

Writing papers:

Four types of paper:

1. Theory paper: setting up model, deriving some results; often “proposition-proof”
2. Empirical paper: use data, run regressions, of various degrees of sophistication
3. Simulation/calibration of some model
4. Some mix of the empirical/theoretical: set up model and test it.

If theory paper is chosen, think of:

- a. Like telling story; cf other papers, and even textbooks
- b. Make sure you understand your model: what is endogenous, exogenous?
- c. Motivate your assumptions
- d. Motivate why the question is interesting
- e. Clean reading: numbered equations, keep track of indices, etc.

If empirical paper is chosen, think of:

- a. What is it that you’re testing?
- b. What else could be going on in the data? Use common sense
- c. Show favorite plots/diagrams to illustrate point
- d. Tables should be easy to read, all needed info provided; see e.g. Keith Head’s advice

If calibration/simulation paper is chosen, think of:

- a. How pick parameter values?
- b. What’s the algorithm?
- c. Is the exercise non-trivial enough to motivate doing it quantitatively? Can it be solved analytically?

If mixed paper:

- a. See above, but usually those papers are more like empirical paper

First things first. Try come up with at least a topic, know where to start.

Don't spend too much time reading other papers, first do what you want to do; literature overview's not what's crucial

If empirical paper: get data and run first regression a s a p; gets your thinking started – what to do next? Does the result hold when changing or controlling for this or that?

If theory paper: start with some model; use something from textbook or lecture notes if that's the best you can do, try do some twist on it; when you have at least some (non-trivial) result, you've got something to work on: what can alter the result? Robustness?

Idea for starting to write: begin with slides (which can also be presented in class); then you have the structure there already

Remember: writing the paper is not predominantly about getting a grade, but for training, and maybe to have something to enclose with your application for PhD programs.

Concrete topics:

- Set up Solow model with different saving rates for capital owners and workers. Consider two closed economies with different levels of productivity. What can you say about the cross-country and cross-individual income distributions? What happens to inequality over time? How do the results depend on initial conditions?
- Analyze some simple difference equation which displays chaotic behavior (see problem sets). What happens if you add shocks on top on the chaos? Does the time series become more volatile? Or less?
- Pick one of the empirical papers discussed in class (or some other good paper) and try to first replicate their regression results. Then find some new data and see if their results change when controlling for this or that. For example, add geographical variables from www.weatherbase.com to existing cross-country studies
- Look at patterns on income gaps today across regions (provinces or states) within one country, for example China. Try finding (or estimating) historical per-capita income levels, around 1500 (cf Chanda and Putterman.) Are the historically richest regions also richest today?
- Set $\alpha=1/2$ in the Galor-Weil (1996) gender model and find explicit expression for all functions which are now only defined implicitly. Simulate for realistic parameters values.
- Replicate the time paths of the Galor-Weil model as derived by Lagerlöf (2006). Add shocks.
- Collect data over people publishing in top journals in economics (these are AER, JPE, QJE, Econometrica, REStud), and/or science journals (e.g. Science and/or Nature). Code them (if possible) by whether the names are, for example, Chinese, or not. Is there an increasing time trend in the fraction Chinese authors per issue? If so, when does it start? Do the same for affiliation (university). Are Chinese universities too becoming more successful in publishing? You may also try with e.g. Korean names. In order to not make the data set too large, you may pick one volume per year (e.g. one month) over the last, say, 40 years.
- Find data over different types of government consumption across countries, and see if Barro's result that government consumption is bad for growth is robust.
- Set $\epsilon=1/2$ in the Becker-Murphy-Tamura model and try getting explicit expressions for the fertility rate in the Malthusian steady state and on the balanced growth path. If successful, pick parameters values and simulate the model.
- Let β in the Barro-Becker model depend on adult consumption (c). Then consider a small open economy, so that the interest rate (r) is exogenous and constant, and thus capital per worker (k), and the wage rate (w) are also constant. Derive a two-dimensional system of difference equations (for c and n) and illustrate in a phase diagram.