

JUAN NICOLAS HERNANDEZ-AGUILERA

Cornell University, Colleges of Business - Agriculture & Life Sciences
Charles H. Dyson School of Applied Economics and Management
Home address: 504 E 81 St. Apt. 5M
New York, NY 10028

inh79@cornell.edu
+1 (412) 804 8405
www.jnicoha.com
Updated: Oct. 2017

Education:

Cornell University, Ph.D. Candidate in Applied Economics. Expected June 2018

Thesis: "Linking smallholder coffee growers with high-value markets: impact evaluation, sustainable agriculture and cooperation challenges".

University of Pittsburgh, Master in Public Administration, 2012

Major: Policy Research and Analysis. Minor: Development Planning & Environmental Sustainability

Universidad de los Andes, Bogota, Colombia, M.Sc. in Economics, 2006

Thesis: "Macroeconomic determinants of household's consumption in Colombia".

Universidad de los Andes, Bogota, Colombia, B.A. in Economics, 2004

References:

Prof. Miguel Gomez (*Chair and Advisor*)
Dyson School of Applied Economics
Cornell University
340 D Warren Hall (607) 255-8159

Prof. Jon Conrad
Dyson School of Applied Economics
Cornell University
409 Warren Hall (607) 255-7681

Prof. Arnab Basu
Dyson School of Applied Economics
Cornell University
441 Warren Hall (607) 255-6280

Prof. Amanda Rodewald
Department of Natural Resources
Cornell University
159 Sapsucker Woods Rd. (607) 254-2176

Teaching and Research Fields:

Primary fields: Resource Economics, Agricultural Economics and Development Economics

Secondary fields: Experimental Economics, Applied Econometrics and Economic Policy

Teaching Experience:

Cornell University

Fall 2015 Resource Economics (B.A), teaching fellow for Prof. Jon Conrad
2014/16 Research and Strategy in Emerging Markets (Grad & undergrad), co-instructor.
(Included field work with students in rural areas of developing countries)

University of Pittsburgh

Fall 2011 Game Theory & Behavioral Economics (M.A), teaching assistant Prof. Sera Linardi
Spring 2011 Quantitative Methods - Multivariate Analysis (M.A), teaching assist. Pr. Sera Linardi

Rosario University, Bogota, Colombia

2007/09 Macroeconomics I (B.A), instructor
2007,09,10 Introduction to Economics (B.A), instructor

Los Andes, University, Bogota, Colombia

2005/08 Introduction to Economics (B.A), co-instructor with Prof. Miguel Urrutia
2003/04 Economic Policy (B.A), teaching assistant for Prof. Miguel Urrutia, Dr. C.E. Posada
President J.M. Santos, Min. J.C. Pinzón, Min. L.C. Valenzuela, Dr. J.R. Ortega

Research Experience and Other Employment:

Cornell University

2015/17 Costs of economically sustainable coffee production: A farm-level analyses in Latin America (with Fair Trade USA, Department of Information Science, Dyson School of Applied Economics. Research Assistant to Prof. Miguel Gómez
2016/17 The economics and ecology of shade-grown systems (with Cornell Lab of Ornithology, Department of Natural Resources, Dyson School of Applied Econ.)
2015/17 Experimental economics to analyze smallholder coffee growers' behavior and cooperatives. Dyson School of Applied Economics
2014/16 Quality as a driver of sustainable agricultural value chains (with Cornell Lab of Ornithology, Dept. of Natural Resources, Dept. of Soil Science, Dyson School of Applied Economics, Universidad de los Andes and Sustainable Harvest)
2014/15 Cost of establishment and production of vinifera, hybrid and native grapes varieties in the region of NY. Research Assistant to Prof. Miguel Gómez
2012/13 Optimal post-harvest locations to establish a year-round Eastern broccoli industry. Research Assistant to Prof. Miguel Gómez

University of Pittsburgh

2011 Representation and electoral reform in Afghanistan (with USAID).
Research Assistant to Prof. Jennifer Murtazashvili.

Central Bank of Colombia:

2007/09 Inflation and Macroeconomic Programming Department. Economist.
2004/06 Research Unit. Research Assistant to Prof. Martha Misas
2002/03 Research Unit. Internship, Research Assistant to Prof. Maria Teresa Ramirez

Professional Activities:

Referee: Agricultural Finance Review; Socio-Economic Planning Sciences; Central Bank of Colombia

Affiliations: Agricultural and Applied Economics Association; International Sustainable Development Research Society; Association of Environmental and Resource Economists; Colombia Land Grant University Consortium – Cornell representative

Presentations (includes scheduled):

2017 *Invited speaker:* Embassy of Colombia (Washington, DC), Fair Trade (Seattle, WA).
Oral presentation: International Sustainable Development Research Conference (Bogota, Colombia), Agricultural & Applied Economics Association (Chicago, IL).
2016 *Invited speaker:* Specialty Coffee Association of America (Atlanta, GA), Central Bank of Colombia & Development Bank of Latin America – CAF (Bogota, Colombia).
Oral presentation: International Sustainable Development Research Conference (Lisbon, Portugal), 4th Antigua Experimental Economics Conference (Antigua, Guatemala).
2015 *Invited speaker:* U.S Land Grant University Colombia Dialogue, Fulbright and U.S Embassy (Bogota, Colombia). *Oral presentation:* Agricultural & Applied Economics Association (San Francisco, CA). *Poster presentation:* Charter Day Weekend: Creating a Sustainable Future (Ithaca, NY).
2014 *Invited speaker:* Catholic Relief Services, Borderlands Project (Nariño, Colombia),
Oral presentation: Specialty Coffee Association of America (Seattle, WA)

- 2013 *Invited speaker: The Boyce Thompson Institute “From Gene to Bean” (Ithaca, NY), Let’s Talk Coffee, Sustainable Harvest (Salvador).*
- 2012 *Oral presentation: Conference on Latin American Social and Public Policy, University of Pittsburgh (Pittsburgh, PA).*
- 2011 *Oral presentation: Fulbright Enrichment Seminar on Environmental Issues, U.S Department of State (Nashville-TN), Conference on Latin American Social and Public Policy, University of Pittsburgh (Pittsburgh, PA).*

Honors & Fellowships:

- 2016 Colman Leadership Program for PhD Students, Graduate School, Cornell University
- 2012/17 Graduate Research Assistantship, Dyson School of Applied Economics, Cornell
- 2014 Atkinson Center for Sustainable Future Research Fellow, Cornell University
- 2014 Stephen B. and Janice Ashley Fellowship in Agricultural Economics, Cornell
- 2013 Einaudi Center International Research Travel Grant, Cornell University
- 2012/10 J. William Fulbright Fellowship, full-tuition for MPA, U.S. Department of State
- 2012/10 Tuition Fellowship Center for Latin American Studies, University of Pittsburgh
- 2012 Pi Alpha Alpha - National Honor Society for Public Affairs, University of Pittsburgh
- 2012 Field Research Grant - Center for Latin American Studies, University of Pittsburgh

Job Market Paper:

“The economics and ecology of shade-grown coffee”

How to allocate land resources integrating diverse economic, social and environmental objectives is a challenging task for sustainable agriculture. Shade-grown coffee –or coffee produced under canopy of trees– provides habitat for birds that contribute to coffee berry pest control. In addition, this production system is associated in the long-term to lower soil chemical inputs dependency, better coffee qualities and lower yields. I used a dynamic optimization model to estimate smallholder’s decision to grow coffee under poor vs. intense shade considering the interactions between shade-grown coffee and bird population. Based on costs of production and expected savings from pest control services provided by birds, this paper estimates optimal coffee landscape configuration and potential price premiums associated to higher qualities.

Publications:

1. **Hernandez-Aguilera, J.N.**, Gómez, M.I., Rodewald, A.D., Rueda, X., Anunu, C., Bennett, R., van Es, H., (2016) “Quality as a driver of sustainable agricultural value chains: The case of the relationship coffee model” ***Business Strategy and the Environment***, Special issue “*Challenges of the Sustainability Transition in International Trade*”. IN PRESS
2. Fan, X, Gómez, M.I., Atallah, S.S., **Hernandez-Aguilera, J.N.**, “Localization of Vegetable Supply Chains and Spatial Market Efficiency: The Case of Broccoli in the United States”. *Second round peer review*
3. **Hernandez-Aguilera J. N.** (2006) “A Review of The Macroeconomic Determinants of Household Consumption: the Colombian Case”, ***Ensayos sobre Política Económica***, 52
http://www.banrep.gov.co/sites/default/files/publicaciones/archivos/espe_052-2.pdf.
4. Arango, C. A, Misas M.A, López E, **Hernandez-Aguilera J. N.** (2004) “Demand for Cash in Colombia: Neural Networks as a tool of Forecasting”, ***Ensayos sobre Política Económica***, 45
http://www.banrep.gov.co/sites/default/files/publicaciones/archivos/espe_045-1.pdf.

Research Papers:

“Quality as a driver of sustainable agricultural value chains: The case of the relationship coffee model”
(with Miguel Gomez, Amanda Rodewald, Ximena Rueda, Colleen Anunu, Ruth Bennett, Harold Van Es)

Smallholder coffee growers produce 80% of global coffee and are encouraged to comply environmental and social standards, and to meet product quality requirements. However, literature has traditionally focused in evaluating the impact of voluntary sustainability standards such as Fair Trade or Organic, and few studies have assessed outcomes for smallholders participating in specific business models oriented to product quality such as the Relationship Coffee Model (RCM). We examined how biophysical variables, production practices and technology affect coffee quality, and consequently, the ability of growers to participate in RCM. In turn, we evaluated the outcomes of RCM participation. Using original farm-level data collected from 265 Colombian smallholders we compared participants and non-participants of the RCM model and controlled for common unobservable variables that drive participation decisions such as soil-quality conditions or participation in social networks. In addition, we examined relationships among coffee-landscape, bird populations, and product-quality scores. Evaluations based on propensity score matching indicated that RCM participants employed more environmentally-friendly resource management practices, had greater tree diversity and were more informed and optimistic about the coffee business relative to comparable non-participants. Although farm-gate prices did not significantly differ between the two groups, RCM participants had better access to credit. Overall, supply chain arrangements directly linking roasters and growers and based on elevated product quality, can be drivers of sustainable coffee production.

Research in Progress:

“Cooperation and trustiness among smallholder coffee farmers: Implications for product quality and market participation” (with Arnab Basu and Miguel Gomez)

Cooperatives are crucial to link farmers to high-value markets and the commitment of their members with common product quality standards ultimately may determine market opportunities. With a sample of 196 members from a cooperative in Colombia that participate in the specialty coffee market, we evaluated the effect of smallholder grower’s cooperation behavior over product quality. We performed the Voluntary Contributions Mechanism (VCM) or Public Goods game to estimate farmers’ contribution levels, and controlled for potential cofounders affecting product quality such as farm biophysical conditions, available technologies and capital. In addition, to reduce a potential endogeneity in the relationship between quality and cooperation (due to higher disposable income that improved qualities may imply) we did a first stage estimation of individuals’ cooperation as a function of average expectation of the other player’s contribution in the game. We determined that individual’s cooperation positively depends on these expectations while estimated cooperation levels positively contribute to product quality.

Papers in Preparation:

1. **Hernandez-Aguilera, J.N.**, Conrad, J, Gómez, M.I., Rodewald, A. “Price premiums to incentivize smallholder farmers transition to shade-grown coffee production systems”. *In preparation.*
2. **Hernandez-Aguilera, J.N.**, Basu, A., Gómez, M.I., Viennet, R. “Field Experiment on reciprocity among coffee farmers in Colombia: Do membership in cooperatives impact behavioral preferences?”. *In preparation.*
3. **Hernandez-Aguilera, J.N.**, Gómez, M.I., Basu, A. “Cooperation and trustiness among smallholder coffee farmers: Implications for product quality and market participation”. *In preparation.*
4. **Hernandez-Aguilera, J.N.**, Gómez, M.I., García J, Rivadeneira B, Anunu, C. “Costs of economically sustainable coffee production: A farm-level analyses in Latin America”. *In preparation.*

Working Papers & Book Chapters:

1. **Hernandez-Aguilera J. N.**, Gomez, M.I. (2016) "Positioning Colombian smallholder growers in global markets: The case of specialty coffee", in "The equitable, competitive and sustainable development of the agricultural sector in Colombia", **Book edited by Central Bank of Colombia**, Chapter 12.
2. Alonso G, **Hernandez-Aguilera J. N.**, Pulido J. D, Villa M. L (2008) "Alternative Measures for the Colombian Real Exchange Rate", **Central Bank of Colombia**, Borradores de Economía 514.
<http://www.banrep.gov.co/sites/default/files/publicaciones/pdfs/borra514.pdf>
3. **Hernandez-Aguilera J. N.** (2007) "Inflation Expectations and Education", **Central Bank of Colombia**, Reportes del Emisor, 94 <http://www.banrep.gov.co/sites/default/files/publicaciones/archivos/94.pdf>
4. **Hernandez-Aguilera J. N.** (2007) "The Current Account Sustainability: An Approximation from the Consumption-Smoothing Approach", **Central Bank of Colombia**, Borradores de Economía, 440.
<http://www.banrep.gov.co/sites/default/files/publicaciones/pdfs/borra440.pdf>
5. **Hernandez-Aguilera J. N.** (2005) "Imports demand elasticities for the Colombian case: 1980-2004", **Central Bank of Colombia**, Borradores de Economía, 356
<http://www.banrep.gov.co/sites/default/files/publicaciones/pdfs/borra356.pdf>
6. **Hernandez-Aguilera J. N.** (2005) "Non-traditional exports demand elasticities for Colombia", **Central Bank of Colombia**, Borradores de Economía, 333
<http://www.banrep.gov.co/sites/default/files/publicaciones/pdfs/borra333.pdf>
7. Arango, C. A, Misas M.A, **Hernandez-Aguilera J. N.** (2004), "Demand of Monetary Species in Colombia: Structure and Forecast", Borradores de Economía, No. 309
<http://www.banrep.gov.co/sites/default/files/publicaciones/pdfs/borra309.pdf>

Media Citations:

"Shade-grown coffee makes coffee production more sustainable in Colombia", Portafolio (*in Spanish*), May 16, 2017

"Radical collaboration protects Colombia's birds, coffee farmers", Cornell Chronicle, April 2017

<http://www.news.cornell.edu/stories/2017/04/radical-collaboration-protects-colombia-s-birds-coffee-farmers>

"The Cost of Financially Sustainable Coffee Production", Roast Magazine, May 2017

http://www.roastmagazine.com/currentissue/currentissue/roast_CostofSustCoffee.html

"Coffee. Birds. People", Living Bird magazine, Autumn 2016 <https://www.allaboutbirds.org/in-colombia-shade-grown-coffee-sustains-songbirds-and-people-alike/>

"Multidisciplinary approaches to analysis and fieldwork: High-quality coffee markets in Colombia", Economics that really matters, March 30,2015 <http://www.econthatmatters.com/?s=multidisciplinary>

"From the grounds up, study seeks sustainable 'java'", Cornell Chronicle, July 2013

<http://www.news.cornell.edu/stories/2013/07/grounds-study-seeks-sustainable-java>

"Let's Look In At Let's Talk Coffee, Happening Now In El Salvador", Sprudge.com, November 2013

<http://sprudge.com/ltc-2013-bernson-sprudge-reality.html>

"Imports, GDP and real Exchange rate", in Economic and Financial Prospective, November 2005

Other Information:

Languages: English (fluent), Spanish (native), Portuguese (intermediate)

Software: GIS, STATA, R, MATLAB, PASW (SPSS), SAS, RATS, CATS, EViews, C++, EndNote