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## Keeping up with what's going on

Follow the senior fellows on Twitter. There is a [CGD Tweeters](#) list that you can follow!

Read CGD blogs!!

Read the Economist, FT, & Devex

Check out [rollcall.com/decoder/](http://rollcall.com/decoder/) for definitions of common U.S. policy-related terms

If you have a specific area that you wish you could follow in the policy area, message the US Development Policy team

## Being an RA

Guide for being an Econ RA: <https://raguide.github.io/>

If your boss is not being responsive for:

Logistics related things: “manage up” by sending an email around the lines of “hey, if you don’t reply to this email, I’m going to assume you want me to do X,Y,Z.” Generally, that leaves a paper trail for them to follow, and they respond if it’s actually important.

Research related things: send a couple questions and start thinking and asking your own research questions! This is actually an opportunity for you to be a little more independent and ask your own questions.

If you want different responsibilities / more responsibilities, go ask for more work! It’s generally not looked down upon, but you may not get compensated monetarily for it.

Some bosses may not give you credit if you don’t ask. We don’t have (but should have) formal co-authorship rules. But in general, you probably should be getting co-authorship (and sometimes first author credit) for most of your research. This is something you should be able to discuss directly with your fellow but also you can work with Comms if necessary.

Ask for help! You can use the various Teams channels or Associate Staff listserv to ask all types of questions (specific database Qs, Qs about getting access to journal articles, if you need additional RA support on a project and want to see who is available).

Talk to the Fellows! Especially as we return to the office, take advantage of the opportunity to chat with Fellows on other teams. They are usually happy to discuss their work, your research interests, their career pathways, advice on your career pathway. This goes for Masood too - he’s happy to chat with all associate staff about any ideas or concerns you may have and interested in your growth and development beyond CGD.

Talk to Comms, IA, and Outreach: understand their work on how you can best interact with them. Your Fellow will often not know the correct rules/procedures and you can help facilitate interaction and cooperation between teams.

Some things I wish I did better:

Doing lit reviews prior to going ham on something. Don't rely on your peers to do a lit review, because what is important to them is often different from what is important to you.

Making more thorough unit tests within code (using `assert` (STATA) & `waitifnot` (R) functions)

## Grad school standardized testing

### GRE

Best math GRE prep book: Manhattan Prep 5 lb. book (should be in CGD library)--if pressed for time, do a practice test to find out weaknesses, and then do a random sample of the questions in each section. Focus your time on the quant section; just don't practice reading/writing.

GRE calculator app: [https://tonypottera24.github.io/gre\\_calculator/](https://tonypottera24.github.io/gre_calculator/) (did you know you can store numbers in memory? Or directly push calculated values into the question's answer box?)

Don't take the GRE virtually! The system (at least in 2021) was super buggy and sometimes interrupted people mid-test.

[I can't really comment on GMAT/LSAT]

Talk to other associate staff and fellows about their degrees and school choice.

## What to do with your CGD benefits?

If you are generally healthy and your parents have insurance, you can stay on your parents' health insurance plan until age 26.

After you have a certain pool of cash for emergencies, for personal finances, in order of importance, invest in: Roth 403(b), HSA (if you OR your parents have a high deductible health insurance plan), Roth IRA, and repay your student loans.<sup>1</sup> All of these plans have maximum

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<sup>1</sup> See this personal finance decision tree diagram: <https://i.imgur.com/ISoUQr2.jpeg>. Only after you've invested in these should you consider investing in an individual brokerage account (e.g. Bank of America individual account or Robinhood), since they are not tax-advantaged. HSAs are tax advantaged, but we get matching contributions for our Roth 403(b), but to each their own.

contribution amounts, and are tax-benefited in some way. Contributions you make to your 403b now will have a HUGE impact down the line. Even doing 3-5% can make a huge difference, especially as you wait for CGD's 15% to kick in after your first year. Additionally, it is generally not a good idea to wait for certain market times to invest; invest it immediately in a broad-based market fund like SPY and let it sit. Do not invest in bizarre ETFs like leveraged ETFs, currency funds, sector ETFs, or even the Russell 3000 Index unless you have a specific rationale for doing so, as their returns tend to be lower over the long run.

If you have some leftover money, consider donating to an effective charity/advocacy organization like GAVI or Givewell. Since the world is generally getting richer, it is more important for you to donate money *now* rather than later, as each dollar you donate today will go farther in helping someone than a dollar you donate in the future.

CGD gives you either metro benefits (scaled to the distance from the office) OR biking benefits (\$10/mo). Use them!

For your education stipend, you can sign up for foreign language conversation and tutoring for \$10/hr on the Italki app. Others have bought books and taken data visualization courses. If you're applying to PhDs, consider taking math classes at Harvard Extension such as the Real Analysis sequence (Math 23-a/b/c) with your stipend. Forewarning that it does eat almost all of your weekend.

When negotiating for a salary raise, it is highly dependent on your senior fellow/boss advocating for you. Feel free to reach out to other associate staff members to ask them how they approached performance reviews and asking for raises/promotions. It can be helpful to keep track of: the work you were hired to do (the job description you applied for), the work you actually do, and the work of the positions you'd like to be promoted to (those descriptions and salaries can be found [here](#) on the intranet). This can help you make a case for a promotion and raise. You can counter offer your promotion or raise! If you are offered less than you expected or believe you deserve, talk to Luke and make your case - the worst thing that can happen is that he says no.

PTO and time off: USE ALL OF IT! You do not get paid enough not to take your full 6 weeks of PTO. Summer is generally the quietest time at CGD and a good time to take PTO. Even if your boss doesn't use all their PTO, you should! DC also provides [paid family and medical leave](#) and these benefits are expected to increase in July 2022.

## Conducting a lit review

If you cannot find a paper, *don't* use sci-hub, which is a website that allows you to have access to virtually any paper 😊. <https://duckduckgo.com/?t=ffab&q=sci-hub&ia=web>

This is the workflow that one twitter user has recommended for lit review (which I found very helpful):

Identify a key paper in the literature for my project that is germane to my research question.<sup>2</sup>

Search for said paper in ConnectedPapers (connectedpapers.com) to create a graph of related works -- can search in the top bar by article title, DOI, and author names.

In ConnectedPapers, I expand the graph node list (LHS panel) and download the entire list as a [.bib] file using the "Download" button in the panel. I import this to my Zotero library and create a folder for my project.

After cleaning up the metadata - fixing author name errors, dates, and missing info - I continue adding papers (using the Zotero browser extension) and funnel them directly to the project-related Zotero folder.

Once my Zotero library has all the papers I want for my lit review, I set up a BetterBibTex (BBT) perpetual export from this library to my main project directory. no need to re-export [.bib] files when you add a new reference! <https://retorque.re/zotero-better-bibtex/exporting/auto/>

If you use Word for manuscript prep, use the Zotero add-in for citation management and make sure you can link to your Zotero folder

[https://www.zotero.org/support/word\\_processor\\_plugin\\_installation](https://www.zotero.org/support/word_processor_plugin_installation)

If you use RMD/RStudio, install the [citr] package (github.com/crsh/citr) and use its insert\_citation() function to load a pop-up GUI for citations from a [.bib] file that you point to in the YAML (with BBT, can connect directly to your entire local Zotero library)

If you use local LaTeX, just make sure the BBT export goes to your manuscript directory and cite the [.bib] file like you normally would.

If OverLeaf is your preferred editor, connect your Zotero library directly.

[https://www.overleaf.com/learn/how-to/How\\_to\\_link\\_your\\_Overleaf\\_account\\_to\\_Mendeley\\_and\\_Zotero#If\\_you\\_are\\_logged\\_into\\_Zotero](https://www.overleaf.com/learn/how-to/How_to_link_your_Overleaf_account_to_Mendeley_and_Zotero#If_you_are_logged_into_Zotero)

Alright - citations are prepped and your manuscript processor is connected to Zotero.

## Coding Workflow

Make sure to use a LOT of "assert" (STATA) and "[waitifnot](#)" (R) commands in your code, both of which stop your code if it doesn't satisfy some test. Write this prior to writing the code, to save yourself a headache. Even better, check your final results with online sources (e.g. if you're aggregating certain data sources, check that the results align with published measures and with your intuition). When in doubt, get someone else to check your code.

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<sup>2</sup> Shamelessly copied from Shyam Raman  
<https://threadreaderapp.com/thread/1497080453513105409.html>

Install Meld, or some sort of diff-tool to compare your current code with other code (or use <https://www.diffchecker.com/> if you don't mind your code being public)

For STATA, learn to write functions that can be used in multiple scenarios/for common repetitive tasks (ado programs) and use compound double quotes. See examples of commonly used functions in

<https://github.com/iamgyang/CGD-RA-resources/blob/main/Code/example%20preliminaries%20file.do>.

Note that STATA (and many other coding languages) treats the sum of the empty set as 0! (e.g. if I'm collapsing with a sum, I'll get a lot of "fake" zeros!)

Whenever you write code in STATA, remove variable abbreviations (set varabbrev off). This way, if you ever introduce new variables that happen to have similar abbreviations, it doesn't break the code.

Try VSCode as your IDE: you can organize many small scripts easier, search through all the files in one folder, and you have many shortcuts. It also helps immensely with organizing both files of different languages in one project.

How to make STATA LATEX tables:

<https://medium.com/the-stata-guide/the-stata-to-latex-guide-6e7ed5622856d>

For speed, use the 'gtools' package in STATA and the 'data.table' package in R. Importantly, for R, read through documentation and thoroughly understand 'data.table' *pass-by-reference* properties to not make mistakes. R and Python are generally orders of magnitude faster than STATA, but it can be faster to write STATA code for common data cleaning tasks on smaller (100K rows) datasets. Also, the econ community generally understands STATA code.

Learn how to version control with git & github to rewind your code, make branches, and collaborate with others (note that VSCode makes this process really easy). To download from a github repository, use <https://downgit.github.io/#/home>

Rmarkdown/knitr is pretty slick, but for papers, use Latex and just connect it to Dropbox. We have an institutional Overleaf account that you can connect your individual Overleaf account to. Rmarkdown actually makes a lot of errors when doing Latex (maybe this will change by the time you're reading this).

For the CGD color palette, Lee Crawford has made a CGD theme. [[Insert Lee's thing]]

For STATA and R, the standard errors for some linear regression may be inaccurate if you're using the default settings. Use reghdfe package (STATA) and reg x y, vce(hc3) and the sandwich (R) package. See <http://datacolada.org/99>

Don't be afraid of posting questions on Stack Exchange.

If your colleague / boss wants to import data into STATA, and you are originally working in another language, just export the data as a CSV format. Don't bother with converting to .DTA, because DTA cannot deal with column names that are too long, or ones that have periods in them.

## Making pretty graphs

This is almost a discipline in itself

But Datawrapper is wonderful (<https://www.datawrapper.de/>).

Also, try Flourish (<https://flourish.studio/>).

Cool options for advanced data viz using Stata

[https://www.stata.com/meeting/uk21/slides/UK21\\_Naqvi.pdf](https://www.stata.com/meeting/uk21/slides/UK21_Naqvi.pdf)

Rory in the Education team (London office) has created a script for aligning the themes of ggplot graphs (which is a graphing package in R) with the CGD graphics guide. The script along with instructions on how to employ it are found in the [CGD Github](#).

## Some useful coding packages

For increased speed, use the 'gtools' package in STATA and the 'data.table' package in R.

For automatically converting country names to country codes (iso3c/iso2c), use 'countrycode' (R) and 'kountry' package (STATA).

For intelligently handling merges, use mmerge (STATA).

For fixed effects estimation, use fixest (R) and reghdfe (STATA).

For exporting LATEX tables, use esttab (STATA) and modelsummary (R). Avoid stargazer (R).

For importing WDI data, use wbopendata (STATA) and WDI (R).

Lodown (R): download survey microdata.

dbnomics (R): download from WB/ECB/BIS/Eurostat/IMF/WTO.

imfr (R): download from IMF API.

## Econometrics

These two books are a must-skim / must-read. They give a very easy-to-understand overview of fundamental causal inference techniques, fixed effects, difference-in-differences, etc.

Scott Cunningham *Mixtape* book: <https://mixtape.scunning.com/>

Nick Huntington Klein's *The Effect* book: <https://theeffectbook.net/index.html>

Matheus Facure's *Causal Inference for the Brave and True* book (only Python, but covers advanced ML / synthetic diff in diff, which aren't covered in the above 2):  
<https://matheusfacure.github.io/python-causality-handbook/landing-page.html>

Quantitative Economics with Python (probably best place to learn Macro):

<https://python.quantecon.org/intro.html>

Other more advanced resources:

<https://medium.com/@matteo.courthoud/free-causal-inference-resources-a54f1621d455>

Free data analysis with R course with economics research in mind:

[https://github.com/msu-econ-data-analytics/course-materials?utm\\_source=substack&utm\\_medium=email](https://github.com/msu-econ-data-analytics/course-materials?utm_source=substack&utm_medium=email)

Database of papers with STATA replication: <https://ejd.econ.mathematik.uni-ulm.de/>

## Bonus: Learn the Countries of the World

This is, of course, optional, but it was a very fun and rewarding thing to do! It does not take as long as you might think, and I learned through a fun, quiz process while procrastinating university work. There are surely a million ways to learn this, and I've only tried (needed) one workflow, so perhaps there are better ones, but here's how I went about it:

- The ultimate goal (for me) was to get 197/197 on [this sporcle quiz](#).
- To study, I used a different site, where I could take it one continent at a time. It asks you to click on a map the country it names, so you also need to learn *where* the country is and its shape, not just its name, which is better both for remembering and for practical purposes! Here is the site: [this is their South America page](#), as an example, but you can navigate to other continents/subcontinents from the dropdown menus above.

That's pretty much it! Try to nail each of those continent quizzes, studying however works best for you, and then move on to trying the Sporcle Countries of the World Quiz.

I hope you find it as enjoyable and rewarding as I did! It feels great to always know where any given country is whenever mentioned or read, and knowing a country's location and neighbors really helps understand any discussion relating to it.

Good luck!



## **In Conclusion**

CGD is a great place to work! Beat Abdoulie at pingpong for me.