

Farzad Taheripour

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Abstract

Dr. Farzad Taheripour is a Research Assistant Professor in the Department of Agricultural Economics at Purdue University and associate of the Center for Global Trade Analysis (GTAP). Dr. Taheripour research interests are in the area of energy, natural resource, macro and micro economic modeling, and econometrics. He has published several papers and chapter books in these areas in recent years. His current research focuses on developing macro and micro economic models to analyze and quantify economic and environmental consequences of biofuel production and policy. He is a key person in developing GTAP-BIO model and its database which have been frequently used by independent researchers, governmental agencies, and international organizations to evaluate the economic and environmental impacts of biofuels. He has received several research grants from national and international organization. He received his Ph.D. degree in Agricultural Economics from the University of Illinois at Urbana-Champaign in 2006. His Ph.D. dissertation has been selected as an outstanding dissertation by the Department of Consumer and Agricultural Economics, University of Illinois at Urbana-Champaign. He was ranked as an excellent teacher in Fall and Spring 2005.

Education

Ph.D. Agricultural Economics, University of Illinois at Urbana-Champaign (UIUC), 2006

M.S. Economic Systems Planning, Isfahan University of Technology, Isfahan, Iran, 1989

B.A. Economics, Shiraz University, Shiraz, Iran, 1986

Fields of Interest

- Applied Microeconomics (Energy, Bioenergy, Environmental Economics, Climate Change, Natural Resource, and Land use)
- Applied Macroeconomics (Economic Growth and Development, General Equilibrium Modeling, Fiscal policies)
- Public Finance (Tax and Subsidy Policies)
- Applied Econometrics (Demand and Cost Functions)

Positions Held

2012- Research Assistant Professor, Department of Agricultural Economics, Purdue University

2008-11 Energy Economist, Department of Agricultural Economics, Purdue University

2007-08 Post Doctoral Fellow, Department of Agricultural Economics, Purdue University

2000-06 Research and Teaching Assistantship, UIUC

1992-99 Research Economist and Instructor, Institute for Research in Planning and Development (IRPD), Plan and Budget Organization, Tehran, Iran

1993-94 General Director, Macro Economic and Population and Human Resource Bureaus, Plan and Budget Organization, Tehran, Iran

1989-92 Instructor, Agricultural Economics Department, Shiraz University, Iran

1089-92 Research Economist, Plan and Budget Organization, Fars Province, Shiraz, Iran

Teaching Experience

2010 Instructor, GTAP short course, Department of Agricultural Economics, Purdue University

2007-08 Guest Lecturer, honors course offered by Otto Doering, Purdue University, 2007-8

1999-06 Teaching at UIUC:

- Mathematics for Economists: Summers 2005 and 2006, Agricultural and Consumer Economics Department
- Applied Statistical Methods, computer lab and discussion sections: 2002-2005
- Business Statistics, discussion sections: Spring 2005
- Statistics I and II, discussion sections: 2001-2002
- Microeconomics and Macroeconomics, discussion sections: 2000-2001

1989-99 Teaching preliminary courses in Microeconomics, Macroeconomics, Econometrics, and Cost-Benefit Analysis at Shiraz University and at the IRPD, Iran

Publications in English

Journal Articles

1. "Structural Change in the Biofuels Era," with J. Beckman, T. W. Hertel, and W.E. Tyner, *European Review of Agricultural Economics*, 2012, 39(1): 137–156.
2. "Fiscal reforms in general equilibrium: theory and an application to the subsidy debate in Iran," with F. Gahvari, *The B.E. Journal of Economic Analysis & Policy*, 2011, 11(1), Art. 36.
3. "The Effects of Electricity Pricing on PHEV Competitiveness," with S. Huang, B. Hodge, J. Pekny, G. Reklaitis, and W. Tyner, *Energy Policy*, 2011, 39(3): 1552-1561.
4. "Implications of Biofuels Mandates for the Global Livestock Industry: A Computable General Equilibrium Analysis," with T. Hertel, and W. Tyner, *Agricultural Economics*, 2011, 42(3): 325–342.
5. "Comparison of fixed versus variable biofuels incentives," with W. Tyner and D. Perkis, Purdue University, *Energy Policy*, 2010, 38(10): 5530-5540.
6. "Biofuels and their By-Products: Global Economic and Environmental Implications," with T. Hertel, W. Tyner, J. Beckman, and D. Birur, *Biomass and Bioenergy*, 2010, 34(3): 278-289.
7. "Policy Options for Integrated Energy and Agricultural Markets," with W. Tyner, *Review of Agricultural Economics*, 2008, 30(3): 387-396.
8. "Welfare Effects and Unintended Consequences of Ethanol Subsidies," with M. Khanna and A. Ando, *Review of Agricultural Economics*, 2008, 30(3): 411-421.
9. "US Ethanol Policy Analysis – What Have We Learned So Far?," with W. Tyner, *Choices*, 2008, 23(3): 6-11.

10. "Welfare Impacts of Alternative Policies for Environmental Protection in Agriculture in an Open Economy: A General Equilibrium Framework," with M. Khanna and C. Nelson, *American Journal of Agricultural Economics*, 2008, 90(3): 701-718.
11. "Biofuels, Policy Options, and Their Implications: Analyses Using Partial and General Equilibrium Approaches," with W. Tyner, "*Journal of Agricultural & Food Industrial Organization*, 2008, 6(2), Art, 9.
12. "Renewable Energy Policy Alternatives for the Future," with W. Tyner, *American Journal of Agricultural Economics*, 2007, 89(5): 1303-1310.
13. "Local Public Reaction to Large-Scale Swine Facilities," with A. Reisner, *Journal of Animal Science*, 2007, 85(6): 1587-1595.
14. "Hidden Public Expenditure and Economic Performance in Iran," with Hadi S. Esfahani, *International Journal of Middle East Studies*, 2002, 34(4): 697-718.

Book Chapters

1. "Land Use Changes and Consequent CO₂ Emissions due to US Corn Ethanol Production" with W. Tyner, in *Encyclopedia of Biodiversity*, 2nd Edition (forthcoming).
2. "Modeling Biofuels Policies in General Equilibrium: Insights, Pitfalls, and Opportunities" with A. Golub, T.W. Hertel, and Wallace E. Tyner, in John Gilbert (eds.), *Frontiers of Economics and Globalization*, 2010, 7: 153-187.
3. "Market and Social Welfare Effects of the Renewable Fuels Standard," with A. Ando and M. Khanna, in Khanna, Scheffran, and Zilberman (eds.), *Handbook of Bioenergy Economics and Policy*, Series of *Natural Resource Management and Policy*, 2010, 33: 233-250.
4. "Biofuels, Policy Options, and Their Implications: Analyses Using Partial and General Equilibrium Approaches," with W. Tyner, in Khanna, Scheffran, and Zilberman (eds.), *Handbook of Bioenergy Economics and Policy*, Series of *Natural Resource Management and Policy*, 2010, 33: 365-383.
5. "Regional Input-Output Data: Iran," in Narayanan and Walmsley (eds.), *The GTAP 7 Data Base*, USA, Purdue University, 2008.
6. "Policy Analysis for Integrated Energy and Agricultural Markets in a Partial Equilibrium Framework," with Wallace Tyner, in English, Menard, and Jensen (eds.), *Integration of Agricultural and Energy Systems*, Proceedings of a conference held by the Farm Foundation/USDA, at Atlanta, Georgia, February 12-13, 2008, Farm Foundation, Pak Brook, IL, 2008: 1-15.
7. "Future Biofuels Policy Alternatives," W. Tyner, in Outlaw, Duffield, Ernstes (eds.), *Biofuel, Food & Feed Tradeoffs*, Proceeding of a conference held by the Farm Foundation/USDA, at St. Louis, Missouri, April 12-13 2007, Farm Foundation, Pak Brook, IL, 2008, 10-18.

8. “Ethanol Subsidies, Who Gets the Benefits?,” with Wallace Tyner, in Outlaw, Duffield, and Ernestes (eds.), *Biofuel, Food & Feed Tradeoffs*, Proceeding of a conference held by the Farm Foundation/USDA, at St. Louis, Missouri, April 12-13 2007, Farm Foundation, Pak Brook, IL, 2008, 91-98.

Research Reports, Working Papers, and Conference Papers

1. “The role of irrigation in determining the global land use impacts of biofuels,” with T. Hertel and J. Liu, 2011. GTAP working paper 65, Center for Global Trade Analysis, Purdue University, West Lafayette, IN, USA.
2. “Global Land Use Changes due to the U.S. Cellulosic Biofuel Program Simulated with the GTAP Model” with W. Tyner and M. Wang, Department of Agricultural Economics, Purdue University, Research Report Prepared for Argonne National Laboratory, 2011.
3. “Introducing First and Second Generation Biofuels into GTAP Data Base version 7” with W. Tyner, GTAP Research Memorandum No. 21, GTAP, 2011.
4. “The role of irrigation in determining the global land use impacts of biofuels,” with T. Hertel and Jing Liu, presented at: *2011 Applied and Agricultural Economics Association meeting*, Pittsburg, Pennsylvania and *14th Annual Conference on Global Economic Analysis*, June 16-18, 2011, Venice, Italy .
5. “Global Land Use Changes and Consequent CO₂ Emissions due to US Cellulosic Biofuel Program: A Preliminary Analysis” with W. Tyner, will be presented at *14th Annual Conference on Global Economic Analysis*, June 16-18, 2011, Venice, Italy.
6. “Economic and Environmental Consequences of US Corn Ethanol Production: A Comprehensive Analysis,” with W. Tyner, T.W. Hertel, A. Golub, D. Birur, U. Baldos, and Q. Zhuang, presented at the *13th Annual Conference on Global Economic Analysis “Sustainable and Inclusive Trade for Growth and Development,”* June 9-11, 2010, Bangkok, Thailand.
7. “Land Use Changes and Consequent CO₂ Emissions due to US Corn Ethanol Production: A Comprehensive Analysis,” with W.E. Tyner, U. Baldos, D. Birur, Q. Zhuang, Department of Agricultural Economics, Purdue University, Research Report Prepared for Argonne National Laboratory, 2010.
8. “When Green Turns Brown – California Electricity Pricing Kills the PHEV,” with W. Tyner, S. Huang, B. Hodge, G. Reklaitis, and J. Pekny, Department of Agricultural Economics, Purdue University, 2009.
9. “Impacts of Plug-In Vehicle Adoption on Household Electricity Load Profile,” with S. Huang, B. Hodge, G. Reklaitis, J. Pekny, and W. Tyner, Department of Agricultural Economics, Purdue University, 2009.
10. “Estimating Changes of Global Vegetation and Soil Carbon Storage due to Biofuel Production,” with Z. Qianlai, W. Tyner, and T. Hertel, Department of Agricultural Economics, Purdue University, presented at the *12th Annual Conference on Global Economic Analysis “Trade Integration and Sustainable Development: Looking for an Inclusive World,”* June 10-12, 2009, Santiago, Chile.

11. "Implications of the Biofuels Boom for the Global Livestock Industry: A Computable General Equilibrium Analysis," with T. Hertel, and W. Tyner, Background paper for the *2009 State of Food and Agriculture (SOFA), From the Food and Agriculture Organization of the UN (FAO)*, A revised version also presented at the *2009 Applied and Agricultural Economics Association meeting*, Milwaukee, Wisconsin.
12. "Land Use Change Carbon Emissions due the US Ethanol production," with W. Tyner and U. Baldos, Department of Agricultural Economics, Purdue University, Research Report Prepared for Argonne National Laboratory, 2009.
13. "Preliminary Analysis of Land Use Impacts of Cellulosic Biofuels," with W. Tyner and Y. Han, Department of Agricultural Economics, Purdue University, Research Report Prepared for Argonne National Laboratory and California Energy Commission, 2009
14. "The welfare cost of price subsidies: A general equilibrium approach-Case of Iran," with F. Gahvari, Presented at the *Conference on Iran's Economy*, December 11-13, 2008, University of Illinois at Urbana-Champaign, Illini Union, Urbana, IL
15. "Biofuels and their By-Products: Global Economic and Environmental Implications," with T. Hertel, W. Tyner, J. Beckman, and D. Birur, Presented at the *11th Annual Conference on Global Economic Analysis GTAP Conference "Future of Global Economy,"* June 12-14 2008, Helsinki, Finland and to be presented at the *2008 American Agricultural Economics Association meeting*, Orlando, Florida.
16. "Introducing Liquid Biofuels into the GTAP Database," with Dileep Birur, Thomas Hertel, and Wallace Tyner, GTAP Research Memorandum No. 11, GTAP, 2007.
17. "Future Changes in Global Land Use Emissions," with X. Yang and A. Jain, presented at the *10th Annual Conference on Global Economic Analysis "Assessing the Foundations of Global Economic Analysis,"* June 7-9 2007, West Lafayette, Indiana.
18. "Economic Impacts of the Conservation Reserves Program: A General Equilibrium Framework," with Madhu Khanna and Carl Nelson, presented at the *2006 American Agricultural Economics Association meeting*, Long Beach, California.
19. "Welfare Impact of Alternative Public Policies for Environmental Protection in Agriculture in an Open Economy: A General Equilibrium Framework," with M. Khanna, C. Nelson, selected paper presented at the *2005 American Agricultural Economics Association meeting*, Providence, Rhode Island.
20. "Welfare Impacts of Agri-Environmental Policies in an Open Economy: WTO and US Domestic Agricultural Subsidies," with Madhu Khanna and Carl Nelson, Presented at the *2005 World Trade Organization Impacts on U.S. Farm Policy conference*, New Orleans, Louisiana.
21. "Money, Technological Progress, Environmental Quality and Growth", with Madhu Khanna, Presented at the *2002 Heartland Environmental and Resource Economic Workshop*, Iowa state University.

22. "Leasing and Debt in Agriculture: A Quantile Regression Approach," with Ani L. Katchova, and Peter J. Barry, Presented at the *2002 annual meeting of the American Agricultural Economics Association*, Long Beach, California.
23. "Failure of Export Promotion in Iran: Bad Policies or Bad Politics?" working paper with Hadi S. Esfahani, University of Illinois at Urbana Champaign, January 2001.
24. "Balance of Power in Budget Institutions and Macroeconomic Instability in Iran," working paper with Hadi S. Esfahani, University of Illinois at Urbana Champaign, 1999.

Publications in Farsi

- "The Sixth Parliament and Economic Reform in Iran," with Hadi S. Esfahani, *Bahar*, Monday July 2, 2000.
- "Off-Budget Expenditures and Fiscal Policy in Iran," with Hadi S. Esfahani, *Bahar*, Saturday May 12 and 13, 2000 (in Persian, reprint from Mohammad Tabibian, ed., *The Iranian Economy*, 2000.
- "Off-Budget Expenditures and Fiscal Policy in Iran," with Hadi S. Esfahani, in Mohammad Tabibian, ed., *The Iranian Economy*, 2000.
- "Budgeting in Contemporary Iran," with Hadi S. Esfahani, in Kaveh Ehsani, ed., *Goft-o-gu*, Summer 2000.
- "The Effect of Growth of Export on the Production and Labor Demand in Iran," Institute for Research in Planning and Development, Tehran, Iran, 1998.
- "The Impact of Creating Foreign Exchange Indebtedness under the First-Five Years Economic Plan and their Repayment on the Developments of Key Economic Sectors in Iran," with Mohammad Tabibian and et al., *Monetary and Banking Research Academy, Central Bank of the Islamic Republic of Iran*, Tehran, Iran, 1998.
- "An Analysis of the Performance of Budget," with Roghani-Zanjani Masoud, in Masoud Nili, ed., *The Iranian Economy*, Institute for Research in Planning and Development, Tehran, Iran, 1997.
- "An Analysis of the Performance of Exports and Imports in Iran," in Masoud Nili ed., *The Iranian Economy*, Institute for Research in Planning and Development, Tehran, Iran, 1997.
- "An Analysis of the Performance of the tax system in Iran During 1959-94," working paper, Institute for Research in Planning and Development, Tehran, Iran, 1995.
- "Forecasting the Number of Population during the Second Development Plan of Iran," *PBO*, Tehran, Iran, 1994.
- "Expansion of Higher Education and Increase of Student Population in Iran" with Masoud Anjomshoa, *Planning and Development*, Vol. 2 No. 5, Tehran, Iran, 1993.
- "A Model for Forecasting the Number of Students", PBO, Tehran, Iran, 1991.
- "A Model for Project Appraisal in Public Sector", Isfahan University of Technology, Isfahan, Iran, 1989 (M.S. thesis).

Work in Progress

- Analysis of the impact of ethanol use on U.S. crude oil and gasoline prices.
- Estimation of the corn/soybean market impacts of development of viable markets for corn stover.
- Economic and environmental analyses of enhanced enzyme and bioprocessing of bioenergy sorghum to advanced biofuels.
- Introducing water resources into the GTAP data base and its modeling framework,
- Linking a computational general equilibrium model (Global Trade Analysis Project model-GTAP) with an energy model (MARKAL) and a water allocation model (Water Simulation Model-WSM) to investigate economic and environmental consequences of biofuels production at the global and regional levels,
- Estimating changes of global vegetation and soil carbon storage due to the second generation of biofuels,
- Introducing the second generation of biofuels into the GTAP model and data base to assess their economic and environmental impacts,
- Designing a partial equilibrium model to examine impacts of producing cellulosic ethanol on the integrated agricultural and energy markets,
- Analysis of global economic and environmental impacts of a sustainable increase in bioenergy production.

Referee for

- American Journal of Agricultural Economics,
- Applied Economic Perspectives & Policy (Review of Agricultural Economics),
- Agricultural Economics,
- Agricultural and Resource Economics Review,
- Biofuels,
- Energy Journal,
- Energy Policy,
- Journal of Agricultural and Applied Economics,
- Journal of Public Economics,
- Global Change Biology Bioenergy,
- The B.E. Journal of Economic Analysis & Policy,
- American Agricultural Economics Association Conferences
- GTAP annual conferences,

- Several chapter books.

Major Conferences

- Life Cycle Analysis (LCA) XI, American Center for Life Cycle Assessment, Chicago, Illinois, October, 2011, invited speaker.
- Forestry and Agricultural Greenhouse Modeling Forum, Shepherdstown, West Virginia, September 2011, a paper will be presented.
- The CAES-WAEA Joint Annual Meeting, Banff, Alberta, 2011, presented a paper.
- Annual Meeting of the Agriculture and applied Economics Association, Pittsburg, Pennsylvania, 2011, presented a paper and a poster.
- The 14th Annual Conference on Global Economic Analysis "Governing Global Challenges: Climate Change, Trade, Finance and Development", 2011, Venice, Italy, presented a paper.

Annual Meeting of the Agriculture and applied Economics Association, Denver, Colorado, 2010, presented a poster.

- First US MARKAL/TIMES Symposium, US EPA's offices in Research Triangle Park, NC, 2009, Participant.
- Washington Dialogue Series, Trade and Climate Change: Development Aspects of Climate Change Policies of OECD Countries, Washington DC, 2009, Invited Speaker.
- 2nd Generation Biofuels Symposium, Purdue University, 2009, presented a paper.
- Annual Meeting of the Agriculture and applied Economics Association, Milwaukee Wisconsin, 2009, presented a paper.
- Joint Genomics: GTL Awardee Workshop VI and Metabolic Engineering 2008 and USDA-DOE Plant Feedstock Genomics for Bioenergy Awardee Workshop, Bethesda Maryland, 2008, Participant.
- Annual Meeting of the American Agricultural Economics Association, Orlando Florida 2008, presented a paper.
- The Transition to a Bio-Economy: Integration of Agricultural and Energy Systems conference, Atlanta Airport, planned by the Farm Foundation, 2008, presented a paper.
- Annual Meeting of the American Agricultural Economics Association, Portland Oregon, 2007, Participant.
- Biofuel, Food & Feed Tradeoffs, conference, St. Louis Missouri, planned by the USDA and the Farm Foundation, 2007, presented a paper.
- Annual Meeting of the Allied Social Science Association, New Orleans Louisiana, 2007, presented a paper.

- The 10th GTAP Conference, Purdue University, West Lafayette, Indiana, 2007, presented a paper.
- Annual Meeting of the American Agricultural Economics Association, Long Beach California, 2006, presented a paper.
- Annual Meeting of the American Agricultural Economics Association, Providence, RI, 2005, presented a paper.
- World Trade Organization Impacts on U.S. Farm Policy, World Trade Center, New Orleans, Louisiana, 2005, presented a paper.
- The Heartland Environmental and Resource Economic Workshop, Iowa state University, 2005, presented a paper.
- Annual Meeting of the American Agricultural Economics Association, Long Beach California, 2002, presented a paper.
- The Heartland Environmental and Resource Economic Workshop, Iowa state University, 2002, presented a paper.
- Economic Research Forum, Morocco, 1998, presented a paper.

Research Projects and Grants

- Analysis of the Impact of Ethanol Use on U.S. Crude Oil and Gasoline Prices, DOE/Argonne National Lab, Co-principal Investigator,
- Estimation of the Corn/Soybean Market Impacts of Development of Viable Markets for Corn Stover, Indiana Corn Marketing Council, Co-principal Investigator,
- Analysis of the Global Impacts of Second Generation Biofuels in the Context of Other Energy Technologies and Alternative Economic and Climate Change Policy Options, USDA/DOE, Co-principal Investigator.
- Analysis of Global Economic and Environmental Impacts of a Substantial Increase in Bioenergy Production, DOE, Post Doc Researcher.
- Biofuels Land Use Change Modeling, Argonne National Laboratory, Researcher.
- Land Use Impacts of Cellulosic Biofuels, California Energy Commission, Co-principal Investigator.
- Impacts of biofuel mandates in the US and the EU on the global structure of the livestock industry, the Food and Agriculture Organization of the United Nations (FAO), Co-principal Investigator.
- GTAP Database Improvement towards Integration of Biofuel Sectors, OECD, Co-principal Investigator.
- Estimating Political Economy Models of Trade Policy for MENA Countries, Economic Research Forum, Co-principal Investigator.

Computer Skills

GEMPACK, STATA, SPSS, MATHEMATICA, FORTRAN, and applications of Microsoft Office

Recent Honor and Awards

Outstanding Ph. D. Dissertation, 2006, Department of Consumer and Agricultural Economics, University of Illinois at Urbana-Champaign.

Ranked as an excellent teacher by students, Fall 2005, “Incomplete List of Teachers Ranked as Excellent by Their Students” University of Illinois at Urbana-Champaign.

Ranked as an excellent teacher by students, Spring 2005, “Incomplete List of Teachers Ranked as Excellent by Their Students” University of Illinois at Urbana-Champaign.

Competitive Scholarship Awards from the Environmental Council, and the program for Environmental and Resource Economics (pERE) for Summer 2001, Spring 2003, Spring-Summer 2004, Spring 2005.

Teaching Enhancement Grant for ACE 261: Statistic for Agricultural and Consumer Economics, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, Fall 2002, Fall 2003, and Fall 2005.

Case Study Grant for ACE 355: International Trade in Food and Agriculture, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, Summer 2004.

Competitive Scholarship Awards from the PBO of Iran for 1986-1989.

Languages

English (fluent), Arabic (reading), and Farsi (native speaker)