Yigit Aydede

Curriculum Vitae (Yigit_Aydede)

Associate Professor, Department of Economics,
Saint Mary's University, Halifax, Canada.

June 2020

Highlights

Although most of my research is in the field of population economics, my current focus is on applications of machine learning methods by using unconventional data in the public health, risk profiling, and immigration.

- Currently, I am working on COVID-19 Epidemic curve segmentation, chronic disease surveillance systems, credit risk profiling, automation of pre-immigration selection procedures, and developing machine learning methods for social scientists and policy analysts. In each project, I am collaborating with colleagues from different disciplines, such as Accounting, Management, Computer Science, Public Health, and Medicine.
- I am a founder member of Research Portal on Machine Learning for Social and Health Policies, where we have organized a 3-day online Summer School, **Machine Learning for Economists and Applied Social Scientists**, between July 20 and 22, followed by a 2-day Webinar series. We had more than 50 paying students all faculty members at the Summer School and more than 170 participants in the webinar series.
- I am also the principal investigator of a team selected to the Nova Scotia COVID19 Research Coalition.
- Currently, I am serving at Reimagining the Future for Nova Scotians where academic and community experts are put together with access to the best research and data available and see what opportunities are possible for Nova Scotia.
- I mostly teach data analytics courses, Econometrics, Statistics, and Forecasting both at undergraduate and graduate levels.
- I have developed and taught a course, `Introduction to Applied Machine Learning with R` in Winter 2020. It is the first and only machine learning course in the Sobey School of Business that also has programming Labs. Moreover, I am at the program development committee of Master of Business Analytics (MBAN) at the Sobey School of Business, where I will teach `MBAN 5610 Artificial Intelligence & Machine Learning`.
- My application for the promotion to Full Professorship is under review.

Education

- PhD in Economics, University of Delaware, USA, 2006.

Scholarship

Book

- `Applied Machine Learning for Social Scientists and Policy Analysts with` R. Forthcoming in December 2020 at Bookdown. It will be online and free. I will accept donations for pdf and downloadable versions.

Refereed Publications

- Assortative Preferences in Choice of Major. *IZA Journal of Labor Economics.* (Forthcoming).
- Asymmetric Information and Discount to Foreign-Acquired Education in Canada (with Atul Dar). *IZA Journal of Development and Migration.* 2019, 10:2.
- Immigration and Location Choices of Native-Born Workers in Canada. *Papers in Regional Science.* Vol.96(S1) March 2017. 96-S1.
- Is the Lower Return to Immigrants' Foreign Schooling a Postarrival Problem in Canada? (with A. Dar). *IZA Journal of Migration.* 2017. 6:4.
- The Cost of Immigrants' Occupational Mismatch and the Effectiveness of Postarrival Policies in Canada. (with A. Dar). *IZA Journal of Migration.* 2016. 5:9.
- Re-employment, Housing Tenure, and Squatter Settlements in Turkey: An Empirical Analysis. *Housing, Theory and Society.* 2016. Vol.33(1).
- Comparison of Economic Benefits of University and Vocational High School Education among Different Majors in Turkey. (with B. Orbay) *European Journal of Higher Education.* 2016. Vol.6(2).
- Economic Benefits of Studying Economics in Canada: A Comparison of Wages of Economics Majors with those in Other Disciplines Circa 2005. (with A. Akbari) *Canadian Journal of Higher Education.* 2015. Vol.45(4).
- Effects of Immigration on Interregional Population Flows in Canada. *Migration and Development.* 2014. Vol. 3(2).
- Spatial Regularities between Nonimmigrant and Immigrant Numbers in Canada. *Migration Letters.* 2014. Vol.11(1).
- Are the Educational Credentials of Immigrant and Native-Born Workers Perfect Substitutes in Canadian Labour Markets? A Production Function Analysis. (with A. Akbari). *Education Economics.* 2013. V.21(5).
- Effects of Immigration on House Prices in Canada. (with A. Akbari). *Applied Economics.* 2012. Vol.44(13).
- Parametric Social Security Reforms and Saving: Evidence from Turkey. *Topics in Middle Eastern and Northern African Economies*, September 2011, Vol.13.
- Expected Social Security Wealth Simulations and Implicit Rate of Return Calculation for the Turkish PAYG System. *Journal of Economic and Social Measurement.* 2010. Vol.35.
- Generational Selfishness and Social Security: A Note on a Time-Inconsistency Problem in Parametric Reforms of PAYG. *Journal of Economic Policy Reform.* 2010. Vol.13(1).
- Aggregate Consumption Function and Public Social Security: The First Time-Series Study for a Developing Country, Turkey. *Applied Economics.* 2008. Vol.40(14).

Papers Under Review

- Dynamics of Social Mobility during the COVID19 Pandemic in Canada, *Canadian Public Policy* (With M.Yuksel and F.Begolli).
- Son Preferring Fertility Behaviors in Turkey *Population and Development Review* (With MC. Robitaille).
- Why does education-specific skill mismatch have no effect on wages in Turkish labor markets. *Journal of Education and Work.* (With B.Orbay and N.Erkol).

Work-in-progress

- Predicting Respiratory Diseases by Social Media Extraction and Machine Learning (with MLportal).
- Predicting Cancer by Using CCHS (with MLportal) – SSHRC/RDC application is accepted.
- Son preference, Sex-Selective Abortions, and Birth-Spacing in Canada. (With MC. Robitaille).
- Predicting immigrants' hospital utilization based on the record of landing and tax data for pre-migration policies (Mutlu Yuksel, Mevlude Akbulut, Case Warman).

Working Papers

- Dynamics of Social Mobility during the COVID19 Pandemic in Canada, (With M.Yuksel and F.Begolli). *IZA Discussion Papers*, 13376. 06/2020.
- How Big is It? The Cost of Vertical Mismatch in Canadian Labour Markets. (with A. Dar). *CLSRN* (Canadian Labour Market and Skills Researcher Network) – WP154 – 07/2015.
- Immigration and Location Choices of Native-Born Workers in Canada. *CLSRN* – WP130 – 03/2014.
- Economic Benefits of Studying Economics in Canada: A Comparison of Wages of Economics Majors with those in Other Disciplines Circa 2005. *CLSRN* – WP109 – 02/2013.
- Intergenerational Transfers and Expectations: A Note on How a Ponzi Scheme Affects Consumption. *NFI* (Networks Financial Institute at Indiana State University) - 2008-WP-11.
- A Dynamic Inconsistency Problem in Optimal Policies of PAYG. *NFI* 2008-WP-07.
- Wealth Creation and Expected Fairness of the Turkish PAYG System. *NFI* 2007-WP-21.
- Social Security, Intergenerational Transfers, and Saving: New Evidence from a Developing Country. *NFI* 2007-WP-6.
- Saving and Social Security Wealth: A Case of Turkey. *NFI* 2007-WP-03.

Conference Papers

(Refereed - last 4 years)

- *BigSurv20* Big Data Meets Survey Science. November, 2020. Utrecht, Netherlands. "What can be predicted from a national health survey? Is cancer one of them?".
- *European Union Health Economics Association* EUHEA 2020 Conference, Oslo July 9. What can be predicted from a national health survey? Is cancer one of them?.
- *Canadian Research Data Centre Network* (CRDCN) 2019 National Conference, Halifax, October 2019. "What can be predicted from CCHS? Is cancer one of them?" (with Mutlu Yuksel).
- *Canadian Economic Association*, Banff, Alberta, Canada, June 2019. "Son Preferring Fertility Behaviors in Turkey" (MC. Robitaille-Blanchet).
- 13th Annual Meeting of the *Portuguese Economic Journal*, Evora, July 2019. ""Son preference, Sex-Selective Abortions, and Birth-Spacing in Canada".
- *IZA World Labor Conference*, Berlin 2018, "Information constraint and assortative preferences in choice of major."
- *European Society for Population Economics* (ESPE), June 2018, Antwerp, Belgium, "Information constraint and assortative preferences in choice of major."
- *Canadian Economic Association*, Montreal, Canada, June 2018. "Son preference, Sex-Selective Abortions, and Birth-Spacing in Canada" (With MC. Robitaille-Blanchet)
- *European Association of Labour Economists* (EALE), St. Gallen, Switzerland, September 2017. "Information constraint and assortative preferences in choice of major."
- *Canadian Economic Association*, NS, Canada, June 2017. "Intergenerational transmission of field of study." and "Asymmetric information and the immigrants' wage gap in Canada."
- *International Association of Applied Econometrics*, June 2016, Milan. "Developing an Index of Field-of Study Relatedness for Measuring Occupational Mismatch in Canadian Labour Markets."
- *Canadian Economic Association*, Ottawa, Canada, June 2, 2016. "Is the Lower Return to Foreign Education a Postarrival Problem in Canada?"

Invited/Workshops

(Last 4 years)

- SIdE - Societa Italiana Di Econometria, (June 2019). Bank of Italy, Bertinoro, Italy. *Summer School on Machine Learning Algorithms for Econometricians.* 6 Days.
- Tinbergen Institute *Summer School on Genome-wide Data Analysis* - Amsterdam 2018. 5 Days.
- Valencia International *Bayesian Analysis Summer School*, VIBASS2 - University of Valencia, 2018. 6 Days.

- SIdE - Societa Italiana Di Econometria, (June 2017). Bank of Italy, Perugia, Italy. *Summer School on High-Dimensional Econometrics.* 6 Days.

Grants/Awards

- Research Nova Scotia (2020) Principle Investigator $34,900 (with Mitacs) – The Nova Scotia COVID19 Research Coalition. *The role of environmental determinants and social mobility in viral infection transmission in Halifax.*
- Research Nova Scotia New Health Investigator Grant - Under Review, Co-Principal Investigator, $98,800. Invited for submission. *Predicting Asthma Pervasiveness and Exacerbation with Nontraditional Data in Nova Scotia.*
- TUBITAK (2014) $30,000, Principle Investigator *Homeownership and Duration of Unemployment in Turkey.*
- Atlantic Metropolis Centre (2011) $5,000, Pilot Project Grant on immigration.
- NFI Indiana State University (2008) $19,500, *Social Security and Generational Accounting.*
- University of Delaware (2006) $2,000, Graduate Dissertation Fellowship Award.
- Internal research grants (2007 – 2020) $38,000 (in total), several different projects awarded by University of Windsor and Faculty of Graduate Studies and Research, Saint Mary's University.

Graduate Supervision

- Masters of Finance, Thesis 2020, Yeonsil Yi,
- Masters of Applied Economics, MRP 2020, Jahnae Cox,
- Masters of Science in Computing & Data Analytics, Thesis 2019, Diven Sambhwani,
- Masters of Applied Economics, MRP 2017, Pat Marcuccio,
- Masters of Applied Economics, MRP 2016, Claudia Zamai,
- PhD in Economics, Dissertation 2009, Azad Haidar.

Teaching

Qualification in teaching:

- Higher Education Teaching Certification (a two-year special program for selected PhD students), at the University of Delaware (2003–2005).

Courses

(Saint Mary's University, 07/2007 – Present):

- Introduction to Applied Machine Learning in R,
- Mathematical Economics,
- Advance Econometrics,
- Intermediate Statistics,
- Research Seminar in Economics,
- Public Economics,
- Applied Statistics and Data Analysis (**Master's in Finance**),
- Econometrics and Business Forecasting (**Master's in Finance**).

Achievements

- I was nominated to *Fr. William A. Steward Medal of Excellence in Teaching* by students in Saint Mary's University (2017),
- I was awarded *Excellent Teaching Award* at the University of Delaware (2005).
- I was awarded as the *Best Teacher* in the Summer School of Sabanci University (2005).
- To enhance students' data management skills and establish a more productive learning environment for data analytics techniques, I have designed a program for MEA and honour students (Economics) by

Statistics Canada's Atlantic Research Data Centre to access major confidential micro data files. This program has been shown as a model program to other universities in Canada.

- I have developed and taught a course, `Introduction to Applied Machine Learning with R` in Winter 2020. It is the first and only machine learning course in the Sobey School of Business that also has programming Labs.

Service

University activities

- Invited to President's Research Roundtable for AI. (October 16, 2020)
- Served in a special committee preparing a proposal for the Sobey School of Business Strategic Plan 2020-25,
- A member in Research Advancement Committee,
- A member in BComm Committee,
- Organized weekly Brown-Bag meetings in 2015 and 2016 at Sobey School of Business.

Contributions to the profession and community

- Co-founder of MLportal, Research Portal on Machine Learning for Social and Health Policies,
- Organizer and lecturer of at Summer School (July 20-23, 2020) "Machine Learning for Economists and Applied Social Scientists",
- Organizer a webinar series at MLportal (July 23-24, 2020) "Machine Learning for Economists and Applied Social Scientists",
- Serving as a referee 7-10 times in multiple academic journals annually including the Journal of Housing Economics, Regional Science, IZA Journal of Labor Economics, Journal of Population Economics, Applied Economics.
- Member of the Reimagining the Future for Nova Scotians,
- My work was also featured in newspapers, social media, CBC, Global News, and National Post. See the latest one here.
- Presenter at Community Revitalization & Prosperity Network on What Machine Learning Can tell Us About the Post-Pandemic Labour Market.