Gregory Galay

Ph.D. Candidate
Department of Economics & Finance
University of Guelph
Guelph, ON, Canada
N1G 2W1

Email: ggalay@uoguelph.ca
Telephone: (204) 960 - 3356

November, 2016

Education:

Ph.D. Candidate, Economics, University of Guelph, 2012 - June 2017 (expected)

Dissertation: Spatial Price Dynamics: Implications for Investment Decisions and Energy Policy in Canada

Committee: Henry Thille (Supervisor), Alex Maynard, Monica Cojocaru

M.A., Economics, University of Guelph, 2010 - 2011

B.A., Economics, University of Manitoba, 2005 - 2009

Research Interests:

Natural Resource and Energy Economics, Real Options Analysis, Time Series Econometrics

Working Papers:

The Impact of Spatial Price Differences on Oil Sands Investments (Job Market Paper)
Crude Oil Spatial Price Dynamics: A Cointegration Approach

Work Experience:

Instructor, University of Guelph

Distance Education Intermediate Microeconomics, S2016 - S2014
Distance Education Intermediate Macroeconomics, S2011

Teaching Assistant, University of Guelph

Microeconomic Theory I (Graduate Level), F2016 - F2013
Mathematical Methods for Economics, F2016
Intermediate Macroeconomics, W2016, S2013, W2013, & W2011
Advanced Mathematical Economics, F2015
Intermediate Microeconomics, W2015, F2012, & F2010
Game Theory, W2014
Introduction to Mathematical Economics, W2011

Research Grants Received:

Ontario Graduate Scholarship, 2016 - 2017
Graduate Scholarship in Economics, 2012 - 2016
Board of Graduate Studies Research Scholarship, 2015, 2013, & 2012

Conferences/Seminars:

50th Annual Conference of the Canadian Economics Association, University of Ottawa, June 2-5, 2016
Internal Seminar Series, University of Guelph, January 25, 2016
49th Annual Conference of the Canadian Economics Association, Ryerson University, May 28-31, 2015

Programming:

Python, R, and LaTeX

References

Henry Thille	Alex Maynard
Associate Professor of Economics	Professor
Department of Economics & Finance	Department of Economics & Finance
University of Guelph	University of Guelph
50 Stone Road East	50 Stone Road East
Guelph, ON, N1G 2W1	Guelph, ON, N1G 2W1
hthille@uoguelph.ca	maynarda@uoguelph.ca
519-824-4120 ext. 52733	519-824-4120 ext. 53014

Dissertation Chapter Abstracts

The Impact of Spatial Price Differences on Oil Sands Investments (Job Market Paper)

In this article, a two-factor real options model is developed to examine the impact spatial price differences have on the value of an oil sands project and the incentive to invest. Large, volatile price differences between locations can emerge when demand to ship exceeds capacity limits. This may have a significant impact on policy, production and investment in exporting regions. We assume the price difference between two locations follows a stationary process implying prices in different locations move together. The investment decision is formulated as a linear complementarity problem that is solved numerically using a fully implicit finite difference method. Results show the value of an oil sands project and the incentive to invest in a new project will increase when price differences decrease. Surprisingly, the standard deviation of the price difference has very little impact on project value or the incentive to invest.

Crude Oil Spatial Price Dynamics: A Cointegration Approach

This article examines the spatial pricing relationship between weekly crude oil spot prices using cointegration analysis that allows for multiple endogenously determined structural breaks. Particular focus is given to the relationship between land-locked North American crude oils (WTI and WCS) and international benchmarks with access to tidewater (Brent, Dubai Fateh, and Mexican Maya). The number of breaks is determined using a sequential testing procedure proposed by Kejriwal and Perron (2010) and the break dates are estimated using the Bai and Perron (2003) algorithm. Results indicate crude oil prices, for similar and different quality crude oils, are cointegrated with multiple structural breaks. It appears that constrained infrastructure caused from the rapid increase in unconventional crude oil production in North America caused the relationship between land-locked crude oils and tidewater crude oils to change over the sample period causing land-locked crude oils to be discounted relative to similar quality tidewater crude oils.