# **UCLA ECONOMICS**

Undergraduate Newsletter

# Get Ready for the Summer! "The Future Awaits."

### Professor Rojas: Last Lecture Award

#### (Announcement from Alumni Center)

The recipient of the 2015 My Last Lecture Award is **Professor Randall Rojas, Ph.D.** from the department of economics. Even though professor Rojas has only been teaching at UCLA for 5 years, he has clearly impacted the hundreds of students that have sat in his economics and statistics classes. Outside of the classroom he conducts research that spans the topics of econophysics, cosmology, cognitive science, statistics and finance.

In 2010, Professor Rojas joined the UCLA Statistics Department as a lecturer, and in 2011 he transitioned to the UCLA Economics Department, followed by his appointment to his current position in 2013. He has supervised many student research projects in statistics and economics, and continues to engage students in his ongoing research on the modeling of financial markets, asset pricing models, economic warfare and options trading strategies.

More information can be found at: http://alumni.ucla.edu/events/my-last-lectureaward/default.aspx. Award Ceremony will be held on Tuesday, May 12, 6:30-8:30 p.m. at De Neve Auditorium. Tickets are available at Central Ticket Office (CTO). Admission is free, but seating is limited.

### UCLA Economics Launches Master of Applied Economics Degree

Thinking about graduate school? Want a degree that will make you attractive to employers? Consider the NEW Master of Applied Economics program at UCLA! This new program will start accepting applications in Fall of 2015 for students to begin in Fall of 2016. The MAE is an intense, 9-month program focusing on microeconomics, macroeconomics, econometrics, and communications studies. In addition to existing world-class faculty, the program will also feature distinguished guest lecturers – providing students with a unique opportunity to network and learn from industry professionals. The MAE is brand new and will be launching its official website this month. To make an appointment with the MAE Graduate Advisor, join our mailing list, or learn more about the program, please contact <u>mae-office@econ.ucla.edu</u>. We look forward to hearing from you!

### UCLA Economics Summer Sessions

The Department of Economics would like to remind you of our Summer 2015 course offerings. Given that our budget is uncertain for next year and for the future, taking courses in summer might assist you in completing your degree in a timely manner (or even early!). Also, note that we are offering all the required core courses as well as several sections of Econ. 106's and upper division economics electives. All will be open to both Economics and Business economics majors and pre-majors, provided you will have completed the prerequisites.

### **Important Dates**

May 15: Last day to DROP nonimpacted courses with transcript notation June 5: Instruction Ends for Spring quarter June 5: Last day to DROP nonimpacted courses by petition with instructor approval and transcript notation June 8—12: Final Exams



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# **Opinion: Have We Gone Out of the Recession?**

While Americans are gradually stepping out of the shadow that 2008 Financial Crisis cast on them, many other countries are still on their way to getting rid of the horrible nightmare and, due to various reasons, the outcome of their efforts still remain uncertain. Two typical examples are Greece and Japan, both are painstakingly trying to overcome their respective burdens that hindered them for a long period of time. I compiled some updated news and data from authorities to present the readers a general overview of the most recent economic conditions of Greece and Japan respectively.

Let us start with Greece- one of the three Piggies (Portugal, Italy and Greece) which normally refer to the three countries in Eurozone that have been suffering severely in the crisis and owing a great amount of debt to their creditors. However, according to data provided by the Economist (see the chart below), Portugal and Italy have been able to gradually recover from the recession: both countries are currently on the track of reducing unemployment rates, controlling inflation and stopping the trend of recession. According to the most recent news, the Portuguese government financial minister announced on February 16, 2015 that the government has been able to pay back a portion of the debt in recent terms.



conomist.com

(Cr. Image: Reuters, WSJ, OECD. Used for educational purposes.)

However, as shown in the charts above, Greece seems to fall behind compared to its counterparts. Its unemployment rate still remains high at the level of 25% and the Gross Domestic Products still falls drastically according to the data of 2014. "Between 2008 and 2014 nominal GDP, a rough proxy for an economy's capacity to repay debts, fell by 22%, much more than any other European invalid." During last month's election, the Syriza party proposed the political reform and if that plan is implemented, Greece will face a sharp reduction in government revenue and yield more social spending. Currently the country seems to have no power to pay back its debt in Eurozone and no agreement has been reached with its German creditor. Attached is the graph showing the GNI of Greece for the recent decade. Notice that the GNI, unlike GDP is a parameter that has already smoothed the fluctuation of the exchange rate to US dollars. According to the chart, although the data for 2014 has not been available yet, it is more than obvious that the living standard of Greece has retrieved to its level in 2005. A large number of people have stopped paying taxes to show their opposition towards the new law of reform, yet their German creditors are also determined not to make any reconciliation any longer. As indicated in a report in Economist, "A meeting on February 11th, at which Greece presented its plans to euro-zone finance ministers, ended in disarray, without even the usual statement about fruitful discussions". After all, Greece has to reach a balance between its voters and creditors, especially the Germans.

On the other side, Japan's economy has been pulled out of the trap of recession, yet the economic growth still falls out of the scope of expectation from its government officials and economists.

The Prime Minister of Japan, Shinzo Abe focused on the raising of wages and spending of Japanese citizens simultaneously, yet the outcome is less than desirable, due to corporations' lack of willingness to cooperate (In other words, they do not want to raise the wages) and the lack of willingness to consume of normal Japanese people. In order to stimulate the exports, Mr.Abe suppressed the exchange of Japanese Yen to US Dollars, and the exports rose by 2.7% in the last quarter

### Continued: A Hope for Japan



of 2014. However, the history of invasion to different countries in the Second World War brings hatred of different peoples to the Japanese and, at the same time, limits the probability of increase in exports in the future. Ms. Park, the president of South Korea, has required the Japanese government to formally apologize for the issue of forced prostitution in South Korea , which is the response to the continuous denial of crimes committed.

To sum up, economics is strongly related to issues of politics, therefore, to recover from recession, the two countries are also supposed to rebuild the internal logic of politics simultaneously.

# Prof. McGarry Leads First Town Hall Meeting

On January 29th, Department Chair Professor Kathleen McGarry held a town hall meeting to present the state of the Department of Economics.

At the meeting, Professor McGarry discussed various aspects of the department: the academic requirements for the majors offered in the department, the number of undergraduate students in each major, and the diverse and dynamic faculty members. In particular, Professor McGarry brought attention to the rapid increase in the number of Economics or Business Economics majors in recent years. She pointed out the low faculty-to-student ratio in the department currently and encouraged undergraduates to come up with more efficient and effective ways to use faculty resources. The students onsite were actively involved in the discussion and gave many constructive suggestions. At the end of her presentation, Professor McGarry also held a Q&A session to address various questions and concerns of undergraduate students regarding the department and the majors.

The Town Hall Meeting was a success. It was the first time the Department Chair had a close interaction with undergraduate students in this setting. It helped students to learn more about what is going on in the department and stay informed. The department is planning more meetings in the future.

# **Economics Course Preview**

February 6, 2015 — UCLA Department of Economics organized the first Economics Course Preview which was intended to inform students of the course content and applicability of upper division Economics electives. Due to increasing number of undergraduate majors in the department, the department has begun to offer more elective courses, especially those that include labs. These courses aim to inform students of the more relevant concepts in Economics and prepare them for the competitive job market.

Professors from each course presented their courses to the students, with emphasis on applicability. Students were encouraged to take courses that matched their interest and future career aspirations. Prof McGarry, encouraged students to take more Mathematics courses, especially Mathematics 33A Linear Algebra. A profound understanding of Economics requires mastery of mathematics. Students were also encouraged to take Economics 103: Econometrics early on in their undergraduate careers. Econometrics skills assist students in other upper-division Economics courses as well as increases the chance of getting an internship given that employers highly value Econometrics skills.

Students who are interested in pursuing a career in Investment Banking and Consulting were suggested to take more technical courses. These courses include Investment, Financial Mathematics, Finance, Financial Market, and other similar courses.

The department will organize course previews again due to overwhelmingly positive feedbacks from students.





# American Fracking: History, Cost, & Environmental Impacts

Hydraulic fracturing, also known as fracking, is the process of drilling and injecting fluid at high pressure in order to fracture shale rocks to release unconventional oil and natural gas inside. Fracking has been used commercially in the United States 65 years. However, with rising petroleum costs in the early 21st century, fracking sites have vastly expanded throughout the US.

Hydraulic fracturing sites tap into shale sources by drilling around a mile below the surface and then turning horizontally, continuing for up to another mile. Once this well is drilled, cased, and cemented, fluid (known as bine) consisting of a mixture of water (95%), sand (9.5%) and chemicals (0.5%) are pumped at high pressure to create fractures in the rock below, thus releasing stores of natural gas and shale oil, which are retrieved at the well site above the surface. Inevitably, this emerging industry has many notable economic and environmental impacts.



The fracking industry has a huge potential of economic growth throughout the United States in the next 30 years. There are currently an estimated 500,000 natural gas fracturing sites throughout the United States, and vastly growing. Although hydraulic fracturing is more costly than conventional oil welling, shale oil and gas is a much more extensive resource, especially in the United States. There is an estimated 2.8-3.3 trillion potential barrels of shale oil globally, of which 1.5-2.6 trillion barrels are in the US alone. Many experts note that we are in the "shale gas revolution", in which the United States could become the world's largest oil producer before 2016. Additionally, the National Petroleum Council estimates that hydraulic fracturing will eventually account for nearly 70% of natural gas development in North America. According to the US Energy Information Administration, US gas production from 2012 to 2040 will increase 56%. These figures and estimates of the expansion of the US fracking industry undermine the great potential of job creation and capitalization of energy.

Inevitably, pumping millions of tons of water, sand, and chemicals underground comes with severe environmental impacts. Notable impacts include water use/depletion, freshwater contamination, and air pollution, while less notable impacts include noise pollution and induced seismic activity (earthquakes). Shockingly, it takes 1-8 million gallons of water to complete each fracking operation, and each well can be fracked up to 18 times. With over 500,000 fracking sites in the US alone, our current fracking industry requires an estimated 72 trillion gallons of water and 360 billion gallons of chemicals to run. Additionally, over 600 chemicals are used in fracking fluid, including known carcinogens and toxins such as lead, uranium, mercury, formaldehyde, and methanol. There is currently no perfect solution to stopping methane gas and toxic chemicals to leach from the underground fracks and contaminate the nearby groundwater. Methane concentrations are an estimated 17x higher in drinking water-wells near fracturing sites than in normal wells. Additionally, there have been over 1,000 documented cases of water contamination near drilling sites as well as cases of sensory, respiratory, and neurological damage due to ingesting contaminated water. After a site is fully fracked and abandoned, the waste fluid is left in open air pits to evaporating, releasing harmful VOC's into the atmosphere, creating contaminated air, acid rain, and ground level ozone. Clearly, there are many incredibly severe environmental impacts associated with hydraulic fracking. Do you think it is worth the economic benefits? (Cr. Image Hannah Otto Callbuzz.com, Educational Purposes)

The Undergraduate Roundtable is comprised of approximately one dozen undergraduate economics majors and pre-majors, representing students in the first through fifth years of the program, including transfer students. Students in the straight Economics major, the Business Economics major, and the Math-Econ major are all encouraged to participate. Pre-majors are also welcome. Meetings are typically held twice per quarter but the frequency depends on the preferences of the members themselves.

In addition to the newsletters, in the past the Roundtable has run a mentoring program for transfer students, an information night for students interested in pursuing a Ph.D., and organized lunches with professors. What the Roundtable does in the coming year is up to you!

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