Ada Kolobadia NAYIHOUBA
University of Montreal
Department of Economics
3150, Rue Jean-Brillant
H3T 1N8, Montreal (QC), Canada

Tel: +1 (202)5941467
Email: ada.nayihouba@umontreal.ca
Citizenship: Burkina Faso
 Languages: English, French.
 Website: https://sites.google.com/view/adanayihouba/

RESEARCH AREAS

o   Econometrics (Theory and application), Applied microeconomics, Economic growth, Education economics.

EDUCATION

o   **2018 (expected):** PhD. in Economics, University of Montreal, Canada.
    Dissertation: Essays on dynamic panel data models and on education economics.
    Advisor: Marine Carrasco.
o   **2011:** Master's in Statistics and Economics, National School for Statistics and Economic Analysis (ENSAE), Dakar (Senegal), with honors.

PROFESSIONAL EXPERIENCE

o   **July 2016-Present: The World Bank**, Consultant, Education Global Practice, Washington, DC.
    Member of cross-practices team for econometric analysis of the impact of child marriage on economic growth, the analysis of the impact of population structure on economic growth, the determinants of the convergence of countries human capital per capita.

o   **Summer 2013 & Winter 2014**: **University of Montreal**, Research Assistant.
    Harmonisation of Demographic and Health Survey data from sub-Saharan countries; Identification of causal effect of political and social reforms on education and fertility outcomes.

o   **2011-2012 : Institut de Recherche et Développement (Sénégal)**, Research Assistant.
    Harmonization of surveys/census data from Cameroon, Mali, and Senegal for Migration, Labor Market & Demographic Dynamics project - Paper on impact of fertility on labor force participation.

o   **Summer 2010 : DIAL/Institut de Recherche pour le Développement** (**Paris)**, Intern.
    Paper on demographic transition in Africa and link between demographic dynamics and growth.

o   **Summer 2008: National Institute of Statistics and Demography (Burkina Faso)**, Intern.
    Review of measures taken by Government to reduce inflation/impact on Consumer Price Index.

TEACHING EXPERIENCE

o   **Fall 2013-Fall 2015: University of Montreal,** Teaching Assistant and Lecturer.
    Teaching assistant: Econometrics & Quantitative methods for economists; Lecturer: Econometrics.
o   **National School for Statistics and Economic Analysis (Dakar)**, Teaching Assistant and Lecturer.
    Teaching Assistant: Impact evaluation using Stata; Lecturer: Econometrics & Analysis of survey data.

AWARDS AND FELLOWSHIPS

o   **Human Development VPU team award**, SABER - Reaching New Milestones Towards a Systems Approach in Education, 2017
o   **Award of Excellence**, Early Graduation Scholarship Grant, University of Montreal, 2016-2017.
o   **Excellence Scholarship**, CIREQ and Economics Department, University of Montreal, 2012-2017.
o   **Grant for Internship**, Dial/Institut de Recherche pour le Développement, Paris, Summer 2010.
o   **Excellence Scholarship**, Agence de Coopération Française, Government of France, 2006-2011.

PUBLICATIONS

o Demographic Dividend and Economic Growth: What Prospects for Africa? (in French) *Statéco* 109:89-102,2015.

o Economic impacts of child marriage: global synthesis report, Washington, DC: The World Bank and International Center for Research on Women,2017 (with Quentin Wodon et al.)

RESEARCH PAPERS

Thesis Papers

o A regularization approach to estimating the dynamic panel data models (with Marine Carrasco, in progress).

o Regularized LIML estimator of the dynamic panel data models (with Marine Carrasco, in progress).

o Return to schooling in Brazil: a cohort based analysis.

Other Papers

o Gains in human capital wealth: stylized facts from growth models (with Quentin Wodon, in progress)

o Fertility and Female Labour Force Participation in Three sub-Saharan African Countries (with Anne Sophie Robilliard, in progress).

o Determinants of Female Labor Participation in WAEMU Countries, Master's Thesis, National School for Statistics and Economic Analysis, Dakar, June 2011 (with Malick Diop).

PRESENTATIONS AT CONFERENCES AND WORSHOPS

o Canadian Economics Association 51st Annual Conference, Antogonish, Canada, 2017.

o 22nd Federal Forecasters Conference, Washington DC, USA,2017

o Conference in honor of Pr. Jean Marie Dufour, Montréal, Canada, 2016.

o Canadian Economics Association 49th Annual Conference, Toronto, Canada, 2015.

o CIREQ Ph.D. Student's Conference, Montréal, Canada, 2015.

o Second methodological workshop of MIMADEM (programming on Stata), Bamako, Mali, 2012.

COMPUTER SKILLS

o Matlab, Stata, SPSS, EVIEWS, SPAD, Latex, Microsoft Office**.**

OTHERS

o **Memberships**: Economic Analyst at l'Afrique des Idées **(Think Tank),** Member of team drafting policy note on job creation/local governance for Benin's Prime Minister in 2015.

REFERENCES

o Marine Carrasco   University of Montreal   +1 514-343-2394   marine.carrasco@umontreal.ca
o Benoit Perron   University of Montreal   +1 514-343-2449   benoit.perron@umontreal.ca
o Raphael Godefroy   University of Montreal   +1 514-343-2397   raphael.godefroy@umontreal.ca
o Quentin Wodon   The World Bank   +1 202-473-14-46   qwodon@worldbank.org

Essay on dynamic panel data models (DPM) estimation and on education economics

In the first two chapters of my thesis, we develop regularized estimators for DPM. In such models, the number of moment conditions may be very large even if the time dimension is moderately large. Even though the use of many moment conditions improves the asymptotic efficiency, the inclusion of an excessive number of moment conditions increases the bias in finite samples. An immediate consequence of a large number of instruments is a large dimensional covariance matrix of the instruments. As a consequence, the condition number (the largest eigenvalue divided by the smallest one) is very high especially when the autoregressive parameter is close to unity. Inverting covariance matrix of instruments with high condition number can badly impacts the properties of the estimator. As a solution to the many instruments problem, we propose a regularized approach to estimating the DPM.

A regularization approach to the Generalized Method of Moments (GMM) estimator of DPM

(With M. Carrasco, Job market)

The first chapter of the thesis proposes a regularized GMM estimator of DPM using three ways of inverting the covariance matrix of the instruments. All these methods involve a regularization parameter similar to the smoothing parameter in nonparametric regressions. We derive the asymptotic properties of the regularized estimators and propose data driven method to select the regularization parameter. The simulations confirm that regularization improves the properties of the classical GMM estimator especially when the autoregressive parameter is close to unity. An empirical application on the impact of financial development on economic growth completes the paper. Whereas the usual GMM estimator results in 0.022 % in GDP growth for each 1% increase in the financial development indicator, the regularized estimators lead to between 0.035% and 0.066% of increase.

Regularized Limited Information Maximum Likelihood (LIML) estimator for DPM (With M. Carrasco)

In this chapter, we propose a regularization approach to estimating the LIML estimator of the DPM. This estimator is known to have better finite sample properties than the GMM estimator but its implementation becomes problematic when the time dimension T becomes large. We derive the properties of regularized LIML estimators and prove through simulations that its improves the properties of the usual GMM estimator as well as the regularized GMM estimator.

Return to education in Brazil: a cohort based approach

When estimating the economic return of education, a major issue is to be able to separate the true effect of schooling on earnings and the effect of unobserved factors such as ability. The last chapter of the thesis uses differences in educational attainment by birth cohorts to estimate the return to education in Brazil. Education is instrumented by years of birth and regularization technique is used to address the many instruments problem. Preliminary results reveal that return to schooling is around 4 % per year whereas the ability bias is 3%.