

# Dimitrios Dimitropoulos

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**Citizenship** Canadian, Greek

**Languages** English, Greek

**Research Interests** Energy Economics  
Industrial Organization

**Teaching Interests** Energy Economics  
Industrial Organization  
Econometrics

## Education

- 2014 Ph.D., Economics, University of Toronto (2007-2014).  
Dissertation: Three Essays in Energy Economics and Industrial Organization, with Applications to Electricity and Distribution Networks.  
Committee: Adonis Yatchew (supervisor), Melvyn A. Fuss, Frank Mathewson
- 2007 Master of Arts (Doctoral Stream), Economics, University of Toronto (2006-2007).
- 2006 Specialized Honours Bachelor of Arts (Summa Cum Laude), Economics, York University (2001-2006).

## Awards

- Royal Bank Graduate Fellowships in Public and Economic Policy. University of Toronto, 2014.  
SGS Travel Grant. University of Toronto, 2014.  
University of Toronto Graduate Fellowship. University of Toronto, 2006 to 2012.  
C.B. Macpherson Graduate Admission Award. University of Toronto, 2007.  
York University Continuing Student Scholarship. York University, 2002 to 2006.  
Stanley L. Warner Memorial Award. York University, 2006.  
Professor William Jaffe Book Prize. York University, 2005.  
William Pearson Scott Award. York University, 2004.  
York University Faculty Association Scholarship. York University, 2003

## **Publications and Research Papers**

"Joint Estimation of Production and Cost Functions, With an Application to Electricity Distribution," with Adonis Yatchew (Job market paper).

"Is Productivity Growth in Electricity Distribution Negative? An Empirical Analysis Using Ontario Data," with Adonis Yatchew.

"Sticks and Carrots: Is Resale Price Maintenance Necessary?"

"Discerning Long-Term Trends in Commodity Prices: A Semiparametric Approach," with Mathieu Marcoux, and Adonis Yatchew (Work in progress).

## **Professional Experience**

2010 - Present: Course Instructor, University of Toronto

- Courses: Empirical Industrial Organization (undergraduate: fall 2014, summer 2014), Industrial Organization and Public Policy (undergraduate: summer 2012, fall/winter 2011, summer 2011, fall/winter 2011, summer 2010).
- Develop curriculum. Prepare and deliver lectures to students. Prepare and administer assignments and examinations.

2010 - Present: Research Assistant, University of Toronto

- Supervisor: Adonis Yatchew.
- Compile and manage data, as well as conduct econometric analyses in energy economics. Collect research results and assist in analysis of results and preparation of journal articles for publication.

2007 - Present: Teaching Assistant, University of Toronto

- Courses: Econometrics (Ph.D., MA), Industrial Organization (undergraduate), Law and Economics (undergraduate), Quantitative Methods in Economics (undergraduate), Microeconomic Theory (undergraduate), Introductory Economics (undergraduate).
- Prepare and lead tutorials and discussion groups to supplement lectures. Grade examinations, term papers and other assignments.

## **Conference and Invited Seminar Presentations**

7th International Workshop on Empirical Methods in Energy Economics. Aachen, Germany.

44th Annual Conference of the Canadian Economics Association. Québec, QC.

8th Annual International Industrial Organization Conference. Vancouver, BC.

## **Computational Skills**

Matlab, S-Plus/R, STATA, Ox, Gauss.

**References**

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Professor Dwayne Benjamin  
Associate Chair, Undergraduate  
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## Dissertation Abstract

### Joint Estimation of Production and Cost Functions, With an Application to Electricity Distribution, *with Adonis Yatchew* (Job Market Paper)

Although production and cost functions are mathematical duals - they both contain the same information about the underlying technology - practitioners typically estimate only one or the other. This paper proposes an approach for joint estimation of production and costs. Combining such quantity and price data has the effect of adding statistical information without introducing additional parameters into the model, thus allowing one to obtain greater precision of estimation. Our estimator optimizes a GMM-type objective function and simultaneously produces internally consistent parameter estimates for both the production function and the cost function. We show how to account for the presence of certain types of simultaneity and measurement error, and we extend the framework to a multi-output setting. The methodology is applied to data on 73 Ontario distributors for the period 2002-2012. Our models incorporate business condition variables such as customer density. We find no evidence of economies of scale, and estimate productivity growth to be approximately negative 1% per year over the period. As expected, the joint model results in a substantial improvement in the precision of parameter estimates.

### Is Productivity Growth in Electricity Distribution Negative? An Empirical Analysis Using Ontario Data, *with Adonis Yatchew*

Electricity industries are experiencing upward cost pressures in many parts of the world. This paper focuses on electricity distribution. We apply two methodologies for estimating productivity growth – an index based approach, and a cost based approach – to data on over 70 Ontario distributors for the period 2002 to 2012. The resulting productivity growth estimates are approximately -1% per year, suggesting a reversal of the positive estimates that have generally been reported in previous periods. We implement flexible semi-parametric variants to assess the robustness of the conclusions and discuss the use of such statistical analyses for calibrating productivity and stretch factors within a price-cap framework.

### Sticks and Carrots: Is Resale Price Maintenance Necessary?

While the existing literature on vertical contractual relations has established that resale price maintenance is sufficient to coordinate the retail network of a manufacturer, this paper asks whether such vertical restraints are necessary. Specifically, this article studies the vertical contracting problem between an upstream manufacturer and its downstream retailers in a setting where spot market contracts fail, but resale price maintenance cannot be appealed to due to legal prohibition, to examine whether other forms of contracting can achieve the outcome of vertical integration. I show that a bonus scheme based on retail revenues is sufficient to provide incentives to decentralized retailers to elicit the correct levels of both price and service. Interestingly, an incentive scheme based on retail sales is unable to do so. Intuitively, an incentive scheme based on quantity alone will fail because it does not alter the source of incentive incompatibility between manufacturer and retailer, namely retail price competition. On the other hand, an incentive scheme based on retail revenue is able to coordinate the distribution channel because higher bonus levels are attainable not only by increasing sales, but also by increasing price; higher service levels then follow, as there is a sufficient retail margin to underwrite them.