Homework #2: What is a life worth?

The objective of this assignment is for you to familiarize yourself with the various transportation statistical resources that are linked in the syllabus and to reflect on how some of these sources may be used to evaluate/justify one or more of the transportation investment projects near your home (or Princeton if your home is not in the US).

You are encouraged to work in pairs (two people collaborating, turn in one original with both names via email). If you prefer, you may work by yourself. Due via email by midnight Sunday Sept. 30.

One of the fundamental challenges of systems analysis is establish a quantitative measure(s) that will enable a ranking of alternatives such that the "best" is revealed. Measures can be multi-dimensional as long as the dominant alternative dominates in all dimensions; otherwise, a "tradeoff" must be made and the conflicting dimensions need to be resolved. This is a fact of life! In such cases it is usually somewhat straightforward to quantify each of the conflicting measures. What is often more nebulous and contentious is what is the conversion factor that resolves one to the other.

A convenient quantitative measure is equivalent monetary cost, say dollars ($). In such cases everything needs to be converted to $$$$$$. Since transportation projects often impact safety one needs to convert safety measures, such as lives saved or expunged, into monetary terms. So what is a life worth??? One of numerous attempts was made by Prof. Orley Ashenfetlter's (Econ) and M Greenstone's (U. of Chicago). They approached the estimation of the value of a life by using fatal accident statistics before and after the speed limit change from 55 mph to 65 mph. (lives traded for time saved). They came up with $1.54M. This research is contained in Working Paper #463

1. Spend no more than one hour reviewing the Ashenfelter & Greenstone (A&G) paper. Write a half page summary of their approach, focusing on their data sources.
2. Spend no more than one hour reviewing the data sources listed in the Syllabus as well as other searches that you might make. In abbreviated form suggest other approaches and other data sources that might be used to strengthen or refute A&G findings.
3. Spend no more than one hour looking through the current Federal transportation legislation SAFETEA-LU (Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users) http://www.fhwa.dot.gov/safetealu/index.htm to find a capital construction (pork barrel??) project near your home town. Prepare a ½ page brief description of the project and identify where the A&S findings might be useful in determining the viability/value of that project.