

# STEPHEN P. KASTORYANO

## CURRICULUM VITAE

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### PERSONAL INFORMATION

Email:	skastoryano@gmail.com	Date of Birth:	05.07.1984
Homepage:	<a href="http://www.skastoryano.com">http://www.skastoryano.com</a>	Nationality:	Switzerland, United States
Phone:	+44 751 4464625	Languages:	English(nat.), French(nat.), Spanish, Dutch, German
Address:	59b Allen Road, N16 8RY, London, UK		

### ACADEMIC APPOINTMENT

Lecturer in Economics, University of Reading	2020 -
Assistant Professor in Empirical Econometrics, University of Mannheim (Hiatus due to sickness throughout 2016-2019)	2013 - 2019

### EDUCATION

Ph.D in Economics, U. of Amsterdam & VU. Amsterdam	2009 - 2013
Title: <i>Essays in Applied Dynamic Microeconomics</i>	
M.Phil. & M.Sc. in Economics, Tinbergen Institute	2007 - 2009
B.A. in Economics, Political Science & Mathematics, Northwestern University	2003 - 2006

### RESEARCH

**Research interests:** Empirical Microeconomics, Causal Inference Methodology,  
Crime Economics, Labor Economics

**Publications:**

- Street Prostitution Zones and Crime, 2017, *AEJ: Economic Policy*  
(with P. Bisschop and B. van der Klaauw),

**Working papers and Research in progress:**

- Dynamic Evaluation of Job Search Assistance, *R&R Journal of Applied Econometrics*,  
(with B. van der Klaauw)
- Uncovering the Effects of Nautical Patrolling on Illegal Fishing (with B. Vollaard)
- Decomposing Causal Mechanisms in Duration Models with Unobserved Heterogeneity  
(with J. Beyhum),
- Identification and Estimation of Causal Mechanisms in a Dynamic IV-Mediation Model
- Statistical Detection of Tax Fraud using Auditing Announcements
- Manipulation of Crime Statistics prior to US Mayor Elections

### PROFESSIONAL AFFILIATIONS

· Institute for the Study of Labor (IZA) Research Affiliate	2011 -
· Center for Econometrics and Empirical Evaluation (CEE), Mannheim	2013 - 2019
· Fellow at the Netherlands Institute for the Study of Crime and Law Enforcement	2016

## **HONORS, AWARDS, FELLOWSHIPS**

- C. Willems Stichting Scholarship for visiting UCL
- Econometrics Games 2010: 2nd place worldwide with VU Amsterdam team
- NETSPAR M.Phil. Thesis award 2010
- Huygens Scholarship 2007- 2009

## **TEACHING EXPERIENCE**

- 2020: B.Sc. Behavioural Economics
- 2016: Ph.D. Advanced Econometrics II
- 2015: Ph.D. Advanced Econometrics II, B.Sc. Econometrics of Panel Data and Social Interactions,
- 2014: Ph.D. Advanced Econometrics II, Ph.D. Econometrics of Panel Data and Social Interactions, B.Sc. Econometrics of Panel Data and Social Interactions
- 2013: Ph.D. Econometrics of Panel Data and Social Interactions  
B.Sc. Econometrics of Panel Data and Social Interactions
- 2011: B.Sc. Thesis Seminar Economics
- 2009: Microeconomics I, U. of Amsterdam, Teaching assistant
- 2008: Microeconomics, Macroeconomics, Econometrics, VU. Amsterdam,  
teaching assistant for first year M.Sc. program

## **CONFERENCE PRESENTATIONS**

- 2020: European Causal Inference Meeting (EUROCIM 2020)
- 2015: 7th Annual Meeting on the Economics of Risky Behaviors IZA (Izmir), European Economic Association (Mannheim), International Association for Applied Econometrics Annual Conference (Thessaloniki)
- 2014: 68th European Meeting of the Econometric Society (Toulouse), Counterfactual Methods for Policy Impact Evaluation (Rome)
- 2013: LATAM workshop in econometrics (Sao Paulo), Institute for the Study of Labour (Bonn)
- 2012: 66th European Meeting of the Econometric Society (Malaga), IAB Workshop on Job Search Assistance, Monitoring and Sanctions (Nuremberg), VU Amsterdam Criminology (NSCR), Aarhus University, University of Mannheim
- 2011: IZA Summer School
- 2010: SOLE & EALE Joint Annual Meeting 2010,  
Econometric Society World Congress 2010, 3rd Joint IZA/IFAU Conference on Labor Market Policy 2010, Swiss Economists Abroad Conference 2010

## **REFEREE ACTIVITIES**

Review of Economic Studies, Journal of Business and Economics Statistics, Journal of Human Resources, Journal of Population Economics, Labour Economics, Empirical Economics.

## **Research Statement:**

### *Empirical Microeconomics*

The focus of my empirical work is largely on fraud detection, which I consider in different fields. I currently have one published paper, and three in progress.

The first empirical paper which is published in *AEJ : Policy*, titled “**Street Prostitution Zones and Crime**” with Paul Bisschop and Bas van der Klaauw, has received some media attention in the Netherlands and in the US (Vox.com, Nature, Cato institute). This paper studies the effects of legal street prostitution zones on registered and perceived crime. It is one of only two existing causal studies on the effect of legalizing prostitution. In addition, this paper is the first to discuss the influence of different types of regulation systems in combination with legalization. Using a unique setting in the Netherlands our most important result is that opening a tippelzone decreases registered sexual abuse and rape by about 30% – 40% in the first two years. For cities which enforced licensing in tippelzones, we also find reductions in drug-related crime and long-term effects on sexual assaults.

A second paper on which I am collaborating with Ben Vollaard is in the field of environmental “**Uncovering the Effects of Naval Patrolling on Illegal Fishing**”. This paper tackles the issue of illegal fishing by considering the effects of the deployment of a Dutch naval patrolling ship in the North Sea on the catch load of illegally small ship. We use quasi-random variation in the weeks when the patrol ship is at sea to uncover the changing fishing patterns and changes in total catch of fishing vessels. Our results indicate that the catch of small sole is strongly increased in weeks when the patrol vessel is not at sea. We explain that this is mainly due to fishing vessels using illegal fishing nets with smaller than legal mesh sizes. We further explore heterogeneity of this effect by vessel characteristic and vessel fishing patterns.

Another paper that I have been working on for a while is “**Statistical Detection of Tax Fraud using Auditing Announcements**”. This paper builds on a huge enterprise I started during my PhD where I collected very detailed tax data from the Dutch tax authorities. In this paper I use unexpected tax-auditing announcements by the tax authorities to detect unusual tax evasion and avoidance behaviour. The unexpected nature of these auditing announcements allows me to evaluate how different types of taxpayers respond to an increased probability of auditing in financial assets, property holdings and debts. Current results indicate not only substantial tax evasion but also strategic substitutions and reallocations of income in response to these announcements. These results created quite a stir when presented to the tax authorities and for a long time it was unclear whether I would be able to finish this project. Fortunately, I have recently convinced them to let me pick it up again.

A final empirical paper I am working on is “**Manipulation of Crime Statistics prior to US Mayor Elections**”. This paper gathers panel data to investigate whether crime statistics in quarters leading up to mayor elections in the US show significant variations from expected trends. In particular, we look at whether these fluctuations in reported crime rates depend on the predicted voting margins reported in local news prior to the elections. Results indicate not only decreases in specific media drawing crime categories such as homicide, but we also find a sharp up tick in crime reporting following the elections. Moreover, we find some of the reduction in media grabbing crime reports to coincide with increases in reports of close, but less media grabbing, overlapping crime categories.

### *Causal Inference:*

My empirical econometric research develops frameworks and models which allow a researcher to identify the causal effects of a so-called policy regime and of the actual implementation of a treatment. More specifically, I consider situation where individuals are randomized to a *policy regime* which dictates a stochastic propensity to future *treatment* among agents. I allow selection on unobservables and formulate novel assumptions to identify different causal mechanisms and characterize the affected agent subtypes (eg. compliers).

The dynamic potential outcomes frameworks I have been developing build on several strands of literature in econometrics and statistics: 1. the IV-LATE potential outcomes framework 2. the mediation analysis literature 3. the dynamic treatment effects literature. The econometric identification issues I consider are always motivated by policy relevant empirical problems.

The first paper on this research agenda is my “**Decomposing Causal Mechanisms with Duration Outcomes**” with Jad Beyhum. This paper presents an econometric framework which identifies the causal effects of a treatment policy regime and of the actual implementation of treatment when the outcome of interest is a duration variable. We consider a situation in which agents are randomized to a policy regime upon entering an initial state that prescribes a stochastic propensity to future treatment. Thereafter, at different moments in time and depending upon their policy regime, surviving agents are randomized to actually receive treatment. Our dynamic potential outcomes framework provides non-parametric identification of: the ex-ante effect of the policy regime on the duration to exit, which may include placebo-type information effects, the ex-post baseline effect of actually receiving treatment on the duration to exit within a given policy regime, and the additional ex-post interaction effect of the policy regime and actually receiving treatment. We also extend our discussion to allow for dynamic information accumulation due to the past history of unobserved intermediate variables in a hazard model, which weakens several proportionality assumptions usually imposed. We further present an estimation procedure and present simulation results. Lastly we illustrate the framework using data on kidney transplants. In this setting we decompose the different causal effects

of having a blood type which is easily matchable (policy regime), and on actually finding a match (treatment) on the probability of death.

The second paper on this research agenda is “**Identification and Estimation of Causal Mechanisms in a Dynamic IV Model with Selection on Unobservables**”. For this paper, the identification results have been derived but I am still looking for a dataset to provide an empirical application. The outcome in this paper can be discrete or continuous. I first consider the setting where a treatment is initially tested unexpectedly in the population and then rolled out generally. I allow agents to change their selection into treatment in the new regime based on unobservables and characterize a new decomposition of causal effects for complier sub-types. I then consider a second setting where the policy maker changes an existing policy regime thereby changing the propensity to receive treatment. Identifying the parameters of interest in this setting requires different assumptions than in the duration setting since we can not exploit information from variation on the time dimension. I therefore develop a new assumption which has as a special case the IV-LATE exclusion restriction assumption on potential outcomes. As such, I show that IV-LATE is a special case in this dynamic setting. Since the framework imposes some monotonicity conditions, I also propose tests on these conditions.

Both of these papers build on work from a paper “**Dynamic Evaluation of Job Search Assistance**” jointly written with Bas van der Klaauw and which has been asked for a second revise and resubmit by the Journal of Applied Econometrics. The paper evaluates a job search assistance program for unemployment insurance recipients where the assignment to the program is dynamic. The novel feature of this study is that we use administrative data from a unique institutional environment in which we know the variables determining assignment to the job search assistance program. This provides a background on which we discuss dynamic treatment effects framework from different methodological perspectives. We can also compare empirical results from different dynamic discrete-time evaluation models and continuous-time duration models.