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As I am writing an honors thesis expanding on my senior thesis in the Economics Senior Seminar, I find it rewarding to reflect every challenging moment of conducting an economic research. When I received a permission from the department of Economics and Business to write my senior thesis during the second semester of my junior year, I was absolutely ecstatic about working with data and using statistics, but I did not expect to face the initial challenges of narrowing down my research interests in the field of environmental economics. After several discussions with my thesis advisor Dr. Pablo Hernandez and librarian Luke Vilelle, I took their advice of checking data availability when synthesizing literature to develop a focused research question. Given an extensive data of macroeconomics and global emissions, I decided to look at the Environmental Kuznets Curve (EKC), which examines the relationship between economic growth and environmental degradation and associated available data.

I realized that the literature on the EKC hypothesis has been developed and deeply explored in many aspects, but most of the studies investigated the existence of EKC among countries whose do not share any common characteristics except geographical region. Thus, I wanted to use trade openness as a control variable for my sample size. I selected all the countries whose trade openness index have been consistently higher than the world's average index, which means my sample contained the open economies highly dependent on trade. Instead of traditionally looking at countries with different income levels in the same region, my study looked at countries sharing similar trade characteristics but having different rates of renewable energy adoption. Another loophole of the EKC empirical studies is the divergence in their findings and a lack of explanation for the reason why only some environmental variables were chosen as proxy for environmental degradation. Drawing the ecosystem perspectives I gained during my study abroad in Cambodia, I collected different environmental variables and explained why CO<sub>2</sub> emissions still serve as the major indicator for environmental degradation. With the technological effect of trade openness and renewable energy, I expected to find evidence of a revised EKC among countries in my panel data.

After laying out major methodology steps to answer my thesis question, I started to face the challenges of a meticulous process of data collection, cleaning, and running regression models of a 1155-observation panel. Receiving amazing guidance from Dr. Hernandez and my statistics professor Dr. Julie Clark, I was excited to self-learn how to apply panel analysis tools using RStudio for my panel data. Successfully defended my thesis in last fall 2016, I realized that working independently and self-study a new statistical technique was so involved that allowed me to explore my potential and capacity in data analysis and obtain a lesson of patience and persistence. This rewarding experience helps me develop essential skills in writing and economic analysis that I need to growing as a professional researcher along the way.