

# Wichsinee (Arm) Wibulpolprasert

Associate

Analysis Group, Inc.

1010 El Camino Real Suite 310, Menlo Park, CA 94025

[wichsinee@alumni.stanford.edu](mailto:wichsinee@alumni.stanford.edu) (626) 636-6767

---

**CITIZENSHIP** THAI

**GENDER** FEMALE

**YEAR OF BIRTH** 1986

## **EDUCATION**

2014	Stanford University	Ph.D. in Economics
	<i>Dissertation title:</i>	Essays in Energy and Environmental Economics
	<i>Dissertation Committee:</i>	Prof. Lawrence Goulder, Prof. Caroline Hoxby, Prof. Mar Reguant
2011	Stanford University	M.A. in Economics
2009	Duke University	B.S. in Economics

## **PROFESSIONAL EXPERIENCE**

2014 – Present	Analysis Group, Inc. Menlo Park, CA
	<i>Associate</i>
2012-2013	Thailand Development Research Institute, Bangkok, Thailand
	<i>Consultant</i>
2010-2013	Stanford University Department of Economics and Graduate School of Business (GSB)
	<i>Research Assistant to Prof. Lawrence Goulder (Economics), Prof. Mar Reguant and Prof. Lanier Benkart (Stanford GSB)</i>
2007-2009	Duke University, Department of Economics
	<i>Research Assistant to Prof. Charles Becker and Prof. Marjorie McElroy</i>
Summer 2008	Thailand Development Research Institute, Bangkok, Thailand
	<i>Intern Research Assistant</i>

## **RESEARCH AND TEACHING FIELDS**

Environmental and Resource Economics, Public Economics, Empirical Industrial Organization

## **TEACHING EXPERIENCE**

Spring 2012	Economics Department Graduate Tutor in Econometrics for First Year Graduate Students, Stanford University
Winter 2012	Teaching Assistant for Professor Lawrence Goulder, Stanford University, Econ 156 (Environmental Economics and Policy)
Spring 2009	Teaching Assistant for Professor Andrew Sweeting, Duke University, Econ 139/239 (Undergraduate/Masters Econometrics)

## **SCHOLARSHIP, HONORS, AND AWARDS**

2013-2014 Leonard W. Ely Graduate Student Fund Fellowship, Stanford University  
2009-2010 Stanford University Economics Department Graduate Fellowship  
2009 High Distinction Recognition for Senior Honors Thesis, Duke University  
2008-2009 Phi Beta Kappa, Duke University  
2004-2009 Full Scholarship from the Bank of Thailand for Undergraduate Study in the United States

## **INVITED SEMINARS AND CONFERENCE PRESENTATIONS**

*Optimal Environmental Policies and Renewable Energy Investment in Electricity Markets*, Resources for the Future and Federal Reserve Board, Washington D.C., February 2014  
*Impacts of Thailand's Universal Coverage on Household Expenditures*, International Health Economics World Congress. Sydney, Australia, July 2013  
*Optimal Environmental Policies and Renewable Energy Investment in Electricity Markets*, International Industrial Organization Conference. Boston, MA, May 2013  
*Residential Water Demand in Durham, NC, at the Onset of the 2007 Drought*, Southern Demographic Association Annual Conference. Greenville, SC, November 2008

## **RESEARCH PAPERS**

*Optimal Environmental Policies and Renewable Energy Investment in Electricity Markets*, under review

Renewable energy subsidies have been popular policy instruments to combat climate change. This paper studies the long-run welfare benefits of optimizing design of the existing renewable energy subsidy (the status quo) to coordinate efficient patterns of renewable investment in the presence of heterogeneity in the offset emissions. I consider two improvements to the status quo subsidy: (i) optimizing the subsidy rates to reflect the average cost of the offset emissions, and (ii) differentiating the subsidy rates to reflect the location- and time- specific cost of the offset emissions. This paper is the first to model renewable capacity investment decisions, recover the fixed cost of entry, and measure the relative performance of emissions pricing and various designs of renewable energy subsidies in the presence of spatial and temporal heterogeneity. I find relatively small welfare gains from optimizing rates and designs of the status quo subsidy. In contrast, shifting to the optimal emissions tax or equivalent policies yields much larger welfare gains because these policies engage in additional low-cost emissions abatement channels that renewable energy subsidies cannot: namely, the channel of demand conservation and cross-plant fuel substitution.

*Locational Marginal Pricing and Supply-side Efficiency: Evidence from the Texas Electricity Market*, under review

On December 1, 2010, the Electric Reliability Council of Texas (ERCOT) changed its market structure from a simple 4-zone structure to a nodal structure with a full transmission network model and locational marginal pricing (“nodal market”). The new nodal market structure encompasses more efficient generation and congestion management as well as more refined pricing granularity. This study quantifies supply-side cost savings that result from the more efficient generation and congestion management in the nodal market. I focus my analysis on the changes observed among the natural gas power plants since they are frequently the marginal producers and thus most susceptible to changes in the market structure compared to other types of plants. I find that the nodal market structure leads to a 3 percent reduction in fuel consumption and a 2.5 percent reduction in CO<sub>2</sub> emissions. In addition to the reductions in fuel consumption and the associated emissions, the nodal market structure leads to a 1 percent reduction in the online capacity required to produce the same amount of electricity. Overall, the new market structure leads to a substantial supply-side cost savings of at least \$236 million per year.

*Who Bears the Burden of the U.S. Health Reform?* (with Patricia Foo)

The 2010 Patient Protection and Affordable Care Act (ACA) has the potential to impact U.S. firms through regulations on employer-sponsored insurance (ESI) and general equilibrium effects. We study changes in firms' asset prices around the passage of the ACA to identify the long-run expected incidence of the reform. We find that shareholders of firms with a higher proportion of uninsured employees or employees with ESI prior to the reform experienced a negative impact, while shareholders of firms with a higher proportion of employees who would qualify for expanded public programs experienced a positive impact.

*Thailand's Universal Health Coverage Program and household's expenditure* (with Worawan Chandoevrit)

In this paper, we use a quasi-experiment approach to evaluate the average treatment effects of the Universal Health Coverage scheme (UHC) on the beneficiary households' spending behavior. In particular, we construct a synthetic control sample that best resembles our treated sample in the pre-treatment periods for three outcome variables: (i) monthly out-of-pocket medical expenditure, (ii) monthly non-medical expenditure, and (iii) monthly saving. We find that the reform has a large impact on reducing the out-of-pocket medical expenditure of the beneficiary households. This large reduction in out-of-pocket medical expenditure accompanies a significant increase in the non-medical expenditure and a significant decrease in monthly saving. Altogether, our findings support the hypothesis that the UHC has a benefit of reducing precautionary saving among households.

*Residential water demand in Durham, NC, at the onset of 2007 drought* (with Charles M. Becker)

Understanding patterns of residential water use is important for designing and assessing demand-oriented policies on water conservation. Using the City of Durham's water consumption data for July 2007, this study attempts to quantify the effects of socio-demographic variables (e.g., income, household size, age of the house) on household water consumption using regression analyses. We found that the block group average per capita income and the fraction of newly constructed housing units in a block group are positively related to household water consumption. Ultimately, this paper comments on the feasibility of policies such as water reduction targets and the possible effects of these policies on different income groups.

*Wife's labor supply and marital dissolution: evidence from the NLSY79*

(Undergraduate Honors Thesis, Faculty Advisor: Prof. Marjorie McElroy)

In response to the changing family and social structures in the United States, an accurate understanding of mechanisms and the driving forces of marital dissolution is important in many aspects. For one, the knowledge helps policy and law makers to conjecture possible results of the legislation (e.g. unilateral divorce law, child alimony, or child custody), and the welfare system (e.g. welfare benefits to children and women after divorce) on marriages, divorces, and labor supply. Our goal is to provide additional evidence to a debatable issue in labor and family economics: Does married women's labor supply increases the chance of their future divorces? or is the relationship the other way around? Prior studies have produced conflicting results. We first propose and estimate a dynamic model, namely a divorce hazard analysis, that allows us to predict the risks of marital dissolution at different stages during the marital life course as a function of endogenous wife's labor supply. By estimating the proposed model on a more recent data set, the NLSY79, we hope to address econometrics issues occurred in earlier studies, as well as present new evidence for these competing claims.