

**CURRICULUM VITAE**

**CITIZENSHIP: U.S.A.**

**EDUCATION**

Ph.D., Economics, University of Michigan, 1990.  
M.A., Statistics, University of Michigan, 1986.  
M.A., Economics, University of Michigan, 1984.  
B.A., Economics (with Honors), University of Notre Dame, 1982.

**EMPLOYMENT HISTORY**

**Current Position**

***Principal, B. Erard and Associates*** – a consulting business specializing in tax administration and tax policy research, economic modeling, and data analytics, 1999-present

**Academic Appointments**

***Visiting Professor***, University of Michigan Business School, 1998-1999 academic year

***Research Fellow***, Office of Tax Policy Research, University of Michigan, 1998-1999 academic year

***Associate Professor***, Department of Economics, Carleton University, July 1992 – June 1999

***Assistant Professor***, Department of Economics, University of Toronto, July 1990 – June 1992

**Other Employment**

***Economist***, Compliance Analysis Group, Internal Revenue Service, July 1988 – June 1990

***Economist***, Policy Economics Group, Summers 1985, 1986

## RESEARCH AREAS

Tax Administration, Tax Policy, Econometrics/Data Analytics

## TEACHING EXPERIENCE

**Graduate Courses:** Taxation, Public Expenditures, Applied Regression Analysis

**Undergraduate Courses:** Quantitative Methods, Taxation, Public Expenditures/  
Benefit Cost Analysis, Introductory Microeconomics,  
Advanced Microeconomics

## PROFESSIONAL HONORS AND RESEARCH AWARDS

Keynote speaker (“Flying Under the Radar: Ghosts and the Income Tax”), CESifo Economic Studies Conference on Tax Administration Research, November 2-3, 2018, Munich.

Keynote speaker (“Ghosts in the Tax Machinery”), 2018 Tax Administration Research Centre Annual Conference, Exeter, U.K.

Inducted as a Fellow of the Tax Administration Research Centre, University of Exeter, March 2018.

Report on “Audits, Identity Theft Investigations, and Taxpayer Attitudes” prepared for IRS TAS selected by Jotwell as one of the best works of recent scholarship relating to tax law, March 2018 (<https://tax.jotwell.com/audits-teach-us-tax-compliance/>)

Keynote speaker (“Bottom-Up Methods for Tax Gap Estimation”), 2016 Inter-American Center of Tax Administrations (CIAT) Conference on Estimation of Tax Compliance in Latin America, Lima, Peru.

Research cited in the *New York Times*, *the Wall Street Journal*, and *Tax Notes*.

Selected to deliver the inaugural Master Class (“Measuring the Tax Gap”) for the U.K. Tax Administration Research Centre, November 21-22, 2013.

Invited to testify before the U.S. Senate Finance Committee at its hearing on “Best Practices in Tax Administration: A Look Across the Globe”, April 12, 2011.

## PROFESSIONAL HONORS AND RESEARCH AWARDS, Cont.

Keynote speaker (The U.S. Federal Income Tax Gap: What We See and What We Don't"), 2010 International Institute of Public Finance Annual Congress in Uppsala, Sweden.

Distinguished invited guest speaker, Taiwan Ministry of Finance, 2008.

Keynote speaker, 2005 Organization for Economic Cooperation and Development (OECD) conference on *Tax Compliance Measurement and Program Evaluation*, Ottawa,

Winner (with co-author Jonathan S. Feinstein) of the International Institute of Public Finance (IIPF) Award for the Best Conference Paper Presented at the Annual World Congress (\$2,500 DM), Berlin, August 23-26, 1993

Recognized as a *Top Undergraduate Economics Instructor*, University of Toronto, for course in Quantitative Methods, 1992

Finalist, National Tax Association–Tax Institute of America Dissertation Contest, 1990

## SCHOLARLY PUBLICATIONS

### Articles in Refereed Journals

"Modeling Qualitative Outcomes by Supplementing Participant Data with General Population Data: A New and More Versatile Approach", *Journal of Econometric Methods*, 2021, Volume 11(1), 35—53.

"Flying Under the Radar: Ghosts and the Income Tax" (with Patrick Langetieg, Mark Payne, and Alan Plumley), *CESifo Economic Studies*, 2020, Volume 66(3), 185—197.  
<https://academic.oup.com/cesifo/article/66/3/185/5702170>

"Do Audits Deter or Provoke Future Tax Noncompliance? Evidence on Self-Employed Taxpayers" (with Sebastian Beer, Matthias Kasper, and Erich Kirchler), *CESIFO Economic Studies* 66(3), 2020, 248—264.

"Using Public Information to Estimate Self-Employment Earnings of Informal Suppliers" (with James Alm), *Public Budgeting & Finance*, 2016, Volume 36(1), 22 – 46.  
<http://onlinelibrary.wiley.com/doi/10.1111/pbaf.12083/epdf>

### **Articles in Refereed Journals, Cont.**

"Participation and Compliance with the Earned Income Credit" (with Marsha Blumenthal and Chih-Chin Ho), *National Tax Journal*, 2005, Volume 58(2), 189 – 213.

[http://ntj.tax.org/wwtax/ntjrec.nsf/06CE756499C7CA098525701C005DAEE5/\\$FILE/Article%2002-Erard.pdf](http://ntj.tax.org/wwtax/ntjrec.nsf/06CE756499C7CA098525701C005DAEE5/$FILE/Article%2002-Erard.pdf)

"Explaining the U.S. Tax Compliance Continuum" (with Chih-Chin Ho), 2003, *eJournal of Tax Research*, Volume 1(2), pp. 93 – 109. [http://www.asb.unsw.edu.au/research/publications/ejournaloftaxresearch/Documents/paper1\\_v1n2.PDF](http://www.asb.unsw.edu.au/research/publications/ejournaloftaxresearch/Documents/paper1_v1n2.PDF)

"Acquisitions and Investment" (with Huntley Schaller), *Economica*, 2002, Volume 69 (275), pp. 391 – 414. [Acquisitions and Investment - Erard - 2003 - Economica - Wiley Online Library](#)

"Searching for Ghosts: Who Are the Nonfilers and How Much Tax Do They Owe?" (with Chih-Chin Ho), *Journal of Public Economics*, 2001, Volume 81(1), pp. 25–50. [http://econ.ccu.edu.tw/academic/master\\_paper/100329-2.pdf](http://econ.ccu.edu.tw/academic/master_paper/100329-2.pdf)

"Tax Compliance", (with James Andreoni and Jonathan Feinstein), *Journal of Economic Literature*, 1998, Volume 36(2), pp. 818–860. <http://www.jonathanfeinstein.com/s/compliance.pdf>

"Self-Selection with Measurement Errors: A Microeconometric Analysis of the Decision to Seek Tax Assistance and its Implications for Tax Compliance", *Journal of Econometrics*, 1997, Volume 81(2), pp. 319–356. <http://www.sciencedirect.com/science/article/pii/S0304407697865700>

"The Role of Moral Sentiments and Audit Perceptions in Tax Compliance", (with Jonathan S. Feinstein), *Public Finance/Finances Publiques*, 1994, Volume 49 (Supplement), pp. 70–89. <http://jonathanfeinstein.com/PDFs/moral.pdf>

"Honesty and Evasion in the Tax Compliance Game", (with Jonathan S. Feinstein), *RAND Journal of Economics*, 1994, Vol. 25(1), pp. 1–19. <http://www.jonathanfeinstein.com/s/honestyandevasioninthetaxcompliancegame.pdf>

"Taxation with Representation: An Analysis of the Role of Tax Practitioners in Tax Compliance", *Journal of Public Economics*, 1993, Vol. 52, pp. 163–197. [http://www.researchgate.net/publication/222468897\\_Taxation\\_with\\_representation\\_An\\_analysis\\_of\\_the\\_role\\_of\\_tax\\_practitioners\\_in\\_tax\\_compliance/file/72e7e529e2384df3fb.pdf](http://www.researchgate.net/publication/222468897_Taxation_with_representation_An_analysis_of_the_role_of_tax_practitioners_in_tax_compliance/file/72e7e529e2384df3fb.pdf)

## **Chapters in Edited Books and Published Conference Proceedings**

“How to Evaluate Tax Expenditures” (with Sebastian Beer, Dora Benedek, and Jan Loeprick), forthcoming, *How To Notes*, International Monetary Fund.

“To File or not to File: What Matters Most?” (with Tom Hertz, Pat Langeteig, Mark Payne, and Alan Plumley), forthcoming, *2022 IRS Research Bulletin* (Publication 1500).

“The Specific Deterrence Implications of Increased Reliance on Correspondence Audits”, *2020 IRS Research Bulletin* (Publication 1500). <https://www.irs.gov/pub/irs-prior/p1500--2021.pdf#page=10>

“Doing more with less? Using data and analytics to overcome shrinking enforcement budgets and expanding responsibilities” (with Alan Plumley), Forthcoming in the *2019 Proceedings of the Canadian Tax Foundation Corporate Management Tax Conference on Tax and Technology*, Toronto, Canada, February 27-28, 2019.

“Who is Minding the Nanny Tax?” *Tax Notes Special Report*, September 24, 2018.

“Audits, Identity Theft Investigations, and Taxpayer Attitudes: Evidence from a National Survey” (with Matthias Kasper, Sebastian Beer, and Erich Kirchler), in *National Taxpayer Advocate 2017 Annual Report to Congress, Volume 2 (TAS Research and Related Studies)*, pp. 148-194. [https://taxpayeradvocate.irs.gov/Media/Default/Documents/2017-ARC/ARC17\\_Volume2\\_05\\_AuditsIDtp.pdf](https://taxpayeradvocate.irs.gov/Media/Default/Documents/2017-ARC/ARC17_Volume2_05_AuditsIDtp.pdf)

“Audit Impact Study” (with Sebastian Beer, Matthias Kasper, and Erich Kirchler), in *National Taxpayer Advocate 2015 Annual Report to Congress, Volume 2 (TAS Research and Related Studies)*, pp. 67-99. [http://www.taxpayeradvocate.irs.gov/Media/Default/Documents/2015ARC/ARC15\\_Volume2\\_3-AuditImpact.pdf](http://www.taxpayeradvocate.irs.gov/Media/Default/Documents/2015ARC/ARC15_Volume2_3-AuditImpact.pdf)

“Advances in Nonfiling Measures” (with Pat Langetieg, Mark Payne and Alan Plumley), in *New Research on Tax Administration: An IRS-TPC Conference*, paper presented at the 2012 IRS-Tax Policy Center Research Conference on New Perspectives on Tax Administration, June 21, 2012, pp. 79–90. <http://www.irs.gov/pub/irs-soi/12resconadvnonfile.pdf>

“The Individual Income Tax Reporting Gap: What We See and What We Don’t” (with Jonathan Feinstein), in *New Perspectives on Tax Administration: An IRS-TPC Conference*, paper presented at the 2011 Internal Revenue Service - Tax Policy Center Research Conference, June 22, 2011, pp. 129-142. <http://www.irs.gov/pub/irs-soi/11resconindincome.pdf>

## **Chapters in Edited Books and Published Conference Proceedings, Cont.**

“Predicting Aggregate Taxpayer Compliance Behavior” (with Alan Plumley and Derek Snaidauf) , in *New Perspectives on Tax Administration: An IRS-TPC Conference* paper presented at the 2011 Internal Revenue Service - Tax Policy Center Research Conference, June 22, 2011, pp. 73–92. <http://www.irs.gov/pub/irs-soi/11resconpredict.pdf>

“Chapter 3: California”, in *Prefilled Personal income Tax Returns: A Comparative Analysis of Australia, Belgium, California, Quebec, and Spain*, ed. Francois Vaillancourt, Vancouver: Fraser Institute, pp. 39–62. <http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/prefilled-personal-income-tax-returns.pdf>

“Econometric Models for Multi-Stage Audit Processes” (with Jonathan Feinstein), in *Developing Alternative Frameworks for Explaining Tax Compliance*, ed. James Alm, Jorge Martinez-Vazquez, and Benno Torgler, New York: Routledge, pp. 113–138, 2010. [http://www.jonathanfeinstein.com/s/Feinstein\\_econ\\_models\\_multi\\_stage\\_audits.pdf](http://www.jonathanfeinstein.com/s/Feinstein_econ_models_multi_stage_audits.pdf)

“Pre-Completed Income Tax Returns: Evidence from the California ReadyReturn Program”, *National Tax Association Proceedings from the 103<sup>rd</sup> Annual Conference in Chicago, IL*, pp. 163–170, 2010. <http://www.ntanet.org/images/stories/pdf/proceedings/10/24.pdf>

“Econometric Simulation of the Income Tax Compliance Process for Small Businesses” (with George Contos, Ardeshir Eftekhazadeh, John Guyton, and Scott Stilmar), *Proceedings of the 2009 Winter Simulation Conference*, pp. 2902–2914, 2009. <http://www.informs-sim.org/wsc09papers/281.pdf>

“Towards a Framework for Tax Gap Estimation and Microsimulation Analysis of Tax Noncompliance”, *Proceedings of the 97<sup>th</sup> Annual Conference on Taxation*, National Tax Association, Minneapolis, Nov. 11-13, 2004, pp. 47–52.

“Mapping the Compliance Continuum”, in *Taxing the Hard-to-Tax: Lessons From Theory and Practice*, ed. James Alm, Jorge Martinez-Vazquez, and Sally Wallace, Amsterdam: Elsevier, 2004. <http://www.sciencedirect.com/science/article/pii/S0573855504688080>

“Developing an Econometric Model for Measuring Tax Compliance Using Operational Audit Data” (with Chih-Chin Ho), *2002 American Statistical Association Conference Proceedings*. <http://www.irs.gov/pub/irs-soi/ho.pdf>

## **Chapters in Edited Books and Published Conference Proceedings, Cont.**

"The Income Tax Compliance Burden on Canadian Big Business", in *Taxation Compliance Costs: A Festschrift for Cedric Sandford*, ed. by C. Evans, J. Pope, and J. Hasseldine, Sydney: Prospect Media Pty Ltd, pp. 317–335, 2001.

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.197.6214&rep=rep1&type=pdf>

"The Magnitude and Determinants of Federal Estate Tax Noncompliance" (with Martha Eller and Chih-Chin Ho), in *Rethinking Estate and Gift Taxation*, ed. William G. Gale, James R. Hines, Jr., and Joel Slemrod, Washington, DC: The Brookings Institution, pp. 375 – 410, 2001. [http://epe.lac-bac.gc.ca/100/200/301/finance/working\\_paper\\_tcbt-e/1997/1997-06/wp97-6e.pdf](http://epe.lac-bac.gc.ca/100/200/301/finance/working_paper_tcbt-e/1997/1997-06/wp97-6e.pdf)

"Review of Alternative Approaches to Audit Selection", in *Methods and Modeling Tools in Tax Administration*, ed. Dmitri Chernik and Jorge Martinez, Moscow: Unity Publishing, 2000.

"The Relationship Between State and Federal Tax Audits", (with James Alm and Jonathan S. Feinstein), in Empirical Foundations of Household Taxation, edited by Martin Feldstein and James Poterba, Chicago: University of Chicago Press, pp. 235–277, 1996.

"Towards Building a Profile of an Income Tax Nonfiler: First Snapshots of a Ghost", (with Chih-Chin Ho of IRS), National Tax Association, Proceedings of the Eighty-Eighth Annual Conference, pp. 155–159, 1996.

"The Influence of Tax Audits on Reporting Behavior", in Why People Pay Taxes: Compliance and Enforcement, ed. Joel Slemrod, Ann Arbor: University of Michigan Press, 1992, pp. 95–114.

"The Compliance Costs of a Separate Personal Income Tax for Ontario: Simulations for 1991", (with Francois Vaillancourt), in Taxation in a Subnational Jurisdiction, ed. Allan Maslove, Toronto: University of Toronto Press, 1993, pp. 137–170.

## **Book Reviews**

"The Causes and Consequences of Income Tax Noncompliance", by Jeffrey A Dubin. *Journal of Economic Literature*, Vol. 50(4), pp. 1122-112, December 2012.

"Tax Compliance and Tax Morale: A Theoretical and Empirical Analysis", by Benno Torgler, *Journal of Economic Literature*, 47(1) pp. 28-30, March 2009.

## **Working Papers**

"Ghosts in the Income Tax Machinery", June 2020.

"The Income Tax Compliance Burden on Small and Medium-sized Canadian Businesses", Technical Committee on Business Taxation Working Paper 97-12, 1997

"A Critical Review of the Empirical Research on Canadian Tax Compliance", Technical Committee on Business Taxation Working Paper 97-6, 1997 [http://epe.lac-bac.gc.ca/100/200/301/finance/working\\_paper/tcbt-e/1997/1997-06/wp97-6e.pdf](http://epe.lac-bac.gc.ca/100/200/301/finance/working_paper/tcbt-e/1997/1997-06/wp97-6e.pdf)

"Bibliography on Tax Compliance and the Underground Economy", 1996

"The Income Tax Compliance Cost of Canadian Big Business," Technical Committee on Business Taxation Working Paper 97-2, 1997 <http://publications.gc.ca/collections/Collection/F21-4-97-2E.pdf>

"The General Deterrent Effect of Tax Audits: An Econometric Framework for Analysis", 2006.

## **OTHER PROFESSIONAL ACTIVITIES**

### **Editorial Responsibilities**

Member of Board of Referees, *Encyclopedia of Law and Economics*

Member of the Editorial Advisory Board of the *National Tax Journal*, 1995 through 1998.

### **Academic Referee Work**

Referee for The Accounting Review, Canadian Journal of Economics, Canadian Public Policy, Economic Design, European Economic Review, European Journal of Political Economy, Industry Canada, International Tax and Public Finance, Journal of Accounting Research, Journal of Development Economics, Journal of Econometrics, Journal of Public Economics, National Tax Journal, Public Finance Review, and Review of Economics and Statistics

## **Invited Lectures, Keynote Addresses, and Congressional Testimony**

“Flying Under the Radar: Ghosts and the Income Tax”, keynote address presented at the CESifo Economic Studies Conference on Tax Administration Research, November 2-3, 2018, Munich.

“Ghosts in the Tax Machinery”, keynote address presented at the 6<sup>th</sup> Annual Conference of the Tax Administration Research Centre, April 23, 2018, Exeter, U.K.

“Methodologies for Estimating Tax Non-Compliance”, keynote address at the Inter-American Center for Tax Administrations conference on estimating tax non-compliance in Latin America, August 23-24, 2016, Lima, Peru.

“Measuring the Tax Gap: Measures Based on Operational Audit Data and Measures Based on Comparisons of Surveys and Administrative Data”, invited guest lecture to the European Union Tax Gap Project Group conference held at the Italian Revenue Agency, November 9, 2015.

“Measuring the Tax Gap”, delivered the inaugural series of Masterclass lectures for the Tax Administration Research Center (TARC), United Kingdom, November 21-22, 2013. [http://tarc.exeter.ac.uk/media/universityofexeter/businessschool/documents/centres/tarc/Erard\\_Measuring\\_the\\_Tax\\_Gap.pptx](http://tarc.exeter.ac.uk/media/universityofexeter/businessschool/documents/centres/tarc/Erard_Measuring_the_Tax_Gap.pptx)

“Measuring, Explaining, and Controlling Tax Evasion”, invited lecture delivered at Georgia State University International Center for Public Policy Summer Training Program on Tax Policy, Fiscal Analysis, and Revenue Forecasting, August 7, 2013.

“Best Practices in Tax Administration”, invited testimony before the Senate Finance Committee, April 12, 2011.

“The U.S. Federal Income Tax Gap: What We See and What We Don’t”, keynote address delivered at the 66th Annual International Institute of Public Finance (IIPF) Congress, Uppsala, Sweden, August 26, 2010.

“Tax Administration and Compliance in Montana”, contract with the Montana Department of Revenue to deliver a two-day seminar exploring ways to improve the administration of Montana taxes. Delivered jointly with Professor Joel Slemrod (University of Michigan Office of Tax Policy Research) and Professor Joseph Bankman (Stanford University Law School), August 9-10, 2010.

“Quantitative Techniques in Public Economics: Causal Inference”, invited lecture delivered at Georgia State University Summer School in Public Economics, July 8, 2008.

### **Invited Lectures, Keynote Addresses, and Congressional Testimony, Cont.**

“Alternative Methods for Centralized Case Examination Selection”, delivered to Financial Data Center, Ministry of Finance, Taiwan, March 11, 2008.

“Burgeoning Challenges in Tax Administration”, delivered to Training Institute, Ministry of Finance, Taiwan, March 12, 2008.

“Econometric Models of Multi-Stage Audit Processes”, delivered to Department of Economics, National Taiwan University, March 13, 2008.

“Compliance Measurement and Program Evaluation: An Overview”, keynote address, OECD Tax Compliance Program Evaluation and Measurement Workshop, Ottawa, Canada, May 24, 2005.

### **Conference Presentations**

“To File or not to File: What Matters Most?” (with Tom Hertz, Pat Langeteig, Mark Payne, and Alan Plumley), IRS-TPC Research Conference, June 16, 2022 (virtual).

“Discussant Comments: Developments in Technology and Analytics”, 2021 IRS-TPC Research Conference, June 24, 2021 (virtual).

“You’ve Got Mail: The Specific Deterrence Implications of Increased Reliance on Correspondence Audits” (with Erich Kirchler & Jerome Olsen) , U.K. Tax Administration and Research Center Workshop on Tax Audits Evaluation, December 9, 2020 (virtual); also presented at IRS-TPC Research Conference, June 18, 2020 (virtual).

“Discussant Comments: Understanding the Drivers of Taxpayer Behavior”, 2019 IRS-TPC Research Conference, June 20, 2019, Washington, DC.

“Doing more with less? Using data and analytics to overcome shrinking enforcement budgets and expanding responsibilities” (with Alan Plumley), presented at the 2019 Canadian Tax Foundation Corporate Management Tax Conference on Tax and Technology, Toronto, Canada, February 27-28, 2019.

“Who is Minding the Nanny Tax”, 2018 IRS-TPC Annual Research Conference, June 20, 2018.

“Discussant Comments: Factors that Contribute to Voluntary Compliance”, 2018 IRS-TPC Annual Research Conference, June 20, 2018.

### **Conference Presentations, cont.**

“What Drives Filing Compliance?” (with John Guyton, Patrick Langetieg, Mark Payne, and Alan Plumley), IRS-TPC Annual Research Conference, Washington, DC, June 23, 2016.

“Do Audits Deter Future Noncompliance? Evidence on Self-Employed Taxpayers” (with Sebastian Beer, Matthias Kasper, and Erich Kirchler), IRS-TPC Annual Research Conference, Washington, DC, June 23, 2016.

“Missing Returns vs Missing Income: Estimating the Extent of Individual Income Tax Filing Noncompliance from IRS and Census Data” (with Patrick Langetieg, Mark Payne, and Alan Plumley), Annual Conference of the National Tax Association, Santa Fe, New Mexico, November 13, 2014.

“RAS Affordable Care Act Microsimulation Model” (with Emily Hayes, Layne Morrison, Robert Mueller, and Brock Ramos), IRS-TPC Annual Research Conference, Washington, DC, June 19, 2014

Discussant Comments on “IRS Enforcement and State Corporation Income Tax Revenues” by Margot Howard, Internal Revenue Service-Tax Policy Center Research Conference on *Tax Administration at the Centennial*, June 20, 2013.

“Discussant Comments: Effect of Public Disclosure on Reported Taxable Income: Evidence from Japan and Norway” by Joel Slemrod, National Tax Association Spring Symposium, May 16, 2013.

Advances in Nonfiling Measures (with Mark Payne and Alan Plumley), Internal Revenue Service - Tax Policy Center Research Conference, June 21, 2012.

“The Individual Income Tax Reporting Gap: What We See and What We Don’t” (with Jonathan Feinstein), Internal Revenue Service - Tax Policy Center Research Conference, June 22, 2011.

“Predicting Aggregate Taxpayer Compliance Behavior” (with Alan Plumley and Derek Snidauf). Internal Revenue Service - Tax Policy Center Research Conference, June 22, 2011.

“Pre-Completed Tax Returns: The California Experience”, National Tax Association Annual Conference, November 20, 2010.

### **Conference Presentations, cont.**

“Discussant Comments: How Does Behavioral Economics Inform Tax Policy?,” with papers by James Alm, Raj Chetty, and Joel Slemrod, National Tax Association Spring Symposium, May 13, 2010.

“Discussant Comments: Mobility, Competition and the Distributional Effects of Tax Evasion” by *James Alm* and *Edward Sennoga*, University of Tennessee Center for Business and Economic Research Conference on “Mobility and Tax Policy: Do Yesterday's Taxes Fit Tomorrow's Economy?,” Knoxville, October 2-3, 2008.

Econometric Models for Multi-Stage Audit Processes: An Application to the IRS National Research Program”, Andrew Young School of Policy Studies Conference on Tax Compliance and Evasion, Georgia State University, Atlanta, GA, October 1-2, 2007.

Invited panel member. “Joint Forum on Tax Compliance: Options for Improvement and Their Budgetary Potential”, arranged by the Congressional Budget Office, U.S. Government Accountability Office, and Joint Committee on Taxation, September 6, 2007.

“Estate and Gift Taxation in Taiwan: An Analysis of the Current System and Some Proposals for Reform” (with Chih-Chin Ho), National Bureau of Economic Research (NBER) East Asian Seminar on Economics, Manila, Phillipines, June 23-25, 2006.

“The General Deterrent Effect of Tax Audits: A Preliminary Micro-Econometric Analysis” (with Edward Emblom and Chih-Chin Ho), Internal Revenue Service Research Conference, Washington, DC, June 14-15, 2006.

“The General Deterrent Effect of Tax Audits: An Econometric Framework for Analysis”, 2005 Taipei Conference on Taxation: Theory, Policy, and Administration, Institute of Economics, Academia Sinica, Taipei, Taiwan, December 29-30, 2005.

“Estimating the Informal Supplier Tax Gap” (with James Alm), 2005 IRS Research Conference, June 7, 2005. <http://www.irs.gov/pub/irs-soi/05almerard.pdf>

“Comments on *Corporate Tax Noncompliance* by Michelle Hanlon, Lillian Mills, and Joel Slemrod”, Conference on Taxing Corporate Income in the 21<sup>st</sup> Century, sponsored by Office of Tax Policy Research, University of Michigan, and Burch Center of University of California, Berkeley, Ann Arbor, Michigan, May 5-6, 2005.

### **Conference Presentations, cont.**

“Towards a Framework for Tax Gap Estimation and Microsimulation Analysis of Tax Noncompliance”, 97<sup>th</sup> Annual Conference of the National Tax Association, November 11-13, 2004.

“Mapping the Compliance Continuum”, conference on “The Hard to Tax: International Perspective,” Andrew Young School of Policy Studies, International Tax Program, Georgia State University, Stone Mountain Park, May 15-16, 2003.

“Compliance Measurement and Workload Selection with Operational Audit Data”, Internal Revenue Service Research Conference, George Washington University, Washington, DC, June 11-12, 2002. <http://www.irs.gov/pub/irs-soi/compmewo.pdf>

“Statistical Models of Non-Compliance for Use with Operational Audit Data”, Federation of Tax Administrators Compliance and Education Workshop, San Antonio, March 3-5, 2002.

“The Income Tax Compliance Burden on Canadian Big Business”, International Tax Compliance Cost Symposium, Sydney, Australia, April 26-27, 2000.

“The Magnitude and Determinants of Federal Estate Tax Noncompliance”, Brookings Institution – University of Michigan Office of Tax Policy Research Conference on “Rethinking Estate and Gift Taxation”, Washington, D.C., May 4-5, 2000.

“Participation and Compliance with the Earned Income Tax Credit”, Annual Meeting of the National Tax Association, Santa Fe, November 9-11, 2000.

### **Consulting Engagements**

**ERIS Decision Support**, expert assistance in applying data from the IRS Enforcement Revenue Information System (ERIS) to measure, analyze, and optimize the performance of IRS enforcement processes. Subcontract work for ASR Analytics LLC, 2020-present.

**Evaluation of Selected Tax Expenditure Programs in Portugal**, expert assistance on an IMF mission to develop and implement a framework for the evaluation of three selected tax expenditure programs in Portugal, January-July 2022.

**Framework for Tax Expenditure Evaluation in Portugal**, expert assistance on an IMF mission to develop a framework for the evaluation of the effectiveness and efficiency of tax expenditure programs in Portugal, June-September 2021.

## **Consulting Engagements, Cont.**

**Nonfiler Research Initiatives**, assisted with several tasks to develop an improved understanding of nonfiler behavior and improve case routing and case selection, including: development of new predictive modeling approaches for use in routing decisions for BMF nonfilers; development of an IMF Nonfiler Scenario Planning Tool to help guide and inform the strategic increase in nonfiler soft notices and ASFR interventions to optimize compliance outcomes and IRS workloads; econometric research on issues surrounding the identification and enforcement of “strategic nonfiling behavior” (involving taxpayers whose liabilities are underestimated under the ASFR program) as well as linking and understanding the characteristics of “multiple nonfilers” (who are delinquent with respect to 2 or more tax modules). Subcontract work for ASR Analytics, LLC, 2020-2021.

**IRS ACS Optimization**, expert assistance with a number of tasks related to the redesign of collection and exam notices as well as case selection and collection optimization, including: a Current State Analysis report that synthesizes existing knowledge about Collection performance and how it can be improved; a Notice Design Development Plan that serves as a playbook and reference source for notice redesign initiatives; a Case Selection Playbook that provides a general framework for modifying case selection and prioritization practices and includes an overview of alternative predictive analytics approaches to case selection; evaluations of the LT11 and LT16 notice redesign pilots; development of a case selection plan to improve the uplift of LT11 and LT16 notices; design of a CP14 installment agreement notice and a Covid-related soft notice for taxpayers with a balance due; development, testing, and evaluation of new prototypes of the 566-S and 566-T exam notices; and redesign of the Customer Voice Portal (CVP) messages to more effectively increase compliance and payments, reduce IRS administrative costs, and improve the taxpayer experience. Subcontract work for ASR Analytics, LLC, 2019-2021.

**Corporate Tax Gap Estimation in Poland**, development and implementation of novel statistical techniques for estimating the corporate income tax gap in Poland as well as training of Polish tax administrators in the application of these techniques. World Bank contract, March 2019-December 2021.

**Alternative Workload Modeling**, development and testing of alternative machine learning approaches to selecting IRS individual income tax returns for examination. Subcontract work for ASR Analytics, LLC, September 2019 – July 2020.

**Corporate Tax Gap Estimation in Canada**, provided expert guidance to Canada Revenue Agency Staff in the development and estimation of a methodology for estimating the Canadian corporate income tax gap, January – March 2019.

## **Consulting Engagements, Cont.**

**Estimation of the Nanny Tax Gap**, study sponsored by the International Nanny Association to estimate the federal payroll and income tax gap associated with work performed by household employees. The final report (“Who is Minding the Nanny Tax”) was completed in February 2018, and will be presented at the 2018 IRS-TPC Research Conference in June.

**Design and Analysis Support for Studies Exploring the Psychology of Taxpayer Compliance Behavior**, multi-year contract (TIRNO-17-E-00019) with the IRS Taxpayer Advocate Service to design and evaluate studies to investigate the effect of outreach and education on taxpayer compliance, including a field experiment on how alternative communication tools and messages to taxpayers with outstanding tax balances influences their responsiveness to the IRS and their subsequent compliance. Completed December 2019.

**Expert Witness and Related Services**, contract with the Alabama Department Of Revenue to develop estimates of the compliance costs associated with state sales and use taxation, provide professional guidance, and serve as an expert witness in litigation over Alabama’s recent economic nexus regulation for determining whether out-of-state vendors are required to collect and remit sales and use taxes, September 2016-present.

**Estimation of Canadian International Income Tax Gap**, contract with the Canada Revenue Agency to provide assistance with developing a methodology to estimate the federal income tax gap associated with unreported income from offshore investments. Completed, March 2018.

**Estimation of the Drivers of Individual Income Tax Nonfiling**, multiple contracts with the IRS (TIRNO-15-P-00172, TIRNO-14-P-00157, TIRNO-10-D-00021-D0004) to investigate the drivers of individual income tax filing noncompliance. We developed and implemented a novel econometric methodology for combining publicly available survey data with administrative information to estimate the role of different factors in taxpayer filing decisions. Project completed, January 2017.

**Design and Analysis Support for Studies Exploring the Psychology of Taxpayer Compliance Behavior**, multi-year contract (TIRNO-14-E-00030) with the IRS Taxpayer Advocate Service to assist with the design, analysis, and interpretation of a series of studies exploring the psychology of taxpayer behavior. The first study, an innovative econometric analysis of the impact of audits on future compliance behavior has been published in the 2015 National Taxpayer Advocate Annual Report to Congress. A second study, an analysis of how audits and ID theft investigations shape taxpayer attitudes, has been published in the 2017 NTA Annual Report to Congress.

## **Consulting Engagements, Cont.**

**Consultation on Tax Gap Measurement with Australian Tax Office (ATO),** contract to participate as a member of an expert advisory group to critically evaluate and provide guidance on alternative options for measuring the federal tax gap in Australia. Project completed 2017.

**Development of Health Insurance Micro-Simulation Model,** multiple subcontracts with IBM (for IRS contracts TIRNO-15-Z-00013 and TIRNO-09-Z-00021-003) to develop a rich micro-simulation model of health insurance coverage to assist the Internal Revenue Service with workload planning relating to its responsibilities under the Affordable Care Act. Project completed, May 2016.

**Expert Report on Use Tax Vendor Sales and Use Tax Compliance Costs and Use Tax Compliance Initiatives,** contract with the Office of the Colorado Attorney General to provide an expert report relating to litigation concerning the transactional notice, annual purchase summary, and customer information report provisions relating to remote vendor sales under CCR Regulation 39-21-112.3.5. This report presented estimates we developed of the existing costs to Colorado vendors of complying with state sales and use tax requirements, evaluated the degree to which existing efforts by Colorado and other states to promote compliance with use tax requirements have been successful, and provided an expert opinion on the likely effectiveness of the transactional notice, annual purchase summary, and customer information report provisions in promoting use tax compliance. Project completed May 16, 2014.

**Development of Causal Inference Models,** task order with the Internal Revenue Service (TIRNO-10-D-00021-D0004) to provide advice on the use of causal inference models for developing counter-factual predictions of taxpayer behavior. Project completed, April 2014.

**Consultation on Tax Gap Measurement with Canadian Parliamentary Budget Office,** provided expert advice and recommendations concerning estimation of the magnitude of the tax gap in Canada. Work completed, March 2014.

**Development of Estimates of Taxpayer Underreporting,** task order with the Internal Revenue Service (TIRNO-10-D-00021-D0003) to develop new estimates of line item taxpayer underreporting with respect to the individual income tax by adapting detection controlled estimation methods for use with National Research Program audit results for tax years 2006 through 2008. Project completed, February 2014.

## **Consulting Engagements, Cont.**

**Consultation on Tax Gap Measurement with Her Majesty's Revenue and Customs (HMRC), United Kingdom**, met in person with the HMRC tax gap group and provided expert advice on a range of compliance measurement issues. Work completed, November 2013.

**General Deterrence Modeling**, multi-year project with IBM (IRS contract TIRNO-09-Z-00021) to develop and implement a longitudinal econometric framework for measuring the direct and indirect impacts of tax administration enforcement and service activities on taxpayer compliance for the Internal Revenue Service. Work completed December 2012.

**Development of Models of Consumer Choice for Compliance Research**, task order with the Internal Revenue Service (TIRNO-10-D-00021-0002) to advise the Office of Research on the use of consumer choice models to model the determinants of tax preparation mode. Project completed, September 2012.

**Refinement of Detection Controlled Estimation Methodology**, multi-year project with the Internal Revenue Service (TIRNO-10-D-00021) to refine the Detection Controlled Methodology for estimating noncompliance by line item on tax returns for use with existing and future NRP audit data. Work completed August 2012.

**Profile of Canada's Fishing Industry Labour Force**, contract with Fisheries and Oceans Canada to assist with validation of the methodology underlying its report profiling Canada's Fishing Industry Labour Force from 1994-2006 based on information obtained from tax records. Project completed March 2010.

**Analysis of the California ReadyReturn Program**, project commissioned by the Frasier Institute to review and analyze the performance of the California ReadyReturn program in providing California taxpayers with the opportunity to receive and file a pre-completed income tax return. Project completed September 2009.

**Measuring Compliance with the "Nanny Tax"**, contract with a corporate client to develop and implement a statistical methodology to estimate the degree to which household employers comply with their federal requirements to report and remit Social Security, Medicare, and unemployment taxes on behalf of their domestic employees. Project completed, August 2009.

## **Consulting Engagements, Cont.**

**Sensitivity Analysis of Detection Controlled Estimation Methodology**, task order from the Internal Revenue Service (TIRNO-05-D-00050-0003) to perform a sensitivity analysis of the Detection Controlled Estimation Methodology for estimating noncompliance for certain income line items of the individual income tax return. Project completed May 2009.

**Small Business Tax Compliance Burden Estimation**, subcontract from IBM to provide expert assistance relating to the design of an econometric framework for predicting the magnitude of the burden experienced by small businesses in complying with their federal tax filing and reporting obligations. Work completed January 2009.

**Indirect Effects of IRS Service and Enforcement Activities**, subcontract from IBM to review the literature on the impact of service and enforcement activities on tax compliance, help to facilitate a conference on best practices for measuring this impact, and assist with drafting a report with recommendations for implementing these practices. This work is meant to serve as a guide for the Internal Revenue Service in its allocation of resources associated with a large multi-year investment initiative to study the indirect effects of its activities on compliance. Project completed December 2008.

**Combining Operational and Random Audits**, task order from the Internal Revenue Service (TIRNO-05-D-00050-0002) to develop and apply a statistical methodology to integrate data from operational audits and random audits to measure noncompliance characteristics in the general taxpayer population. Project completed October 2008.

**Line Item Estimation of Individual Income Tax Noncompliance**, task order from the Internal Revenue Service (TIRNO-05-D-00050-0001) to extend the detection controlled estimation methodology to permit estimation of reporting noncompliance for separate income items on the individual income tax return using NRP data. Project completed 2007.

**Detection Controlled Estimation**, task order from the Internal Revenue Service (TIRNO-05-D-00050-0001) to develop and estimate an econometric model to assess the magnitude of undetected noncompliance on returns examined under the *National Research Program (NRP)*, a large-scale random audit study of noncompliance on individual income tax returns. The results of this project were used in development of the official IRS estimates of the income tax gap – the difference between taxes owed and taxes voluntarily reported and paid. Project completed July 2006.

## **Consulting Engagements, Cont.**

**Compliance Burden of Retail Sales Tax**, subcontract with PriceWaterhouse Coopers to participate in the development of a survey instrument and to undertake an econometric analysis of survey results pertaining to a large scale nationwide analysis of the compliance burden of retailers in administering state retail sales taxes. The work was undertaken as part of the Streamlined Sales Tax Project. Project completed, 2007.

**OECD Conference Keynote Speaker and Conference Facilitator**, contract with the Canada Revenue Agency to present the keynote address at an Organization for Economic Cooperation and Development (OECD) conference on *Tax Compliance Measurement and Program Evaluation* held in Ottawa, Canada; facilitated discussions over the three days of the conference (May 24-26); and assist in drafting the Workshop report. Final report completed in September 2005. The workshop included representatives from the following countries: Australia, Canada, France, Japan, Netherlands, New Zealand, Sweden, the United Kingdom and the United States.

**Departmental Performance Report**, contract with the Canada Border Services Agency to provide expert assistance with respect to the development of the Agency's first Departmental Performance Report, including: providing guidance on how to link performance results to key expected outcomes and anticipated results (particularly with respect to compliance and enforcement); assistance in the development and interpretation of key performance measures; review of draft reports to ensure proper tone, emphasis, and linkages; assistance with rewriting and re-organizing the report to enhance clarity and impact. Completed 2005.

**Assessing the Informal Supplier Tax Gap**, contract with the Internal Revenue Service (James Alm, co-researcher, TIRNO-03-P-00651) to develop estimates of the extent to which informal suppliers comply with U.S. federal income tax regulations. Final report completed September 2004.

**Corporate Tax Gap Estimation**, contract with the Internal Revenue Service (TIRNO-03-P-00429) to develop an econometric methodology for estimating the income tax gap for small and medium sized corporations. Completed July 2004.

**Trade Reporting Compliance**, contract with the former Canada Customs and Revenue Agency to develop estimates of the degree to which importers comply with valuation, classification, origin, and duty payment requirements. Completed March 2004.

## **Consulting Engagements, Cont.**

**Post-release Verification Program Evaluation**, contract with the former Canada Customs and Revenue Agency to perform a thorough review of the Canadian post-release verification program with a view towards improving efficiency and performance in measuring and promoting compliance with trade reporting requirements. Completed March 2004.

**Development of Performance Indicators**, contract with the former Canada Customs and Revenue Agency (CCRA) to assist in the development and construction of performance measures, conduct statistical analysis to measure program performance, assist in the creation of CCRA business plans and performance reports. Work completed December 2003.

**Refinement of Alternative Tax Scoring Methodologies**, contract with the Internal Revenue Service (TIRNO-02-P-00649) to refine and perform additional testing of the alternative tax scoring methodologies for audit selection developed under an earlier contract. See below under “Alternative Tax Scoring Methodologies”. Final report completed July 2003.

**Assessment of the Benefits of New Random Audit Data for Workload Selection**, contract with the Internal Revenue Service (TIRNO-01-P-00757) to empirically evaluate how well IRS workload selection criteria developed based on random audit samples from one tax year perform over a series of subsequent years, and to assess from these results how frequently random audit samples should be updated to maintain the efficacy of the audit programs. Final report completed June 2002.

**Development of a Framework for Tax Gap Estimation**, contract with the Internal Revenue Service (TIRNO-00-P-01128) to develop and test an econometric framework for the estimation of the federal income tax reporting gap using operational audit data. Final report completed November 2001).

**Canada Customs and Revenue Agency Annual Report**, contract with the former Canada Customs and Revenue Agency to provide expert advice on the development of a conceptual framework for measuring and reporting on the Agency’s performance against the objectives set out in its Corporation Business Plan, and to assist in drafting major portions of the Annual Report covering the Agency’s performance in delivering tax services and benefit programs. Work completed, September 2001.

## **Consulting Engagements, Cont.**

**Earned Income Tax Credit Participation Study**, contract with the Internal Revenue Service (TIRNO-01-P-00771) to develop an estimate of the degree of program take-up within the federal Earned Income Tax Credit program in tax year 1996, taking into account the compliance burden associated with program participation. The contract also called for the development of profiles of eligible households that do and do not participate. Project Completed in February 2001. A follow-up project extending the results to tax year 1997 was completed in October 2001.

**Magnitude and Determinants of Estate Tax Noncompliance**, econometric analysis of the magnitude and determinants of estate tax underreporting. I co-presented the results of this research with IRS researchers at a Brookings Institution Conference in May 2000. The underlying statistical methodology for the study builds on my earlier contract work for the IRS (see below) on estimating the estate tax underreporting gap.

**Quality Assurance Surveillance Plan**, Department of Education contract to develop an action plan for studying trends within the sub-baccalaureate labor market at the national and sub-national levels, and to explore whether post-secondary enrollment and completion patterns by field are coincident with these trends. Project completed October 1999.

**Sub-baccalaureate Labor Market Trends and The Relatedness of Postsecondary Enrollment Trends**, Department of Education project to carry out the study specified in the above action plan. Final report completed in October 2000.

**Alternative Tax Scoring Methodologies**, Internal Revenue Service contract (TIRNO-98-C-00030) to develop an alternative to the current DIF (discriminant analysis) approach to audit selection based on modern statistical techniques. Final report completed November 1999

**Estate Tax Underreporting Gap**, Internal Revenue Service contract (TIRNO-98-P-00406) to develop estimates of the estate tax underreporting gap using a sophisticated econometric model. Project completed in February 1999.

**Tax Audit Selection Study**, USAID contract (through Georgia State University) to prepare a report describing audit selection techniques by state and federal tax agencies in the U.S. and Canada, and to develop a methodology for implementing statistically-based audit selection procedures in Moscow Tax Inspectorates. Field work in Moscow and report completed in November 1997.

## **Consulting Engagements, Cont.**

**Business Tax Compliance Burden Studies**, contract with the Canadian Technical Committee on Business Taxation to develop, implement, and analyze two separate surveys on the compliance costs of Canadian corporate income and capital taxes. A report on the compliance burden of large Canadian corporations was completed in January 1997. A second report on the compliance burden of small and medium-sized Canadian businesses was completed in November 1997.

**Underground Economy Study**, contract with the Canadian Technical Committee on Business Taxation to prepare a critical review of the empirical research on tax compliance, particularly as it applies to businesses in Canada. The final draft of report was completed in September 1997.

**Follow-up Study**, contract with the Auditor General of Canada to prepare a follow-up report on Revenue Canada's progress since my earlier 1994 report on its new regime for processing personal income tax returns. Work completed in August 1997.

**Evaluation of the Canadian Child Tax Benefit and Goods and Services Tax Credit Programs**, contract with the Auditor General of Canada to evaluate the administration of these programs by Revenue Canada. The former program has some similarities to the U.S. Earned Income Tax Credit. Project completed in September 1996.

**Nonfiler Tax Gap**, developed (free of charge) in 1994 a novel statistical methodology to estimate the magnitude of noncompliance attributable to income tax nonfilers using TCMP data, which was used to generate the official IRS tax gap estimates for nonfilers. Dr. Chih-Chin Ho of the IRS and I extended this methodology to permit the development of a profile of non-filers -- work published in the *Journal of Public Economics*.

**Federal-State Auditing and Compliance**, study of state and federal audit practices performed for the Oregon Department of Revenue with Jonathan Feinstein of Yale University. I developed computer programs to merge micro-level federal and state tax return and audit information, and we performed an extensive analysis of the data. We prepared a report for the Oregon Department of Revenue on ways to improve auditing practices. Our research with this data led to my chapter "The Relationship Between State and Federal Tax Audits", (with James Alm and Jonathan Feinstein), in a National Bureau of Economic Research volume published by the University of Chicago Press. Project completed in 1994.

### **Consulting Engagements, Cont.**

**Evaluation of the New Regime for Processing Tax Returns**, contract with the Auditor General of Canada to evaluate Revenue Canada's administration of its new regime for processing individual income tax returns. Report completed in 1994.

**Electronic Filing Study**, contract with the Auditor General of Canada to prepare and administer a survey of federal tax agencies in the U.S., Australia, and New Zealand on their experiences with electronic filing of tax returns. I prepared a report summarizing the findings of my survey and drawing lessons for the Canadian electronic filing program. Project completed in 1993.

**Individual Income Tax Gap Estimation**, provided approximately 15 days of substantive technical and computing assistance to the IRS Compliance Analysis Group (at no charge) to update the IRS Tax Model so that it could make use of the 1988 TCMP data to generate new estimates of the Individual Income Tax Gap. Work completed in 1993.

**Compliance Costs of Separate Personal Income Tax System in Ontario**, 1992 contract with the Ontario Fair Tax Commission to evaluate the taxpayer compliance costs that would be associated with a shift from federal to provincial administration of Ontario's personal income tax.