Heteroskedasticity:

- Problem: the variance of residuals changes according to independent variables or other factors. This will result in problems for testing the coefficients. This is because OLS regression assumes homoskedasticity (variance of residuals are the same).
- Detecting the problem: You can run the White test. After the regression, type in:
  ```stata
  estat imtest, white
  ```
  Rejection means that you have heteroskedasticity
- If you reject the null, you’ll need to make some adjustments. This is easy. Just add robust as an option at the end of your regression. For example:

  ```stata
  regress lnincome sex age agesq doctor chef comedian waiter, robust
  ```

- Notice that such adjustment will only change the standard error but not the coefficients.

Preparation for the PowerPoint Presentation

In your presentation, you will have about 8 minutes to present your work. That means at most you can have 8 slides in your presentation. Based on the structure of your paper, they will look like this:

- Motivation/Your Research Question
  - Why is it important? Policy Implications?
- Literature Review
  - Don’t go through each paper. Synthesize, compare, and contrast.
  - The citation format: Author (Year)
- Economic theory (For some, this is a part of lit review)
  - You may need graphs but resort to intuition
Always state the empirical predictions (better technology worsens income distribution, higher tax leads to less smoking)

- Data source and regression framework (including variables)
  - Year, geographical region, sample size, data source, variables
  - Regression model
  - Null and Alternative hypotheses according to the theory (some of you may have multiple ones)

- Summary statistics
  - Talk over the important point

- Regression output
  - Specify your dependent variable in your regression table (for example, in the title)
  - The same is true for interpretation of regression tables. You do not need to have “1% increase in teacher salary will cause the API score to increase by 2.25 points” on your slide. Instead, explain it orally. You pretty much have to do this. In the past, faculty members have called out presenters and asked for interpretation of regression coefficients.
  - Make sure you state that you reject or fail to reject the null hypothesis

- Conclusion

- Limitation and future research (may be combined with conclusion)

Some of the items above may be combined onto one slide. Use your judgment.

The general principles of making good PowerPoint presentation still apply. The major new challenge is again, the summary statistics and regression table. There are several things you need to remember.

1. In these tables, present the table in a simple, readable format. Make the fonts as large as possible. This is more challenging than you think because 12 point fonts are impossible to read in PowerPoint, and you may have a large table.
2. Do not waste any space in PowerPoint on what you can talk over. For example, you can look at the summary statistics table and tell the audience things to highlight.
3. People may ask you about some outliers (min and max) if they are out of the ordinary. Be prepared.

General Technical Principles:

- **Design**
  - Large font and wide margins (especially at the bottom)
  - Avoid crowding. Not too many words and too many lines
  - Use key words rather than full sentences for each bullet point
  - Avoid unnecessary features (animation, background, etc)
  - Color is fine but do not overdo it
  - Clean design can never go wrong
  - In large tables, a light shade for every other row may help readers understand better

- **Delivery**
  - Don’t stand in the middle
  - Move if you can.
  - Show some enthusiasm
  - Never read your slides. The audience can do that
  - Eye contact
  - Speak loudly
  - Don’t read from your note
  - Speak like a real person