

December 29, 2015

Dear GK02,

In about three weeks we'll be starting your "statistics" course. Don't worry: It's not intended to turn you all into statisticians. Rather, it's focused on a single statistical tool, "regression analysis," which lets you use available data to study relationships. (If you know how your actions and decisions relate to cost, revenue, profit, or ultimately, to return on investment, you're much better prepared to make the right decisions.)

Regressions are used to make predictions and estimates. Clearly, you'd want to know how much those predictions and estimates can be trusted. Therefore, we need to give meaning to the phrase, "I'm 95%- confident that my prediction (or estimate) is wrong by no more than **this much**." (The "**this much**" is called the "margin of error" in the prediction or estimate.)

I've rewritten the course especially for the Guanhua-Kellogg program, with the goal of starting the discussion of regression analysis in the very first class, so your study groups will be able to work on some interesting cases after each of our first three days together. (I've already tested this in our Miami and Evanston executive programs this past fall, and it seems to have worked well.) In order to get off to a fast start, I need you to do a bit of preliminary reading, which connects your recent "probability" course to the statistical language of "trust."

Attached is a two-page document. The first page is essential reading, and introduces the language we'll be using at (what I hope is) an intuitive level that should suffice for us to get started. The second page is optional, but recommended: It directly connects the language to what you learned in Ehud's probability course.

All the rest of our course materials will be distributed through the class website at [www.kellogg.northwestern.edu/faculty/weber/emba](http://www.kellogg.northwestern.edu/faculty/weber/emba). Please look at the Session-0 (pre-course) link there. You'll find links to "Materials, contacts, exams, etc." (the course's structure) and to "An overview of statistics." Please read those links. Everything else on the Session-0 page is optional (and is left over from a previous version of our course).

This is a course where your study group is an important resource. If you feel comfortable as we work forward, please do what you can to be sure that your groupmates share in your comfort.

I look forward to meeting you on January 20.

Best regards (and Happy 2016!), Bob Weber

### Session 0: Pre-Course Materials

**Course Structure**

- [Materials, contacts, exams, etc.](#)
- [An Overview of Statistics](#)
- Review material
  - Three pages of [notes](#) covering in very brief form all that we'll need from probability.

Read these

**Introduction**

Pay particular attention to "Course Software" here!

**Pre-Course Mailing**

- [Cover letter to GK02](#)
- [Two-page note](#) on language of estimation