

CURRICULUM VITAE

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CITIZENSHIPS : Beninese, Permanent Resident of Canada

FIELDS OF SPECIALIZATION : Econometrics and Macroeconomics

Ph.D. THESIS Title : Bootstrap for panel data with various structures of dependence
Thesis supervisor : Benoit Perron
Date of completion : Summer 2010

EDUCATION 2010 (expected) : Ph.D. in Economics, Université de Montréal, Canada
2004 : M.Sc. in Economics, Université de Bourgogne, France
2003 : M.Sc. in Statistics, ENEA-Dakar, Senegal

PROFESSIONAL ACTIVITIES

Winter 2008, 2007, 2006 : Lecturer, Econometrics (B.Sc), Université de Montréal
Fall 2005 : Teaching Assistant, Econometrics (B.Sc), Université de Montréal
Fall 2003, Winter 2004 : Teaching Assistant, Mathematics for Economists (B.Sc.), Université de Bourgogne
July - September 2003 : Statistician Consultant, PASEC-CONFEMEN, Dakar, Senegal
February - June 2003 : Internship PASEC-CONFEMEN, Dakar, Senegal
September - October 2002 : Internship, ASECNA, Dakar, Senegal
August - October 2001 : Internship, National Statistical Institute, Cotonou, Benin

FELLOWSHIPS AND AWARDS

2004-2009 : Ph.D. Fellowship, Université de Montréal, Canada
1999-2003 : European Development Fund Fellowship, Senegal
June 2005 : J.-C. Eicher Prize, IREDU-Université de Bourgogne, France

PAPERS

- [1] "Bootstrap for panel data".
- [2] "Bootstrap for panel regression models with random effects" [*Job Market Paper*].
- [3] "Bootstrapping differences and differences estimator".

RESEARCH REPORTS

- [6] "Le programme de formation initiale des maîtres de Guinée" (co-author), PASEC Research Report (2003).
- [7] "Les enseignants contractuels et la qualité de l'enseignement de base I au Niger : Quel bilan ?" (co-author), PASEC Research Report (2004).
- [4] "Analyse comparative des cas de recrutement d'enseignants contractuels dans le primaire en Afrique : cas de la Guinée, du Niger et du Togo", Master's Dissertation, Université de Bourgogne (2004).

CONFERENCE PRESENTATIONS :

- [1] Bootstrap for panel data
 - Canadian Economic Association Conference, Vancouver, Canada, June 2008
 - Société canadienne de science économique Conference, Montebello, Canada, May 2008
- [2] Bootstrap for panel regression models with random effects
 - 15th Conference on Panel Data, Bonn, Germany, July 2009
 - Latin American Meeting of the Econometric Society, Rio de Janeiro, Brazil, November 2008
 - Midwest Econometrics Group, Lawrence, Kansas, USA, October 2008
 - Granger Centre Conference on Bootstrap Methods in Times Series, Nottingham, U.K., September 2008

RESEARCH INTERESTS

My research is about multiples indexes data models (panels, hierarchical models) and theoretical justification of bootstrap methods. I am interested in empirical applications in macroeconomics and public policy evaluation.

MEMBERSHIPS

CIREQ, Econometric Society, Canadian Economic Association.

LANGUAGES

French (fluent), English (fluent), Spanish (intermediate).

REFERENCES

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SUMMARY OF MY THESIS

The goal of this thesis is in to extend the bootstrap theory to panel data models. Panel data refers to the pooling of observations on a cross-section of statistical units over several periods. Because of their two dimensions (cross section and time series), panel data have the important advantage to allowing the researcher to control for unobservable heterogeneity that is systematic difference across cross-sectional units or periods. Using bootstrap methods, under some regularity conditions, it is possible to obtain a more accurate inference than an asymptotic theory. In the literature, there are some applications of the bootstrap to panel data without rigorous theoretical justification or very strong assumptions. This thesis suggests a bootstrap method more appropriated to panel data. The three chapters analyze the validity of this method and its application.

The first chapter, [1], considers a model with a single parameter and the sample mean as estimator. It is shown that the resampling only in the cross section dimension is not valid in the presence of temporal heterogeneity. The block resampling only in the time series dimension is not valid in the presence of cross section heterogeneity. The double resampling that combines the two previous resampling methods is valid for panel data models with cross section and/or temporal heterogeneity.

The second chapter, [2], extends the previous to panel linear regression model. Three kinds of regressors are considered: individual characteristics, temporal characteristics and regressors varying among periods and cross-section units. Using a two-way error component model, ordinary least squares estimator and the residual based bootstrap, it is shown that the resampling in cross-section dimension is valid for the inference about the coefficients associated to individual characteristics. The resampling in time dimension is valid with the coefficients associated to temporal characteristics. The double resampling is valid for inference about all the coefficients in the model.

The third chapter, [3], re-examines the differences-in-differences estimates exercise of Bertrand, Duflo and Mullainathan (2004). The empirical exercise use panel data from Current Population Survey about female wage in the 50 continental states of US. Placebo laws are generated in state-level and observe their impact on female wage. Naturally a no-impact decision is expected measuring the impact of these placebo laws. . Bertrand, Duflo and Mullainathan (2004) shows that neglected heterogeneity and temporal correlation lead to a bad evaluation of public policies. The double resampling method developed in this thesis corrects very well this size distortion problem and then gives a good evaluation of public policies using panel data.