Zizhong Yan

Personal Information

Department of Economics
University of Warwick
Coventry, CV4 7AL, UK

Phone: +44 (0)7587-088668
Email: helloyzz@gmail.com
Homepage: http://zizhongyan.com

Gender: Male
Citizenship: Shanghai, China

Education

2017   *Ph.D. in Economics*, **University of Warwick**

- *Thesis Title:* Three Essays in Econometrics and Economics of Education
- *Supervisors:* Professor Sascha O. Becker, Dr. Mingli Chen, Professor Michael K. Pitt
- *Examiners:* Professor Wiji Arulampalam, Professor François Caron (Oxford)

2012   *MSc in Econometrics and Mathematical Economics*, **London School of Economics**

2011   *BA in Economics with Econometrics*, **University of Exeter**

Fields of Interest

My research interests lie in econometrics, applied econometrics, and economics of education. I am particularly interested in 1) estimating treatment effects using both frequentist and Bayesian methods; 2) Bayesian approach to missing data problem; and 3) higher education and education in developing countries.

Research Papers

Estimating Average Treatment Effects in Evaluation Studies: Using Dirichlet Process Mixtures (*Job market paper*)

This paper focuses on the estimation of the average treatment effect on the treated (ATT) in evaluation studies under unconfoundedness. As an alternative to traditional matching and reweighting methods, I propose a constrained Dirichlet process mixture of normals (DPMN) model to consistently estimate the covariates distribution in the treatment group and match the control units to the treated so that the distributions of covariates are stochastically equivalent. I use this approach to build a matching estimator and a reweighting estimator with desirable properties. First, the DPMN matching estimator meets the balancing property by construction. Second, since DPMN yields consistent estimates of the propensity score, the reweighting estimator can be constructed. Traditional matching and propensity-score based methods are two-step approaches, which may result in incorrect standard errors. In this paper, the whole algorithm is integrated into a single efficient Markov Chain Monte Carlo scheme: the resulting marginal standard errors can account for errors arising from the first step estimation. I illustrate this new method with Monte Carlo experiments and an empirical application of the LaLonde(1986) data. The DPMN reweighting estimator is found to have a performance comparable to conventional semi-parametrically efficient reweighting estimators. I also find that the DPMN matching estimator is less biased and more efficient than traditional matching estimators, as a result of improved balance.

A New Approach to Estimating the Ordinal Response Model with Censored Outcomes: An Application to the REF 2014, (2017) (*with Michael Pitt*)

In this paper we investigate how the Research Excellence Framework (REF), last held in 2014 to assess the research quality in British higher education institutions over the period 2008-2013, perceive economics journals in their assessment system. Exploiting on-line published data on submitted research outputs of different REF quality standards, which is only available at the institutional level, we propose a novel algorithm within an ordered probit framework that allows us to distinguish the censored REF standards for each individual submission and to

estimate how economics journals were perceived by the Economics and Econometrics sub-panel and the Business and Management Studies sub-panel. In particular, we develop an efficient Markov Chain Monte Carlo (MCMC) sampling scheme for the inference and also suggest a robust and weakly informative prior distribution to overcome the potential separation problem. This is the first paper to employ a standard regression model to directly predict the perception of journal quality for the REF 2014 exercise. The estimated results can be viewed as a directory for determining to what extent each economics journal meets the criteria set by the REF 2014. Our proposed method can be generalised to other generalised linear models where the outcomes are censored at an aggregate level.

Empowering Mothers and Enhancing Early Childhood Investment: Effect on Adults Outcomes and Children Cognitive and Non-Cognitive Skills, (2016) No. w22963. NBER (*with Victor Lavy and Giulia Lotti*)

Empowering women and enhancing children's early development are two important goals that are often pursued via independent policy initiatives in developing countries. In this paper we study a unique approach that pursues both goals at the same time: empowering mothers through tools that also advance their children's development. A program operated by AVSI, an Italian NGO, in a poor neighborhood of Quito, Ecuador, targets parents of children from birth to age 5. It provides family advisor-guided parent training sessions once every two weeks for groups of six to eight mothers and their children. We find that the program empowered women in various dimensions, including higher labor force participation and employment, higher likelihood of a full-time job in the formal-sector and higher wages. Treated mothers are also more likely to continue their education, make independent decisions regarding their own finances, have greater role in intra-household decisions, especially on issues involving children's education and discipline and increase parental inputs into their children's development. We find that treated children improve their cognitive and non-cognitive skills, for example, they are less likely to repeat a grade or temporarily drop-out from schooling, are less absent from and have improved behaviors in school, have better attitudes towards learning, and achieve higher scores on cognitive tests. Applying a recently suggested factor model of children's relative non-cognitive skills reaffirms our finding of significant gains in children non-cognitive skills. All results hold when we estimate aggregate treatment impacts, use summary indices instead of individual outcomes in order to account for multiple inference, when we use entropy balancing to adjust for differences in pre-treatment covariates, and when we use other robustness checks.

WORK IN PROGRESS

- "Teachers in Brazil" (*with Fernanda Brollo, Roland Rathelot, and Victor Lavy*)

- "Bayesian Approach to the Non-linear Panel Data Model" (*with Mingli Chen*)

ECONOMETRIC SOFTWARE

- "MSEFFECT: Stata Module to Estimate the Mean Effect Size of (binary/multiple group) Treatment on Multiple Outcomes", (2017), available at RePEc and SSC archive.

- (work in progress) "Stata Package for the Duration Model", (with Wiji Arulampalam, Valentina Corradi, and Daniel Gutknecht)

- "Improved Stata Editor for Mac OS Users", (2016-2017) available at Sublime text package control (with Chuhong Wang)

- "*Vim* Plugin for Running Selected Do-file in Stata", (2016) (with Chuhong Wang)

TEACHING EXPERIENCE

Teaching Assistant

- EC9A3 Advanced Econometric Theory (MRes/PhD level), second terms in 2014-2015, 2015-2016 and 2016-2017.
- EC226 Econometrics (UG second year level), 2013-2014, 2014-2015, and 2015-2016.
  (*I acted as the examination moderator for the EC226 module during 2014-2015.*)

Econometric and Technical Helpdesk Tutor

I have met and tutored more than 500 students individually to help with their econometric and software related questions in their dissertations.

- Economics undergraduate final year project (EC331), 2014-2015, 2015-2016, 2016-2017, 2017-2018
- MSc Time series dissertation helpdesk, 2015 summer, 2016 summer.

Short-courses Instructor

- Workshops of Data Management (UG final year level), 12/2016
- Stata seminars for MSc students in the Department of Economics (MSc level), 10/2016, 10/2017

Professional Experience

I am currently employed as a Research Officer at the University of Surrey. During My PhD, I have been appointed as a research assistant by professors to help with novel econometric modelling, intensive programming, and empirical implementations.

01/2017 — current	Research Officer (part-time), School of Economics, University of Surrey, UK
12/2016 — current	Research Assistant for Professor Sascha O. Becker
12/2015 — 09/2016	Research Assistant for Dr. Mingli Chen.
12/2015 — 01/2016	Research Assistant for Dr. Alessandra Ferrari (University of Reading, UK).
09/2015 — 11/2015	Research Assistant for Dr. Fernanda Brollo.
06/2015 — 10/2015	Research Assistant for Professor Victor Lavy, Dr. Roland Rathelot and Dr. Fernanda Brollo.
03/2014 — 07/2014	Research Assistant for Professor Victor Lavy.
10/2013 — 02/2014	Part-time Client Service Support, Hartley Library, University of Southampton.
04/2011 — 10/2011	Intern, Coca-Cola (Wuhan, China) Plant, Shanghai Haijiali Engineering Co., Ltd.
05/2008 — 09/2008	Intern, Agency Department, China Merchants Logistics Holding Co., Ltd.
10/2007	Intern, Singapore Cultural Festival, Media Development Authority of Singapore.
2006 — 2010	Co-founder (Martial arts video production and sell), Shanghai LiLide Events Planner Co., Ltd.

Presentations

2017	• Departmental seminar, University of Warwick
2017	• Departmental seminar, Department of Economics, University of Southampton
2016	• 2016 Annual Econometrics Workshop, University of Warwick
2015	• CAGE WIP seminar, Department of Economics, University of Warwick
2013	• PhD workshop, Department of Economics, University of Warwick

IT and Language Skills

Programming for econometrics:	Proficient programming in Python, Stata and Matlab
Other:	*Vim*, LaTeX, HTML, MS Office on both Windows and Unix platforms
Languages:	Mandarin(native), English(fluent)

References

Professor Sascha O. Becker
Department of Economics,
University of Warwick, UK
☎ +44 (0)24 765 24247
✉ s.o.becker@warwick.ac.uk

Assistant Professor Mingli Chen
Department of Economics,
University of Warwick, UK
☎ +44 (0)24 765 22901
✉ m.chen.3@warwick.ac.uk

Professor Victor Lavy
Department of Economics,
University of Warwick, UK
The Hebrew University of Jerusalem, Israel
☎ +44 (0)24 765 23032
✉ v.lavy@warwick.ac.uk

Professor Jeremy Smith
Department of Economics,
University of Warwick, UK
☎ +44 (0)24 765 23336
✉ jeremy.smith@warwick.ac.uk