How to Give an Applied Micro Talk
Unauthoritative Notes

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Motivation

- Your audience does not care about your topic
- You have 1-2 slides to change their minds
- Make them count
  - anecdotes
  - facts
  - policy questions
State a research question

- Policy/counterfactual question: what would happen if...?
- Estimate of an important “deep” parameter: how forward-looking are consumers?
- Test of an important theoretical prediction: does revenue equivalence hold in...
- Or, better yet, all three!
Not Research Questions

- Applied research questions are motivated by economics and not the economics literature.

- Applied research questions are not
  - What happens if we apply the X model to industry Y?
  - What happens if we change assumption Z of the X model?
  - What happens when I re-estimate so-and-so’s model on some other data?
Outline what your paper does and why

Convey why you have something to add

“Revisit the consumption CAPM using new high-quality consumption data.”

NOT “Revisit the consumption CAPM because no one has estimated it in a few years.”
Preview of Findings

- Assume the audience is about to leave
- Make sure they walk out with something
- Be tangible but terse
  - Just enough of your methodology so results don’t feel like magic
  - Not so much that you crowd out the findings
State adoption of mandatory maternity leave reduces women’s wages by 5%

- No effect for women past fertile age
- No effect for men

Implies approximately $0.75 of every $1 spent on maternity benefits are “paid” by mother
Incidence of maternity leave policies mostly on wages
Across state-years

- Number of observations ranges from 543 (Delaware in 1976) to 17,645 (New York in 2005)
- Mean wage for women is $17.49/hour (2008 dollars); median is $15.12/hour
- Mean wage for men is $25.16/hour (2008 dollars), median is $22.99/hour
- Average annual change in women’s wages is 1.34%

Regression model with state and year fixed effects

- Weighted by number of observations in state-year
- Exclude outliers using Tukey’s method
- Cluster standard errors (Bertrand Duflo Mullainathan 2003)

Effect of maternity leave adoption is estimated to be

- -$1.70 per hour (SE = $0.30) for women
- -$0.21 per hour (SE = $0.20) for men

Compare to cost of $2.25 per hour of providing leave
Goals

- State clearly the source of each variable
- Prevent confusion later: no one should be wondering
  - “Where did that come from?”
  - “Is that measured at the state level or the county level?”
- Anticipate concerns over pure measurement and address them now
  - Are data sources reliable?
  - Do the concepts you measure approximate those in your model?
Credit

- Be sure to get credit for
  - Novel data
  - New ways of measuring something
  - New sources of variation

- But no one cares that
  - This dataset took a long time to download
  - There are a lot of different ways to weight the data and I had to read a manual
No one wants to see your underwear

And no one wants to know how you processed the data

- First I collapse by state, county, year, and gender to make the dataset easier to look at
- Then I divide all variables by the 2008 CPI
- Then I remove observations with missing wages
- Then I remove observations with wages that are greater than $100/hour...
- Then I collapse by state, year and gender

Try this:

- Average wage by state, year and gender, excluding outliers (> $100/hour in 2008 dollars)
Model
Be Explicit

- Panel data model with year and state fixed effects
- Identification comes from exogenous law changes
Be More Explicit

- Panel data model with year and state fixed effects

\[ y_{it} = \alpha_i + \delta_t + \beta x_{it} + \varepsilon_{it} \]

with

- \( y_{it} = \) average wage in state \( i \), year \( t \)
- \( \alpha_i = \) state fixed effect
- \( \delta_t = \) year fixed effect
- \( \varepsilon_{it} = \) error term

- Identification comes from exogenous law changes
Be Even More Explicit

• Panel data model with year and state fixed effects

\[ y_{it} = \alpha_i + \delta_t + \beta x_{it} + \varepsilon_{it} \]

with

• \( y_{it} \) = average wage in state \( i \), year \( t \)
• \( \alpha_i \) = state fixed effect
• \( \delta_t \) = year fixed effect
• \( \varepsilon_{it} \) = error term

• Identification:

\[ E(\varepsilon_{it}|x_{it}, \alpha_i, \delta_t) = 0, \]

i.e. law changes are exogenous conditional on fixed effects
Define Your Bottom Line

- Let $\gamma$ be the average cost (per hour) of providing maternity leave
- Define $\beta/\gamma$ as the fraction of maternity leave costs paid by the worker
Even Better If

- You can lay out explicit economic assumptions that justify your econometric assumptions
- Your model connects directly to well-defined policy or welfare questions
Pause To

- Discuss the most important vulnerabilities of your modeling approach
  - Why you think your model is a good approximation
  - What you will do to assess plausibility of your assumptions / sensitivity
Do Not Pause To

- Try to anticipate every possible criticism
- Talk about the other models you have tried
- Discuss fine points that no one will think of anyway
By Now

• The audience
  • believes in your question
  • understands what you measure and how
  • understands what you will do with your data and why

• Otherwise
  • the audience is lost
  • no one will be able to appreciate your findings
  • the talk is already over, you just don’t know it

• No pressure though
Principles for Slide Design

- Unlike reader of paper, audience can’t skip or browse
- So every word is precious
- Slides should be clear
- Slides should be sparse: no extraneous detail
• While you are talking, some people are not listening
• Instead they are looking at your slides
• Make the slides tell the story with your voice
• (Can you hear me now?)
• Don’t put anything on a slide you don’t plan to talk about
• Amount of space you devote should correspond to the emphasis you intend
Pacing

- No pauses
Pacing

- No pauses
- Unless

You Really Want to Stress Something
Pacing

- No pauses
- Unless
- You
Pacing

- No pauses
- Unless
- You
- Really
Pacing

- No pauses
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- Something
Your paper is a complete description of what you did and what you learned.

- Slides cannot be complete—there is not enough time.
- Leave documentation to the paper.
- Use your talk to tell your story.
A 30 minute talk is not a 90 minute talk where you talk three times faster

(Hat-tip to Matthew Rabin for teaching me this one.)

Choose emphasis and detail for the amount of time you have
Results
Figures

- Use figures wherever possible to tell the story of what is in the data
  - More honest
  - More complete
  - More interesting
  - More persuasive
Tables

- Use tables to summarize key magnitudes
- Not to
  - Show coefficient on every control variable (unless these tell an important story)
  - Show every robustness check you did (can summarize these in bullets)
- Always be telling your story
Bottom Line

- Have a bottom line
- A single qualitative or (ideally) quantitative take-away
  - Measurement error in consumption data explains 27% of equity premium puzzle
- Not just another description of what you did
  - Estimated the consumption CAPM with high-quality data
You worked hard on your research

Work hard on communicating it

Make sure the audience

- Cares about your research question
- Understands how you answer it
- Knows why they should believe you
- Walks out of the room knowing what you learned
And One More Thing

- Practice

Give talks whenever you can.
And One More Thing

- Practice
- A lot
And One More Thing

- Practice
- A lot
- Give talks whenever you can