What I have accomplished at the UC-Berkeley during the Fall-2015 Semester as a Visiting Graduate Student Researcher

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General Experience
As an economist, I want to see the treatment effect and then, based on the results, suggest whether others should or should not do that same treatment. When I first arrived at Berkeley, I had the same feeling that I had when I first arrived in the U.S. Dealing with a new culture (a new department), living with other people, and going away from some of one’s past habits is always good to experience in one’s life. So, the first thing I got from Berkeley was a great new experience that I had not had before.

Classes
I audited two classes in the Agricultural and Resource Economics (ARE) department and one in the Statistics department. Applied Econometrics (ARE 213) was the most interesting and useful class for me. It was taught by Prof. Michael Anderson. This class covered most of the materials that we have at the University of Kentucky ECO 706 class, but had an emphasis on application. Also, this class provided most of the sources for each topic and could be followed in the future, if needed, to apply the methods for one’s own research.

Also, I audited Prof. David Zilberman’s class on Analytical Frameworks for Public Policy and Production and Risk Management (ARE 241). Prof. Zilberman is one of the most famous economists in the field. Being in his class was a big honor for me. I learned about different topics in this class and we had a great discussion about agricultural economics-related issues. This class was also helpful for generating new ideas for research. Prof. Zilberman had a Pizza and Policy panel every week in which we discussed top related papers about different economic topics such as the history of US Agriculture, Household Model, Water, and etc. Part of this class was taught by Prof. Ethan Ligon. It was more theoretical and gave tools and ideas to think more about the theories behind one’s own paper. Lastly, I had an R class in the statistics department. This class gave me tools to clean, manage, and map data in the R modeling language.

Workshops
I found UC-Berkeley D-Lab (http://dlab.berkeley.edu/) very useful. D-Lab provides cross-disciplinary resources for in-depth consulting and advising, access to staff support, and training and provisioning for software and other infrastructure needs. I participated in a series of R workshops (R for data science parts 1 to 4) at the D-Lab. This workshop started from basics in R and in the two last sections got to the advanced materials in R. This workshop was held once a week and each section was 3 hours long. Also, I participated in geocoding and mapping in the R workshop at the D-lab. This was in two sections and helped me understand how to make maps, extract data from the maps, add data to the maps and more in R. Finally, D-lab has a consulting program in which
professionals in each software (R, Stata, SQL, etc.) gave free advice to the students. I used consulting services and it was very useful. I need to mention that D-lab program was not only for R but had training programs for other software such as Stata and others.

**Research Projects**
In the beginning, of the fall semester, Dr. Steven Buck involved me in several research projects. We used R for utility level water consumption data management and data cleaning to use it for water demand estimation in California. In this project, we had monthly and annual data which allowed us to estimate monthly, seasonal, and annual demand from 1994-2014. This project needs water consumption data (which is cleaned and ready to use), weather data, household characteristics data, and water rate information. This project is ongoing and we are collecting price data using survey from 196 water utilities in CA to match with other data sets that we have.

As a related project, we used shorter period (1994-2009) data to estimate demand for water and paper. A paper for that project is currently being written. We will be submitting this paper to the AAEA annual meeting conference.

In another project, we tried to find water utilities that are in the same school district in California. The main idea is to use geographical regression discontinuity design to estimate water rate effect on technology adoption. In this project, we found 17 school districts across CA that have two or more water districts. Because this project needs household-level data (customers’ account information) we want to find utilities that are willing to share their customers’ information.

**Presentation**
ARE seminar is a great opportunity to get feedback from students and faculty in the department. Presentations may range from seminars on polished work to more workshop-style discussions of work in progress. Typically presenters have 50 minutes, but that can be extended to 80 minutes with prior arrangements. I presented my second year paper in the Environmental and Resource Economics (ERE) seminar. In addition to the comments, I received information about where I can submit my paper for publication.

**Cooperating With Faculty and Graduate Students**
I worked with some of the faculty members and graduate students at the UC-Berkeley during my visit. For example, I was able to get detailed feedback on my second-year paper and some suggestions to improve my paper from Professor Sofi Berto Villas-Boas. We had regular meetings with one of the graduate students who is working on related topics. Also, I am working with a graduate student who is working on the weather effect on water demand in CA. We were able to relate our data sets. For example, he used my cleaned water consumption data and I will be using his weather data in the future. I learned that teamwork is a key for success, and I want to continue and extend my collaboration with Berkeley and UK graduate students in the future.

**Seminars**
ARE and economics departments had many different meetings and seminars (https://are.berkeley.edu/events). I participated in most of the Friday seminar series in which mostly graduate students in the job market presented their job market papers. These seminar series were useful because I got a sense about what my future job market paper would require and also gained insight into my competitors’ quality in the job market. Wednesday seminar series was my other favorite seminar. It
was an environmental and resource economics seminar which students presented their ongoing work in the environmental economics area to their peers and faculty to gain feedback. I was fortunate that I also presented my second-year paper in this seminar and I received very good feedback. Either presenting or hearing others work in this seminar was helpful to increase one’s work quality and to tackle most of the questions (i.e. clarity of research question, identification strategy, how to presenting result, etc.) before submitting to a journal or joining the job market. I participated in some of the energy group seminars in the economics department, which was helpful for me to generate new ideas.

I would like to thank to the Dr. Maynard, Dr. Dillon and Dr.Hu for allowing me to visit UC-Berkeley and being supportive. I feel so very lucky to have met Dr. Buck and to have worked with him. Dr. Buck always made time to review my works and gave excellent guidance, despite his busy schedule.