

Rohan Alexander

140 St George St, Toronto, Canada
rohanalexander.com
rohan.alexander@utoronto.ca

Academic Appointments

University of Toronto

Postdoctoral Fellow, Faculty of Information

Jul 2019 – *current*

Professional Appointments

University of Melbourne, Climate and Energy College

Research Associate, Energy Transition Hub

Sep 2019 – *current*

Education

Australian National University

Ph.D (Economics) *Essays on Applied Historical Labour Economics* Feb 2015 – Dec 2019

M.Economics Feb 2012 – Nov 2012

University of Queensland

B.Economics (Hons)

Feb 2004 – Nov 2008

Publications

Rohan Alexander, Kelly Lyons, Michelle Alexopoulos and Lisa Austin, 2019, ‘Workshop on barriers to data science adoption: Why existing frameworks aren’t working’, *Proceedings of the 29th Annual International Conference on Computer Science and Software Engineering (CASCON 2019)*, 384-385.

Rohan Alexander and Zach Ward, 2018, ‘Age At Arrival and Assimilation In The Age Of Mass Migration’, *The Journal of Economic History*, 78(3), 904-937.

Working papers

Rohan Alexander and Monica Alexander, ‘The Increased Effect of Elections and Changing Prime Ministers on Topics Discussed in the Australian Federal Parliament between 1901 and 2018’, submitted to *Political Analysis* (22 pages, single-spaced).

Abstract: Politics and discussion in parliament is likely to be influenced by the party in power and associated election cycles. However, little is known about the extent to which these events affect discussion and how this has changed over time. We systematically analyze how discussion in the Australian Federal Parliament changes in response to two types of political events: elections and changed prime ministers. We use a newly constructed dataset of what was said in the Australian Federal Parliament from 1901 through to 2018 based on extracting and cleaning available public records. We reduce the dimensionality of discussion in this dataset by using a correlated topic model to obtain a set of comparable topics over time. We then relate those topics to the Comparative Agendas Project, and analyse the effect of these two types of events using a

Bayesian hierarchical Dirichlet model. We find that: changes in prime minister tend to be associated with topic changes even when the party in power does not change; and the effect of elections has been increasing since the 1980s, regardless of whether the election results in a change of prime minister.

Rohan Alexander and Tim Hatton, ‘The Making of a Nation: Who Voted for Australian Federation?’, to be submitted to *The Journal of Economic History* (24 pages, single-spaced).

Abstract: We examine the votes that led to six British colonies federating to become the Commonwealth of Australia in 1901. We analyze support for Federation using a new dataset of district-level voting records that we associate with a new dataset of district-level census characteristics. We find little support for the view that sectoral interests were important. On the other hand, we find greater support for Federation in districts with a greater share of migrants from outside the colony, among those further from the seats of colonial government, and with a greater share of females. Therefore, support for Federation seems to have been associated more with migration, distance, and possibly female suffrage, than with trade.

Rohan Alexander and Patrick Leslie, ‘A Word-Count Based Classifier of Politicians in the Australian Federal Parliament (1901–2018)’, to be submitted to *Australian Journal of Political Science* (18 pages, single-spaced).

Abstract: When Australia federated in 1901, the Senate (upper house) of the Australian Federal Parliament was envisaged as a house to represent the interests of the constituent states. To investigate the efficacy of this we analyze how what is said in the Senate is affected by the state the senator represents and how this has changed over time. We codify two data sources to create a new dataset of who said what in the Australian Federal Parliament between 1901 and 2018. Using the House of Representatives (lower house) as a comparison, we then analyze politician-specific language using a Bayesian hierarchical model. We explore how the effect of the state that a senator represents changes over time, and hence how the representation of states’ interests has evolved, and how the state-identity of politicians has been subsumed by party-identity in Australia. We find that: the importance of the state-of-origin has decreased over time; and that substantial changes were associated with the world wars. Our findings have implications for how we think about the Senate as either a ‘states’ house’, or a ‘party house’.

Rohan Alexander, Patrick Dumond, and Patrick Leslie, ‘Forecasting Multi-District Elections’, to be submitted to *Political Analysis* (25 pages, single-spaced).

Abstract: The overall outcome of an election in a multi-district system turns on the number of electoral divisions won by each party. Despite this, traditional political opinion polls tend to focus on broad national-level estimates of support for major parties. In this paper we develop a framework to characterize a useful forecasting model of multi-district elections. We then implement an approach to forecast the number of electoral divisions won by each of the larger political parties in Australia at the 2019 Federal Election. Our approach first uses survey data and multi-level regression with post-stratification (MRP) to estimate electoral-division-level first-preference shares. To account for Australia’s use of preferential voting, we then use a model that we trained to estimate electoral-division-level two-party-preferred shares. We find that our approach performs well out-of-sample, and it has additional advantages over traditional polling including improved interpretability, transparency, and better communication of statistical uncertainty. Our framework allows the consistent evaluation of forecasting models of elections in a multi-district system. Finally, our paper also improves

our understanding of the circumstances in which MRP is appropriate, as we find that despite the bias of voter advice applications, and despite the relatively small number of respondents per electoral division for usually political opinion polls, both can still provide informative results on an electoral division basis.

Presentations

A Bayesian Multi-Level Model with Post-Stratification for Forecasting Multi-District Elections in Canada

(Upcoming) 2-4 June 2020, Western University, CPSA Annual Conference, London, Ontario.

Forecasting Multi-District Elections

(Upcoming) 16-19 Apr 2020, Midwest Political Science Association, Annual Conference, Chicago.

10 Dec 2019, Monash University, Department of Econometrics & Business Statistics, Melbourne.

9 Dec 2019, Australian Society for Quantitative Political Science Conference, Melbourne.

2 Dec 2019, Australian National University, Cake for Comments, Canberra.

20 Nov 2019, POP AusPSA Workshop, Canberra.

17 Oct 2018, University of Toronto, Political Behaviour Group, Toronto.

A Word-Count Based Classifier of Politicians in the Australian Federal Parliament (1901–2018)

4 Sep 2019, European Consortium for Political Research, General Conference, Wrocław.

22 Jun 2019, European Political Science Association, Annual Conference, Belfast.

18 Jun 2019, Quantitative Text Analysis Workshop, Dublin.

The Effect of Elections and Prime Ministers on Discussion in the Australian Federal Parliament (1901–2018)

11 Jan 2019, Political Methodology Specialist Group, Annual Conference, Warwick.

11 Dec 2018, Max Planck Institute for Demographic Research, Rostock.

22 Nov 2018, University of Toronto, Political Behaviour Group, Toronto.

25 Oct 2018, Australian National University, Research School of Economics, Canberra.

25 Oct 2018, Parliamentary Library, Parliament of Australia, Canberra.

24 Oct 2018, Australian National University, School of Politics and International Relations, Canberra.

Exploring Australia's Hansard (1901–2017)

Poster, 7–9 Sep 2018, Economic History Association Meeting, Montreal.

A Surnames-Based Analysis of Tasmanian Social Mobility (1803–2015)

20 May 2016, UC Berkeley, Economic History Lunch, Berkeley.

2 May 2016, Australian National University, Research School of Economics, Canberra.

Key technical skills

I am proficient in a wide range of economic and statistical methods used for quantitative analysis, including Bayesian hierarchical models, multilevel regression with post-stratification, topic modelling such as Latent Dirichlet Allocation and Structural Topic Models, and logistic regression. In particular, I have experience extracting, cleaning, processing and analyzing both structured and unstructured data. This includes techniques such as: using optical character recognition to digitize data; using web scraping tools;

cleaning data in an automated and reproducible way; performing a range of data exploration techniques to understand the characteristics of the dataset; and analyzing data using statistical methods.

Languages and packages: R, Python, Stata, SQL, HTML/CSS.

Teaching experience

University of Toronto

Course Instructor, Experimental Design for Data Science

Winter Term, 2020

Australian National University

Tutor, Macroeconomics 3

Semester 2, 2017

Tutor, Microeconomics 3

Semester 1, 2017

Tutor, Behavioural Economics

Semester 2, 2015

Tutor, Business Economics

Semester 1, 2015

Tutor, Microeconomics 1

Semester 1, 2013

Tutor, Foundations of Economic and Financial Models

Semester 2, 2012

University of Queensland

Tutor, Microeconomic Policy

Semester 2, 2008

Tutor, Microeconomic Theory

Semester 1, 2008

Tutor, Introductory Microeconomics

Semesters 1 and 2, 2007

Short courses and workshops

Instructor, Getting started with MRP Australian National University, 3 December 2019

Citizenship and work permit

Australian citizen living in Toronto holding an open Canadian work permit that expires on July 2023.

Referees

John Tang

Senior Lecturer

University of Melbourne

Zach Ward

Assistant Professor

Baylor University

Kelly Lyons

Associate Professor

University of Toronto