

MOHAMMAD MOROVATI

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EDUCATION

Research Fellow	Stanford Law School , working under supervision of Professor Jeff Strnad, Working on Innovative Financing Solutions for Housing	Dec 2013-Dec 2016
Ph.D.	Economics, University of Texas at Austin Dissertation: Three Essays on Energy Economics: Markets, Investment and Production Committee Chair: Sheridan Titman	December 2013
M.Sc.	Economics, University of Texas at Austin	December 2007
B.Sc.	Electrical Engineering, Sharif University , Tehran, Iran	August 2005

CURRENT POSITIONS

Managing Director, TEIAS (Tehran Institute for Advanced Studies) (A leading private higher education institution established within Khatam University aspiring to overhaul it to a world class university in Iran)	May 2017-Present
Assistant Professor of Economics, Khatam University (First choice of students for higher education in the field of economics and finance)	May 2017-Present
Member, Board of Directors, Haamee Institute, (A Charity Foundation Supporting Social Sciences in Iran)	March 2018-Present
Member, Board of Directors, Araz Silicon Industries, (First producer of silicon metal in Iran)	March 2020-Present
Member, Board of Directors, Iranian Oil Industry Ventures (Largest venture fund in Iran dedicated to oil industry)	Apr 2020-Present

EMPLOYMENT HISTORY

Adviser, Iranian Ministry of Petroleum, Vice President of Planning,	July 2016 -Aug 2017
Adviser, President of Iranian National Development Fund,	Nov 2016-March 2019
Lecturer, "Financial Economics", Sharif University of Technology,	Fall 2016
Lecturer, "Energy Economics" and "Economics of Petrochemical Industries", Tehran University,	Fall 2016
Research Fellow, Stanford University Law School Research on implementation of new Islamic Finance Solutions	Dec 2013- Dec 2016
Lecturer, Energy Economics and Valuation, University of Texas at Austin	Fall 2013
Research Assistant for Professor John Allison, University of Texas at Austin	2010-Aug 2013
Summer Research Internship, the World Bank Group, (International Finance Corporation)	Summer 2011
Consultant, the World Bank Group, (International Finance Corporation)	Sep 2011-June 2012
Team Leader, System Dynamics Market Research, Iran Khodro Car Company, (1 Million+ production annually)	2004-05

WORKING PAPERS

"Real Options, Financial Constraints and Drilling Rigs Rental Rates," (with Sheridan Titman),	
"The Stock Market Reaction of Energy Intensive Industries to Innovations in Expected Natural Gas Prices"	2013
"Structural Changes in the Relationship Between Oil Prices and Real Economic Activity," (with Sheridan Titman and Malcolm Wardlaw)	2010

CONFERENCE PRESENTATIONS

"Understanding Risks in Islamic Finance" (with Jeff Strnad), 10th International Conference on Islamic Economics and Finance, Doha, Qatar,	March 2015
"Are Markups in Oil Market Caused by Exhaustibility or OPEC Market Power? An Empirical Test," Iran Economy Conference, UIUC, Urbana IL,	Dec 2008
"Optimal Investment to Prevent Declining Oil Production, Case of Iran" HAND Economics Forum, Chicago IL,	Oct 2010

PUBLICATIONS

"Silicon Valley, the Startup Capital of the World" (With Yahya Tabesh and Mohammad Akbarpour)	Sharif University Press,	2015
"Foreign Exchange Shocks and Gasoline Consumption." (with Hamed Ghoddusi and Nima Rafizadeh).	Energy Economics	84 2019

FELLOWSHIPS, HONORS, AND AWARDS

Mathematics Instructor Fellowship, The University of Texas at Austin
Ranked **15th** (out of 500,000) in the nationwide University Entrance Exam, Iran
Silver medal, National Physics Olympiad, Iran,

Summer 2010
2001
2000

COMPUTER SKILLS

Programming	MATLAB, Python, Visual Basic, Pascal
Statistics	STATA
Financial Data Sources	Bloomberg Terminal, WRDS (CRSP, Compustat, etc)

LEADERSHIP EXPERIENCE

President, Resana Student group, Sharif University of Technology
Vice-President, Persian Students Society, the University of Texas at Austin

2003-2004
2007-2009

REFERENCES

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Real Options Approach to Oil and Gas Investments (Joint with Sheridan Titman)

We investigate several factors affecting the investment decisions of oil and gas companies. A simple real options model provides powerful insights into the market for investment equipment in this industry. According to the model, today's investment costs will adjust in equilibrium so that oil companies' propensity to invest equates across different time periods. We obtain data containing a unique measure of firms' investment costs, including details of contract terms and pricing for offshore drilling equipment. To test our model, we combine our investment measure with financial and macroeconomic data, which enables us to perform a panel data analysis of investment's response to variations in market conditions such as investment costs, the slope of the futures curve, firms' past earnings, cost of capital and oil price volatility.

Our empirical results demonstrate that the real option value of investment is increasing in oil price volatility and borrowing costs, and is decreasing in the slope of the futures curve. Our results also show that larger firms, facing fewer financial frictions, are more forward looking, while smaller firms, who have less access to capital markets, are more dependent on their past earnings. The results are consistent with model predictions and are robust to different slicing of the data for projects with different complexity and investment requirements. The results are also consistent across different regions of the world.

The Stock Market Reaction of Energy Intensive Industries to Innovations in Expected Natural Gas Prices

Natural gas production in North America has increased significantly over the past decade causing prices to plunge during the past 5 years. The purpose of this research is to investigate the effect of low natural gas prices on energy intensive U.S. manufacturing industries using market data. I empirically evaluate the stock market reactions of publicly traded companies in energy intensive industries to the arrival of new information due to unexpected price shocks in the natural gas futures market, proxied for by monthly changes in natural gas futures contracts with a fixed maturity date. My results show that the stock market does not react significantly to innovations in the expected price of natural gas, suggesting that the effect of low natural gas prices on manufacturing is often exaggerated. When I split the sample into two groups based on a ratio of natural gas expenditures to total production value, I find that the stock market valuation of companies with a high level of natural gas intensity is positively and significantly affected by unexpected downward shocks in natural gas prices. These results can be helpful for clarifying the policy debates about export permits for natural gas.

Are Markups in the Oil Market Caused by Exhaustibility or OPEC Market Power? An Empirical Test

In this paper I investigate the interaction of firms in energy markets as a whole. A "Hotelling rule" predicts that even in competitive equilibrium, the price of an "exhaustible" resource exceeds its marginal cost due to the opportunity cost of depleting the non-renewable resource. This cost is called a "scarcity rent". Oil prices exceed the marginal extraction cost significantly. This can be attributed to two different sources: the effect of scarcity of oil on prices or the exercise of market power by OPEC (i.e., collusion). In this paper, I use the approach of Porter (1983) regarding the possibility of a "scarcity rent" component of the gap between price and marginal extraction cost in the oil market. The novelty of my approach is to empirically estimate scarcity rent by using data on cost of production of oil. Two benchmark cases, where scarcity rent is either zero (non-exhaustible resources hypothesis (Adelman 1990)) or equal to the minimum price-cost margin are considered. The results show that in both cases OPEC failed to cooperate effectively and in the second case, estimated market conduct is closer to Cournot behavior.