellence in Research
Mar 2008	Industry Study Fellow of the Sloan Foundation – one of five young North American scholars to be so selected.
Mar 2008	Dean Griffin's Day Thank a Teach Award – Honouring Outstanding Teaching Contributions – Presented by The Georgia Tech Ambassadors and the GT Alumni Association
Apr 2007	Sloan Foundation – Book Promotion Award – a \$10K award given to help in the promotion of the most promising books in Industry Studies for <i>Innovation and the State</i>
2007	Visiting Fellow – Bruegel Institute for International Economics, Brussels
2006-2007	Visiting Scholar – Stanford University – Asia Pacific Area Research Center Stanford Project on Regions of Innovation and Entrepreneurship
June 2006	Herman E. Krooss Prize Panel – Best Dissertations in Business History – The Business History Conference Annual Meeting Toronto, Canada June 8 th to 10 th .
Dec 2005	Sloan Industry Studies Best Dissertation Prize
Feb 2001	Fellow – Social Science Research Council: the Corporation as a Social Institution Program

Scholarships and Grants

Note: amount given only for grants received since arriving to Georgia Institute of Technology

May 2012 USCC

China's Technology Standards Policy and Implication

\$52,129.99

Feb 2012Enterprise Innovation Institute (EI2)

Two years grant to support: Tech Connect Initiative

\$35,000

Mar 2011 Connect Innovation Institute

Innovation for Production in the USA – maximizing the economic growth benefits of innovation – one year project

With Peter Cowhey (UC San Diego)

\$100,000

Feb 2011Institute for Information Infrastructure Protection (I3P)

Eighteen Months grant to support the Ubiquitous Data Collection: Toward an Analytical Framework for Comprehensive Privacy Research Project

With Seymour Goodman

\$196,740

Jan 2011 Enterprise Innovation Institute (EI2)

Two years grant to support: Tech Connect Initiative \$70,000

Oct 2010 Kauffman Foundation

Two years grant to assist in the developing of a theory of the political economy of technological entrepreneurship in emerging economies

\$47,000

Apr 2010 National Science Foundation (NSF)

Three years grant to support: Toward a Theory of Innovative Organizations under Conditions of Structured Uncertainty

\$399,991

Nov 2009 Enterprise Innovation Institute (EI2)

Two years grant to support: Sustainable High-Tech Cluster Initiative \$100,000

Jul 2009 U.S.-Israel Bi-National Science Foundation (BSF)

R&D Policy: Partisan and Neoliberal Convergence Across Developed Nations With Amos J. Zehavi – University of Tel Aviv

\$120,000

Aug 2008 Alfred P. Sloan Foundation

Three grants to co-sponsor the Globalization, Development, and Innovation Speaker Series at the Georgia Institute of Technology and a special thematic session as the ASA conference in Boston

\$14,080

May 2008 Georgia Research Alliance

Roadmap for an Entrepreneurial Economy Initiative

Research grant for partial support of the Unexploited Growth? Entrepreneurship and the Evolution of Georgia's IT Industry Project \$15,350

Feb 2008 Alfred P. Sloan Foundation

A grant to organize and sponsor two panels on innovation and international affairs at the ISA meeting March 2008 San Francisco

\$2,800

Nov 2007 Alfred P. Sloan Foundation

Four years research Support: Can Wealthy Nations Stay Rich in A Rapidly Changing Global Economy?

With John Zysman – UC Berkeley

\$500,000

Nov 2007 Kauffman Foundation

The Innovation Trap Research project – twenty months partial support

\$114,324

Sept 2007 Alfred P. Sloan Foundation

Two grants to co-sponsors the Globalization, Development, and Innovation Speaker Series at the Georgia Institute of Technology

\$7,000

July 2007 Alfred P. Sloan Foundation

Development Grant (with John Zysman of UC Berkeley)

\$45,000

July 2007	Alfred P. Sloan Foundation
	R&D and Public Policy in the Chinese IT Industry project
	\$45,000
Mar 2007	The Samuel Neaman Institute for Advanced Studies in Science and Technology, Science Technology and Economy program; Technion – The Israeli Institute of Technology
	Four-years grant – The Innovation Trap: The Israeli Case
	\$40,000
Nov 2006	Alfred P. Sloan Foundation Special Grants to sponsor and organize interdisciplinary panels at the APSA and ASA annual meetings 2007 \$10,000
Jan 2006	Stanford University – SPRIE Research Grant \$7,500
Dec 2005	Kauffman Foundation Multi-year grant to develop research on the internationalization of R&D \$140,300
June 2005	The Samuel Neaman Institute for Advanced Studies
	A three years feasibility grant to develop research on the internationalization of Israel R&D
	\$15,000
Oct 2004	The Samuel Neaman Institute for Advanced Studies Research Grant

Mar 2004	The Center For International Studies – MIT Energy,	Research Grant
	Technology, and International Affairs fund	
Oct 2003	The Samuel Neaman Institute for Advanced Studies	Research Grant
May 2003	The Center For International Studies - MIT	Travel Grant
Jan 2003	The Samuel Neaman Institute for Advanced Studies	Research Grant
April 2001	The Samuel Neaman Institute for Advanced Studies	Research Grant
April 2001MIT Industrial Performance Center and the Alfred P. Sloan FoundationFellowship and Research Grant		
Mar 2001	MacArthur Foundation	Research Grant
Feb 2001	Social Science Research Council (SSRC) –	Fellowship and
	Program on the Corporation as a Social	Research Grant
	Institution	
June 2000	Media-Lab-Europe	Research Sponsorship
June 2000 May 2000	Media-Lab-Europe MIT Industrial Performance Center	Research Sponsorship Research Grant

Fellowship Program

1994 – 1997 Hebrew University of Jerusalem:

Rector's Grant for exceptional achievements - Full Scholarship and monthly stipends (1996-7); Department of Political Science Participation in the Honors Workshop; Dean's Grants for excellence (1994-5 and 1995-6)

Presentations and Colloquia

- Nov 2012 *Keynote Speaker: Multiple Pathways to Rapid-Innovation-Based Growth: The Strategic Role of the State*. OECD-EU's INNO-Grips Global Review of Innovation Intelligence and Policy Studies. Helsinki, Finland, Nov 23rd
- Nov 2012 *Keynote Speaker: How can countries devise growth policies and create the unknown in an ever globalizing world*? Tekes - the Finnish Funding Agency for Technology and Innovation symposium on Broad-based Innovation, Challenges for companies and policy. Helsinki, Finland, Nov 22nd
- Nov 2012 *Technology Standards in China: the Structured Uncertainty of a Brave New World?* ETLA – the Research institutions of the Finish Economy. Helsinki, Finland, Nov 21st
- Nov 2012 *Keynote Speaker: Foresight Exercise of the Prime Minister's Office.* The Prime Minster of Finland Office. Helsinki, Finland, Nov 21st
- Oct 2012 *Technology Standards and IPR Policy and Practice in China*. Seminar series on on the Economics of Innovation and Knowledge. University of Torino and Coleggio Carlo Alberto, Torino Italia, Oct 10th
- Oct 2012 *China's Current* Landscape Panel and Standard Setting and IP treatment in Emerging Economies. Symposium on Management of Intellectual Property in Standard-Setting Processes – National Academies of Science, Washington DC, Oct 3-4th

Jun 2012	Featured Invited Panel. "Is There a Future for Manufacturing in Advanced Industrial Countries?" <i>Society for the Advancement of Socioeconomics (SASE)</i> annual meeting, MIT, Cambridge Mass, June 29 th
Jun 2012	<i>When More is Less? Economic Theory and Ubiquitous Data</i> Collection. Information and Telecommunication Privacy Conference. Washington, DC. Institute for Information Infrastructure Protection (<i>I3P</i>), June 5 th
Jun 2012	<i>Run of the Red Queen: Innovation and Economic Growth in China.</i> IV University, Seattle, June 3 rd
May 2012	Run of the Red Queen: Innovation and Economic Growth in China. The Information Technology and Innovation Foundation. Washington, DC. May 10th
May 2012	Invited Speaker. National R&D Policies Panel. The National R&D Conference: Office of the Chief Scientists, Israel. Tel Aviv, May 3rd
Apr 2012	America's Two Systems of Innovation: Innovation for Production in Fostering U.S. Growth. Invited Speaker. National Governors Association: Growing State Economies Regional Summit. Omaha, April 25 th
Apr 2012	<i>Run of the Red Queen: Innovation and Economic Growth in China.</i> University of Georgia. Athens, April 16 th
Mar 2012	Invited Speaker: Innovation and Growth in China. Chinese Academy of Science Graduate School of Management, Beijing May 15 th
Mar 2012	Invited Speaker: Innovation and Growth in China. Peking University School of Government, Beijing, May 14 th
Feb 2012	Convener and Panelist, "Why – and Which – Manufacturing Matters: Innovation and Production in the U.S." Brookings Institutions, Feb 22 nd , 2012, Washington, DC
Jan 2012	<i>SMART SPECIALIZATION? NATIONAL INNOVATION STRATEGIES IN A GLOBALIZING WORLD.</i> Keynote Speaker. Accelerating R&D Excellence through Global Collaboration and Open Innovation . Katz-Echo Global R&D Forum, Pittsburgh, PA. Jan 20 th 2012

Sep 2011	<i>Small States and Big Bubbles: Asymmetric Adjustment in Nordic Europe</i> . Panel on Small States Reconsidered: Reconciling Flexibility and Rigidity in Economic Adjustment. Seattle, Sep 3 rd 2011
Aug 2011	<i>Cutting through the Fog: Understanding the Competitive Dynamics in Cloud Computing.</i> Panel on Emerging Industries, Academy of Management, San Antonio, TX, Aug 16 th 2011
Aug 2011	California Dreaming? Cross-Cluster Embeddedness and the Systematic Non- Emergence <i>of the 'Next Silicon Valley</i> . Panel on Community networks, Academy of Management, San Antonio, TX, Aug 15 th 2011
Aug 2011	Professional Development Workshop, Panelist, <i>Global Restructuring: Innovation</i> and Organization in a Borderless World. Academy of Management, San Antonio, TX, Aug 13 th 2011
July 2011	<i>Multiple Pathways to Rapid-Innovation-Based Growth: The Strategic Role of the Region.</i> Keynote Speaker. Orkestra – Basque Country Competitiveness Day 2011: Leading the new complexity. July 6 th Kursaal Congress Center, San Sebastain, Spain
Jun 2011	<i>Governance, Innovation, Globalization and Economic Growth in China.</i> Samuel Neaman Institute for Advance Studies in Science and Technology, Technion, Israel June 15 th
Apr 2011	<i>Run of the Red Queen – The Misunderstand of China's Industrial Innovation</i> . Munk School of Global Studies Speaker Series, University of Toronto, Canada, April 6 th
Apr 2011	<i>Diverse National Growth Strategies in ICT</i> . University of Southern California Annenberg School of Communication, Los Angeles, CA, April 4 th
Mar 2011	Developing a Portfolio of Private-Public Programs to Support Innovation: Evidence from Small States. Panel on Small State Adjustment Reconsidered: Reconciling Flexibility and Rigidity in Europe and beyond. International Studies Association Annual Convention in Montreal, Canada, March 17th

Mar 2011	Discussant and Chair. Panel on the Politics of Innovation: International and Comparative Governance. International Studies Association Annual Convention in Montreal, Canada, March 17th
Feb 2011	<i>Public Policy and The Development of the IT Industry in China</i> . SET Change Speaker Series. Carnegie Mellon University, February 10 th .
Oct 2010	California Dreaming? Cross-Cluster Embeddedness and the Systematic Non- Emergence of the 'Next Silicon Valley. The Initiative for Studies in Transformational Entrepreneurship (INSITE) Speaker Series. University of Wisconsin Madison. Oct 25 th
Oct 2010	Panelist, <i>Keynote Panel "The Future of China"</i> 4 th annual China Goes Global Conference. The Kennedy School of Government, Harvard University, Cambridge Mass. Oct 7 th 2010
Aug 2010	Professional Development Workshop, Panelist, <i>Borderless Innovation: Integrating industrialized and developing countries</i> . Academy of Management, Montreal, Aug 7 th 2010
Jun 2010	Panel on <i>Chinese Approaches to National Innovation</i> . Conference on Chinese approaches to National Innovation. University of California San Diego, La Jolla, California, June 28-29
Apr 2010	Panel on Managing Globalization. Conference on the US Corporations in the Recovery and Beyond. New School for Social Research, New York City April 23 rd
Apr 2010	<i>Ideas, Structure, State Action, and Economic Growth: Rethinking the Irish Miracle.</i> Panel on Conceptualizing Capitalism: Ideas and Industrial Adjustment in Contemporary Europe. Conference of Europeanists, Montreal Canada, April 17 th , 2010
Jan 2010	Keynote Speaker and Panellist – First China Leaders Club – Guanghua Leadership Institute in Conjunction with Cisco. The Ritz-Carlton Guangzhou China January 23 rd , 2010

Dec 2009	<i>The Logic of Madness in China's Technology Standards Policy</i> , Academy of International Business (AIB)/CIBER Conference on Emerging Research Frontiers. Panel 3: The Politics of Crisis and the New Institutions of Development. Charleston Place Hotel and Riviera Theatre, Charleston, SC Friday, December 4 th , 2009
Dec 2009	Keynote Speaker: <i>The Communal Roots of Entrepreneurial-Technological Growth?</i> <i>Social Fragmentation and the Economic Stagnation of Atlanta's Technology</i> <i>Cluster</i> TAG/ATDC Entrepreneurs "Sustaining Start-Ups: How the Local Business Structure Impacts Growing Companies," Georgia Tech Research Institute December 3 rd , 2010
Nov 2009	Keynote Speaker – The Social Factors Behind Atlanta's High Tech Industry Stagnation Atlanta Technology Angels Meeting, November 13 th 2010
Nov 2009	<i>Technological changes and implications for market governance</i> (with John Zysman) Special Roundtable on PUBLIC GOVERNANCE AFTER THE CRISIS co-sponsored by the Rappaport Center for Law and Public Service, Suffolk University Law School; the School of Public Policy, University College London; and Governance: An International Journal of Policy, Administration and Institutions. Suffolk University Law School, Boston, Mass November 13 th
Oct 2009	<i>Evaluation of the Finnish National Innovation System</i> , Public Presentation of the Final Report to the Finnish Government and Stakeholders. HILTON KALASTAJATORRPA, Helsinki ,Finland October 28 th .
May 2009	<i>The Run of the Red Queen.</i> Special Panel on China, Technology Policy, and the Production of Knowledge Harvard Business School International Research Conference May 29-30.
May 2009	The Communal Roots of Entrepreneurial-Technological Growth? Social Fragmentation and the Economic Stagnation of Atlanta's IT Cluster. Panel on High Technology Clusters Creation Dynamics: Failure and Success, Industry Studies Association Annual Meeting Chicago, IL, May 28-29th
May 2009	<i>The Run of the Red Queen – Globalization and the PE of Innovation in China.</i> Globalization and Politics: A Conference in Honour of Suzanne Berger, MIT, Cambridge Mass, May 7-9th

Apr 2009	<i>Multiple Pathways to ICT Growth: The Strategic Roles of the State.</i> Senior Chinese Government Leadership Development Program, Guanghua School of Management, Beijing University, China. April 16 th .
Mar 2009	Invited Keynote Speaker: " <i>Nature or Nurture – Growing the Irish Entrepreneur</i> " Michael Smurfit Graduate Business School, University College Dublin, Ireland March 11 th .
Jan 2009	Invited Speaker: <i>Revisiting Path Dependence - Suggestions for Clarification</i> . Freie Universität Berlin Fachbereich Wirtschaftswissenschaft Institut für Management, Berlin, Germany, January 19th
Nov 2008	Invited Speaker: <i>Innovation and the State</i> . The Centre for Industrial Competitiveness and the Department for Regional Economic and Social Development University of Massachusetts, Lowell, MA, Nov 10th.
Oct 2008	Convener, discussant and panellist – Second Conference on National Policy Reactions to the decomposition of production and the services transformation – What can the Wealthy States do? BRIE, Berkeley, CA, Oct 16-28th.
Aug 2008	<i>Mis-Steps and Misunderstandings or How did the Irish IT Industry Emerge?</i> <i>Rethinking the Role of the State in the Irish Miracle.</i> Panel on New Pieces for a New Puzzle? Coalitions and Institutions for Development Under Globalization, American Political Science Association annual meeting, Boston Mass, August 27-30 th
Aug 2008	Thematic Session: <i>Industry Studies and the Ever Changing World of Work</i> . Session Organizer and Panellist. American Sociological Association annual meeting, Boston Mass, August 1-4 th
Jul 2008	Invited Panellist: Workshop on the enhancement of evaluation and assessment practices in the area of innovation policy in Israel. Office of the Chief Scientist: Ministry of Trade Industry and Employment, Jerusalem Israel, July 9 th

Jul 2008	Invited Presentation: <i>Innovation and the State</i> . Workshop on the Process of Innovation: Skills, Firms, and Locational Advantage. Universitat Rovira i Virgili Reus Spain, July 3-5 th
May 2008	Invited coordinator and discussant – special invited panel: <i>Companies</i> and <i>Countries: Aligning Corporate and National Interests</i> . Sloan Industry Studies annual meeting, Boston Mass, May 1-2 nd
Apr 2008	Convener and Host – Kauffman Foundation International Innovation Scholars Research Network – Inaugural Meeting, Atlanta April 10-11 th .
Mar 2008	Roundtable on Emerging Economies and the Global Drive for Knowledge Economies. International Studies Association Annual Convention in San Francisco, CA, March 26-29 th
Mar 2008	<i>Mis-Steps and Misunderstandings or How did the Irish IT Industry Emerge?</i> <i>Rethinking the Role of the State in the Irish Miracle</i> ; Panel on National Institutions and the Political Economy of Industrial Technological Change, International Studies Association Annual Convention in San Francisco, CA, March 26-29 th
Jan 2008	Invited seminar – <i>Innovation and the State</i> – Chinese Academy of Science Graduate University Centre for Innovation and Information Management, Beijing, China.
Dec 2007	Keynote Speaker – Innovation and Venture Capital – IVC Paris 2007, Paris France, Dec 19 th .
Nov 2007	Mis-Steps and Misunderstandings or How did the Irish IT Industry Emerge? Rethinking the Role of the State in the Irish Miracle; Industry Studies Special Panel – Regional Science Association Annual Meeting, November 7-10, Savannah, GA.

Oct 2007 Convener, discussant and panellist – conference on National Policy Reactions to the decomposition of production and the services transformation – What can the Wealthy States do? BRIE, Berkeley, CA, Oct 18-20.

 Sept 2007 Roundtable: Globalization, The State, and Innovation-Based Industrial Development: Should we Have a More Interdisciplinary Research? A discussion around the book: "Innovation and the State: Political Choice and Strategies for Growth in Israel, Taiwan, and Ireland (Dan Breznitz, Yale University Press) American Political Science Association Annual Meeting: Political Science and Beyond, Chicago, IL, Aug 30 – Sept 2nd

Sept 2007 *Misunderstanding the "Miracle"? The State and the Growth of the Irish-Owned IT Industry: Lessons for the New EU Entrants*; Panel on National Institutions and the Political Economy of Industrial Technological Change. American Political Science Association Annual Meeting: Political Science and Beyond, Chicago, IL, Aug 30 – Sept 2nd

Aug 2007The State as a Strategic Manager? A Dynamic Capabilities View. Special
roundtable on Economic Sociology. American Sociology Association Annual
Meeting: Is another world Possible? August 11-14, New York City, NY.

 Aug 2007 Building Technology-based Entrepreneurship in an Emerging Regional High-Tech Cluster in Europe; Panel on Geography and Technology Entrepreneurship – Academy of Management Annual Meeting: Doing Well by Doing Good, August 3-8th Philadelphia, PA.

Aug 2007The State as a Strategic Manager? A Dynamic Capabilities Framework; Panel on
Corporate Strategy: Government, Regulatory, and Political Strategies – Academy of
Management Annual Meeting: Doing Well by Doing Good, August 3-8th
Philadelphia, PA.

Aug 2007Globalization, Coopetition, and Public Policy: Creating New High-Tech Industries- Israel and Taiwan; Panel on Institutional Environments and National Competitive

Advantage – Academy of Management Annual Meeting: Doing Well by Doing Good, August 3-8th Philadelphia, PA.

June 2007 *The State as a Strategic Manager? A Dynamic Capabilities View*. Society for the Advancement of Socioeconomics Annual Conference 2007: Changing Political Economies: Macro Trends and Micro Experiments, June 28-30 Copenhagen, Denmark

June 2007 Globalization, Coopetition Strategy, and the Role of the State in the Creation of New High Technology Industries: The Case of Israel and Taiwan, DRUID Annual Summer Conference 2007. APPROPRIABILITY, PROXIMITY, ROUTINES AND INNOVATION. Copenhagen Business School, Copenhagen, Denmark June 18-20th.

June 2007 Invited Speaker: *Innovation and Economic Growth: Future Policy Concerns* "Innovation Systems and National Competitive Advantage – Joint Conference for Policy Makers and Researchers" Helsinki University of Technology, Tietieden Talo, Finland, June 14th

June 2007 Invited Speaker: *Innovation and the State Lessons for the Future* "Industry Dynamics in High Technology Workshop" Helsinki University of Technology, Tietieden Talo, Finland, June 13th

June 2007 Keynote Speaker: The Future of Ireland's Innovation-Based Economic Growth – Stakeholder Breakfast organized by IDA-Ireland, Enterprise Ireland, Science Foundation Ireland, Forfas, and the Department of Enterprise Trade and Employment. Four Season Hotel Ballsbridge, Dublin, Ireland June 6th.

May 2007 Innovation and the State: Political Choice and Strategies for Growth in Israel Taiwan, and Ireland, Special book authors' panel: Strategic Management Society Conference "NEW FRONTIERS IN ENTREPRENEURSHIP: STRATEGY GOVERNANCE AND EVOLUTION" Catania, Italy, May 23-25, 2007

May 2007	Invited Speaker: University of Bologna, Italy – Department of Management Speaker Series Research Seminar. May 22nd
May 2007	Invited Speaker: The GWU-GMU-Georgetown Technology, Science, and Innovation Policy Research Seminar: George Washington University Elliot School of International Affairs May 3 rd .
May 2007	GMU PhD Research Seminar in Public Policy: "Innovation and the State" George Mason University School of Public Policy, May 3 rd .
Mar 2007	<i>Ideology Rules – The Falsity of Ober-Structuralism in Neo-Developmental State</i> <i>Arguments – Japan and Ireland Revisited</i> ISA Annual Conference, POLITICS, POLICY AND RESPONSIBLE SCHOLARSHIP, Chicago II, Feb 28 – March 2 nd .
Mar 2007	Special Roundtable on Innovation Enterprises et Territories The First Annual TechInnov Conference: Recontres Innovation & Développment Paris-Sud, Orly France March 8th
Nov 2006	<i>Globalization, Coopetition Strategy, and the Role of the State in the Creation of</i> <i>New High Technology Industries: The Case of Israel and Taiwan</i> High Tech Regions 2.0: Sustainability and Reinvention November 13-14, Stauffer Auditorium The Hoover Institution on War, Revolution and Peace Stanford University Co-sponsored and co-hosted by: Stanford Project on Regions of Innovation and Entrepreneurship (SPRIE) and the Industrial Technology Research Institute, Taiwan (ITRI)
Oct 2006	<i>Innovation and the State: Political Choice and Strategies for Growth in Israel, Taiwan, and Ireland</i> Meet the Author Special Joint Seminar of EU Centre and the Industry Studies Centre, University of Pittsburgh October 26 th .
Sept 2006	<i>Globalization, Coopetition Strategy, and the Role of the State in the Creation of</i> <i>New High Technology Industries: The Case of Israel and Taiwan</i> The European Institute for Advance Studies in Management 2 nd annual workshop on Coopetition Strategy. Bocconi University, Milan Italy

Sept 2006	Untapped Wealth? R&D and Industrial Innovation in Ile de France. The Technology Transfer Society 2006 Annual Conference: Next Generation Innovation: New Approaches and Policy Designs. September 28-30 Atlanta, GA.
Sept 2006	<i>The Social Aspects of Technology Transfer</i> . The Technology Transfer Society 2006 Annual Conference: Next Generation Innovation: New Approaches and Policy Designs. September 28-30 Atlanta, GA. <i>Panel Convener</i>
June 2006	Herman E. Krooss Prize Panel – Best Dissertations in Business History – The Business History Conference Annual Meeting Toronto, Canada June 8 th to 10 th .
June 2006	Special Workshop – Preparing an Entrepreneurial Policy Framework for the USA – Organized by the Kauffman Foundation, Washington, DC, June 1-2 nd
April 2006	A special conference on Innovation and Adaptation: What Does It Take for Wealthy Countries to Sustain Growth? Invited Speaker, UC Berkeley, California, USA.
April 2006	Development Through Immigration – Toward a Dynamic Evolutionary Policy Framework on the Impact of High-Skill Labor Migration from Less Developed Economies – With Roland Aydin - Association of Asian Studies (San Francisco, CA). Panel on "Diaspora and Development: Ethnicity-based Transnational Technology Networks and Development in China, India, Ireland, Israel and Taiwan."
Mar 2006	Innovation and the State: High Technology in a World of Fragmented Production – Israel, Ireland, and Taiwan. Stanford Project on Regions of Innovation and Entrepreneurship Seminar Series. Stanford University, California.
Mar 2006	<i>The Diffusion of Academic R&D Capabilities and Economic Development</i> . ISA Annual Meeting: The North-South Divide and International Studies. Panel WA43: Political Constraints, Education, and Economic Growth, San Diego California.

- Feb 2006 A special Industry-State-University workshop: "Mondialisation et Territoires: Quel Role pour L'Action Publique" [trans:globalization and regions: what role for public policy?] . Keynote speaker. Paris, France.
 Dec 2005 Development of the IT industry in Israel, Ireland and Taiwan: Choices and Consequences of Government Policies. Sloan Industry Studies Annual Meeting: Globalization and Innovation. Panel 2: The Role of Government and University in Innovation. Royal Sonesta Hotel, Cambridge, Mass, USA
- Sep 2005 Long-Term Sustainability of a Product R&D and Innovation-Based Software Industry? The Case of Israel. The Technology Transfer Society 2005 Annual Conference: Advancing Innovation and Entrepreneurship. September 28-30 Kansas City, MO.
- July 2005 A Misunderstood 'Miracle' The State and Growth of the IT Industry in Ireland. 21st European Group for Organizational Studies (EGOS) Colloquium June 30 July 2nd, 2005. Sub-Theme 36: Dynamics of Business Systems and Varieties of Capitalism.
- June 2005 A Misunderstood 'Miracle' The State and Growth of the IT Industry in Ireland. DRUID Annual Summer Conference 2005. Dynamics of Industry and Innovation: Organizations, Networks, and Systems. Copenhagen Business School, Copenhagen, Denmark.
- June 2005 Science and Technology Industrial Policy in Taiwan. Bi-Annual Conference on R&D and Innovation in the Era of Globalization – The Science, Technology, and the Economy Program. Session II: S&T Policy in the Era of Globalization. June 2nd The Dan Tel Aviv Hotel, Israel.
- July 2004 Innovation, Flexibility, and the Limits of State's Power: The Taiwanese IT Industry.
 20th European Group for Organizational Studies (EGOS) Colloquium July 1 3,
 2004. Sub Theme 01: Comparative Studies of Economic Organization.
 Complementarities, Contradictions and Change in Institutional Regimes and
 Business.

June 2004	Flexibility, Innovation, and the Limits of State's Power: S&T Industrial Policy in Taiwan in IT Industry. DRUID Annual Summer Conference 2004. "Industrial Dynamics, Innovation and Development," Hotel Marienlyst Conference Center Copenhagen, Denmark.
June 2004	Discussant - DRUID Annual Summer Conference 2004. "Industrial Dynamics, Innovation and Development," Hotel Marienlyst Conference Centre Copenhagen, Denmark – Session 3-4: Models of Innovation and Industry Organization.
June 2004	<i>Technological Innovation and the Limits of State's Power: R&D and Industrial Policy in Taiwan.</i> International Conference on Technological Innovation and Development. John F. Kennedy School of Government, Harvard University.
Apr 2004	Innovation and the Limits of State Power: IC Design and Software in Taiwan. Global Sourcing and Regions of Innovation. UCSC Silicon Valley Regional Center, Moffett Field.
Feb 2004	<i>The State's Role in the Evolution of the Software Industry in Israel.</i> Workshop on the software industry in the economic development efforts of developing countries. Yale University, Center of Latin America Studies.
Jan 2004	What (If) Can Israel Learn From International Comparisons for Science and Technology Industrial Policy? Presentation to the Office of the Chief Scientist, Ministry of Trade and Industry, State of Israel, Management Forum.
Nov 2003	Diffusion of Academic R&D Capabilities as an Industrial Innovation Policy? – The Development of Israel's IT Industry. "What do We Know About Innovation?" A Conference in Honour of Professor Keith Pavitt – November 13-15 th SPRU, UK.
July 2003	An Iron Cage or the Final Stage? Intensive Product R&D and the Evolution of The Israeli Software Industry. Workshop on the Globalisation of the Software Industry – Software Industry Centre, Carnegie-Mellon University, Pittsburgh, Pennsylvania.

June 2003	Discussant, Joint Annual meeting of the Business History Conference and the
	European Business History Association, Regions, Nations and Globalization. Panel
	1.D. Diversification Strategies. Lowell, Massachusetts.

June 2003 The Development of the IT Industry in Israel: A Case of State Induced Expansion of Academic R&D Capabilities Throughout the Economy?

Panel 4.2 New Perspectives on National Innovation Systems. DRUID Summer Conference 2003 – Creating, Sharing, and Transferring Knowledge: The Role of Geography, Institutions, and Organizations. Hotel Scanticon Comwell Helsingør Copenhagen, Denmark.

June 2003 Discussant, DRUID Annual Summer Conference 2003 – Creating, Sharing, and Transferring Knowledge: The Role of Geography, Institutions, and Organizations: Panel 5.2: Innovation Systems and Capability Building. Hotel Scanticon Comwell Helsingør Copenhagen, Denmark

- June 2003 *The IDF as a Jumping Board: Human Capital Issues.* Science, Technology, and the Economy Annual Conference Can the High-Technology Sector Lead (again) to the Growth of the Israeli Economy? Dan Acadia Hotel, Ceasria, Israel.
- Dec 2002 *The Influence of the Israeli Military on the IT industry*. Globalization, High-Tech Development and R&D Policy A Workshop in the Center for Advanced Studies Hebrew University of Jerusalem, Israel.
- Sep 2002 *The Development of the Israeli Software Industry: A Story of R&D Competitive Advantage?* International Workshop on Software in Emerging Countries. Scuola Superiore Sant'Anna, Pisa, Italy.
- May 2002Development of High-Tech Industry Under Conditions of Intensified
Globalisation: the Cases of Israel and Ireland. Israeli Economic Association
Annual Meeting. Science, Economy, and Technology Special Panel.
- April 2002Conceiving New Industrial Systems: The Different Emergence Paths of High-
Technology Companies in Israel and Ireland. Business History Conference Annual
Meeting. Panel on State Intervention in Organizational Development.

April 2002	Organizer and Host, "History Collaborative Research Network of the SSRC Program on the Corporation as a Social Institution Program – First Annual Meeting." MIT Center for International Studies.
Aug 2001	<i>The Military as a Public Space – The Role of the IDF in the Israeli Software Innovation System.</i> Workshop on The Indian Software Industry in a Global Context. The Indian Institute of Management, Ahmedabad.
June 2001	<i>Globalization of the IT Industry in the Periphery</i> . Special Invited Lecture – First Annual Meeting: The Center for "Globalization, High Tech Development and R&D Policy" at The Hebrew University of Jerusalem.
Mar 2001	From the Periphery to the Core: a Comparative Study of Globalization Strategies of IT Firms in Ireland, Israel, and Taiwan. Keynote speaker – MediaLabEurope special executives' seminar – Dublin, Ireland.
Sep 1999	Rethinking Polanyi: The Role of Political Economy Theories in the Enactment of the 1834 Poor Law. APSA 1999 annual meeting in Atlanta. Panel 7-12T Social

Departmental and Professional Service

Scientists in The Public World.

2012	Testimony on <i>China's Innovation and Economic Growth: Implication for the United States</i> . US-China Economic and Security Review Commission of the U.S. Senate
2011-12	UNIDO – The Status of High Technology Manufacturing: Strategy for Least Developed Countries
2011 -	Tekes – The Finnish Innovation Agency – International Adviser: Systemic Change Research and Policy Initiative
2011 -	Fundación Chile – International Advisory Board – Member

2011-	PhD Director – Strategy Group – College of Management Georgia Institute of Technology
2011 -	PhD Committee - College of Management Georgia Institute of Technology
2011	International Finance Corporation (IFC) – Latin America Group – Expert Consultant
2010-12	Innovation-Task force – Institute-wide task force under the auspice of Dr Stephen Cross to spur innovation in all aspects of Georgia Institute of Technology operations
2010-12	World Bank – Innovation and Growth, PRMED – Expert Consultant
2010-	United States Israel Science and Technology Foundation – Member of the Advisory Committee U.S. – Israel Innovation Index Project
2010	Testimony on <i>Supporting Innovation in the 21st Century Economy</i> . Technology and Innovation Subcommittee of the Committee on Science and Technology U.S. House of Representatives. Hearing on March 24 th , 2010
2009-10	The Don K. Price Book Award Committee – Chair of the Committee – American Political Science Association – Science Technology and Environmental Politics Section
2009-	Co-founder and academic Director – Georgia Institute of Technology Tech Connect Initiative – The Enterprise Innovation Institute

2009 -	Faculty and co-designer (with John Zysman and Patrick Keating) – Senior Government Leadership Program on Innovation Policy – Government of China – co-sponsored by Beijing University Guanghua School of Management and Cisco Systems
2009 -10	Evaluation of the Finnish National Innovation System – National Project for the Government of Finland – Team Leader (one of six international experts, each leading a team)
2008 -10	Organizer and Convener – <i>The Sam Nunn School Research Colloquia Seminar</i> Series – The Sam Nunn School, Georgia Institute of Technology
Fall 2008	Sam Nunn School Research Colloquia Committee – The Sam Nunn School, Georgia Institute of Technology
2008 -	Journal: Review of Policy Research: The Politics and Policy of Science and Technology– Member of theEditorial Board
2008-9	Organizer and convener – "International Innovation and Entrepreneurship Scholars Research Network" (a North American Research Network and Workshop series sponsored by the Kauffman Foundation)
Fall 2007	IR Security and Area Studies Search Committee – The Sam Nunn School, Georgia Institute of Technology.
June 2007	Irish Development and Science and Technology Authorities (IDA-Ireland, Enterprise Ireland, Science Foundation Ireland, and The Department of Enterprise, Trade and Employment (DETE)) – the future of Ireland's Innovation-Based Growth
2006-07	The 2020 Economic Vision and National Strategy for Israel Committee

	"Leveraging R&D for Sustained and Balanced Economic Growth" Development Team. Sponsored by the US-Israel Science and Technology Commission. Nomination by the Chief Scientist of the Ministry of Trade and Industry – State of Israel
2006-08	Technology Association of Georgia – New High Technology Industrial Development Policy for the State of Georgia Committee – "Ideas" Sub-Committee
2006-7	Alfred P. Sloan Foundation – Best Dissertation in Industry Studies Award Committee
2006-Present	Graduate Studies Committee – The Sam Nunn School, Georgia Institute of Technology
2006-7	PhD certificate in Entrepreneurship Policy – an initiative to establish a college-wide PhD certificate program – committee member. Ivan Allen College of Liberal Art, Georgia Institute of Technology
2006-7	Technology and Innovation speaker series steering committee. Ivan Allen College of Liberal Arts, Georgia Institute of Technology
Sept 2006	External Examiner – PhD – The Judge Business School, The University of Cambridge, UK.
2005-Present	Organizer and Convener – <i>Globalization, Innovation, and Development</i> – seminars and workshops series – The Sam Nunn School and the Ivan Allen College, Georgia Institute of Technology
2005-6	C/IPE Search Committee – The Sam Nunn School, Georgia Institute of Technology.

2005-6 2006 Sam Nunn Policy Forum Organizing Committee. 2002-03 MIT - Personnel Committee (senior and overall development search committee).

2002 SSRC – Program on the Corporation as a Social Institution. Submission and reception of a grant to organize a series of conferences on the use of history in social science.

<u>Journal Reviewer for:</u> Administrative Science Quarterly, Academy of Management Journal, IEEE Computer, Research Policy, Management and Organization Review, Economic and Social Review, Organization Studies, Pacific Review, Industry and Innovation, Economic History Review, Industrial and Corporate Change, World Development, Review of International Political Economy, Social Forces, World Politics, Comparative Political Studies, Governance, Economic Geography.

Book manuscript Reviewer for: Yale University Press, Cornell University Press, Oxford University Press, Stanford University Press.

<u>Grants, Awards, or Proposals Reviewer for:</u> Defense Economics Program (Israel), Israel Science Foundation, Alfred P. Sloan Foundation Industry Studies Program, Canada Science Foundation, European Science Foundation, DRUID, Strategic Management Society (SMS), National Science Foundation (NSF), Canada Research Chairs program, Killam Research Fellowships program (Canada), Korea Advanced Institute of Science and Technology (KAIST)

Courses Taught

- Globalization
- Comparative Government Business Relations
- The State, Innovation, and Industrial Development in International Perspective
- Science, Technology and International Affair I
- Science, Technology and International Affair II
- Innovation, Local Institutions, Governments, Business and Growth
- Seminar on International Strategy Research (PhD research design seminar)
- The Political Economy of Innovation
- Special Reading Seminar Comparative PE of Development

- Special Reading Seminar on R&D, Innovation, and Economic Development
- Special Advance Reading Seminar in IPE Research
- Special Advance Reading Seminar Science and India
- Special Advance Reading Seminar on the PE of European Finance
- Special Reading Seminar on the PE of Innovation in China

Individual Student Guidance

- Roland Aydin (MS) Immigration flows and IPE of technological change (Spring 2006)
- Rachael Brennaman (MS) (INTA graduate student of the year) The Political Economy of Agriculture Trade Regimes (Fall 2006 Spring 2007)
- Jones (Brett) Mathews (MS Science Policy, Economic Development, and Security in India (started Spring 2007 finished Spring 2008)
- Banafsheh Azizi (MS) The Political Economy of Development and the Resource Curse of the Gulf States (started Spring 2007 finished Spring 2008)
- Mollie Taylor (MS) State and Innovation The Economic Development Benefits of the Information Technology Industry in Georgia (started Fall 2006 expected finish date Spring 2008)
- Karan Chopra (UG) Undergraduate Research Opportunities Program Information and Communication Technology and Development in India
- Amy Harmon (MS)– Financial Comparative Political Economy of continental Europe (Fall 2007, Spring 2008)
- Jason R. Mills (MS) Political Economy of China (Fall 2009)
- Li Tang (PhD) High Tech Innovation in China (Spring-Summer-Fall 2011)
- Fen Huijun (PhD) High Technology Innovation in China (Spring-Summer-Fall 2011)
- Vincenzo Palermo (PhD) A Kauffman Foundation Dissertation Award winning proposal (2011)
- Yin Li (PhD) High Tech Innovation in China (Spring-Summer-Fall 2012)
- Gung Zhu (PhD) High Tech Innovation in China (Spring-Summer-Fall 2012)

Thesis supervisor:

Masters

- Banafsheh Azizi Spring 2008
- Mollie Taylor Spring 2008
- Jason R. Mills Fall 2009

Ph.D.

- Michael Murphree expected 2014
- Diane Alleva Caceres expected 2014

- Mollie Taylor expected 2014
- Wen Wen Spring 2012
- Vincenzo Palermo expected 2013

Ph.D External

- Gregory Laudman University of Tennessee
- Carsten Zimmermann University of Cambridge (UK)
- Brain Gordon Simon Fraser University (Canada)

Other Work Experience

1997-2000	Business Development Manager for "Nocturnus LTD," a software company
specia	lizing in consulting and tailor-made applications.

1994-1997	Cofounder and General Manager of "Nocturnus LTD."	

1992 Public-Relations Company (Alex Cotay) working as Spokesperson for the Ministry of Defense Press.

Professional Education

2001	The Israel Chamber of System Analysts	Certified Systems Analyst (CSA)
1996 – 1997	Sivan - The Center for Technology	Diploma Studies in Systems
	Studies, Jerusalem	Analyses and Design
Professional Associations		
American Political Science Association - APSA		
American Sociology Association – ASA		
Society for the Advancement of Socioeconomics - SASE		
International Studies Association – ISA		
Academy of Management – AOM		
Industry Studies Association		

European Group of Organizational Studies – EGOS The European Institute for Advance Studies in Management (EIASM) The Technology Transfer Society – T2Society Association for Asian Studies – AAS Business History Conference – BHC Regional Science Association International - RSAI The Israel Chamber of System Analysts The Israeli Anthropological society (1995-1997)

Vincenzo Palermo

Georgia Institute of Technology Scheller College of Business 800 West Peachtree Street NW Atlanta, Georgia 30308 Phone: +1 (678) 613-5173 Email: <u>vincenzo.palermo@scheller.gatech.edu</u> Website: <u>www.palermovincenzo.com</u>

Fields of Interest

Strategic Management, Economics of Innovation, R&D Management, Intellectual Property Rights

Education

PhD in Strategic Management, Innovation and Entrepreneurship, Georgia Institute of Technology, 2008 – Spring 2013 (expected)

Dissertation Title: "Essays on markets for technology: the role of licensing as a complementary strategy to internal R&D"

Committee: Marco Ceccagnoli (Chair), Matthew Higgins, Dan Breznitz, Arvids Ziedonis and Chris Forman

MSc in Economics and Management of Innovation and Technology, Bocconi University (Milan, Italy), Advisors: Luigi Orsenigo and Franco Malerba. 2005 - 2007

BA in Economics and Management of Innovation and Technology, Bocconi University (Milan, Italy), Advisor: Luigi Orsenigo. 2002 - 2005

Working Papers

Ceccagnoli, M., Higgins, M., Palermo, V., Behind the scenes: Sources of complementarity in R&D. (Revise and Resubmit (2nd round) on Journal of Economics and Management Strategy)

Palermo, V., Internal knowledge accumulation and the acquisition of external technology: Is there a trade-off? (Target Journal: Strategic Management Journal)

Palermo, V., Higgins, M., Ceccagnoli, M., How reliable is the market for technology? (Target Journal: Management Science)

Palermo, V., Breznitz, D., The strategic advantage of behavioral targeting: how firm can benefit from personal data? (Target Journal: Management Science)

Ceccagnoli, M. Higgins, M., Palermo, V., Enhancing Research Productivity through the Market for Technology. Working Paper

Awards

2011 Kauffman Dissertation Fellowship, Ewing Marion Kauffman Foundation

2010 "D'onofrio-Rea" Fellowship, Georgia Institute of Technology

Research experience

Research assistant at CESPRI-Bocconi for the European project "KEINS", Director: Prof. Franco Malerba. September 2006 – July 2007

Research assistant on project: "R&D expenditure in biotechnology sector", Director: Prof. Luigi Orsenigo, CESPRI- Bocconi University. February 2006 – May 2006

Research assistant on project: "Development and perspectives of the pharmaceutical sector in Italy". Director: Prof. Luigi Orsenigo, CESPRI- Bocconi University. February 2006 – May 2006

Teaching

MGT 4195, "Strategic Management", Georgia Institute of Technology, Fall 2012, Main instructor

MGT 4195, "Strategic Management", Georgia Institute of Technology, Summer 2011, Main instructor, Evaluation: 4.3/5

"Innovation and Industrial Dynamics", Bocconi University. Teaching Assistant for Prof. Stefano Brusoni. Spring 2008

"The Organization of Inter-Firm Network", Bocconi University. Teaching Assistant for Prof. Stefano Brusoni. Spring 2008

"Microeconomics", Bocconi University. Teaching Assistant for Prof. Nicoletta Corrocher. Fall 2007

Conference Presentations

December 2012, The 5th Israel Strategy Conference Doctoral Consortium, Tel Aviv University, Israel (forthcoming)

October 14-17, 2012. INFORMS Annual Meeting 2012, Phoenix, Arizona

August 2012, BPS Dissertation Consortium, Academy of Management, Boston, Massachusetts

June 2012, DRUID Conference, Copenhagen, Denmark

June 2012, "Strengthening the cyber infrastructure of the United States", I3P Meeting, Washington, DC

May 2012, Trans-Atlantic Doctoral Conference (TADC), LBS, London, UK

January 2012, Kauffman Entrepreneurship Mentoring Workshop, Chicago, Illinois

January 2012, American Economic Association - Allied Social Science Associations (AEA/ASSA), Annual conference, Chicago, Illinois

November 2011, SMS Doctoral Consortium, Strategic Management Society, Miami, Florida

August 2011, Academy of Management, Annual Conference, San Antonio, Texas

August 2011, TIM Doctoral Consortium, Academy of Management, San Antonio, Texas

April 2011, CCC Conference, MIT - Sloan Business School, Boston, Massachusetts

November 2010, Georgia Institute of Technology seminar, Atlanta, Georgia

Membership and services

June 2011, USPTO-NSF, The future of patent data workshop report developer Academy of Management (AoM), Strategic Management Society (SMS) and DRUID member Ad-hoc Research Policy reviewer Academy of Management annual meeting reviewer