# Emmanuel Selorm Tsyawo

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#### Education

Ph.D. Candidate, Economics, Temple University, 2018- (Expected: May 2020)

Dissertation: "Treatment effects in bayesian and latent variable models" Committee: Brantly Callaway (Chair), Oleg Rytchkov, Charles Swanson

Ph.D. Student, Economics, Temple University, 2014-

B.A., Economics and French (First Class), University of Ghana, Legon, 2013

### Research Interests

Microeconometrics and Empirical Industrial Organisation

#### Research Skills

Bayesian Econometrics, Machine Learning, Statistical programming

# Working Papers

1. R&D spillover effects on firm innovation - A spatial approach (Job Market Paper - Preliminary version available on request)

**Abstract**: Quantifying R&D spillover effects requires a spatial matrix that characterises the strength of connectivity between firms. In practice, the spatial matrix is often unknown. This paper proposes a parsimonious approach to estimating the spatial matrix alongside parameters and quantifies R&D spillovers on innovation. The approach generalises to a class of linear and non-linear models, and it allows asymmetry and time-variation in the spatial matrix. On firm innovation, we find strategic

substitutability in firm R&D effort, negative spillover effects, and positive private effects.

- 2. Clustered covariate regression [SSRN], (with Abdul-Nasah Soale, under review)
- 3. Bayesian Distribution Regression [SSRN], (with Weige Huang)
- 4. Recovering distributions for the estimation of treatment effects under partly unobserved treatment with repeated cross-sections [SSRN]

# Work in Progress

- 1. Unobserved heterogeneity in two-part models (with Brantly Callaway)
- 2. A parsimonious approach to estimating the SAR spatial matrix from panel data

# **Teaching**

1. Temple University

Instructor, Principles of Macroeconomics, Fall 2018, Spring 2019, Fall 2019
Teaching Assistant for Prof. Michael Bonnano, 2014-2016
Teaching Assistant for Prof. Michael Leeds, 2016-2017
Instructor, Principles of Microeconomics, Summer I, 2015, 2016, 2018

Instructor, Intermediate Microeconomics, Summer I, 2018

2. University of Ghana, Legon

Teaching Assistant for Dr. Abel Fumey, 2013-2014

### Software

R packages: bayesdistreg [CRAN] [Website] [Github] (with Weige Huang), cluscov [CRAN] [Website] [GitHub] (with Abdul-Nasah Soale), RpacSPD [Website] [GitHub]

 $\mathbf{C} \ \mathbf{projects} \colon \mathtt{metricsC} \ [\mathtt{GitHub}], \ \mathtt{RdotC} \ [\mathtt{Website}] \ [\mathtt{GitHub}],$ 

Fortran projects: metricsFortran [GitHub]

Matlab, Stata, Octave, Python, LATEX, Microsoft Office

### Languages

Ewe (mother tongue), English (fluent, official language of Ghana), French (fluent, DALF C2), Spanish (fluent, DELE B2), German (intermediate), Portuguese (intermediate), Twi

## Honors and Fellowships

- 1. Research Fellowship, Department of Economics, Summer 2019
- 2. Research Fellowship, Department of Economics, Summer 2017

#### References

#### Prof. Brantly Callaway

(Dissertation Advisor) Department of Economics, TU

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#### Prof. Oleg Rytchkov

(Dissertation Committee Member) Department of Finance, TU

Phone: +1 215 204 4146 E-mail: rytchkov@temple.edu Prof. Charles Swanson

(Dissertation Committee Member) Department of Economics, TU

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#### Prof. Doug Webber

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