

Finding Funding

Thirty years ago, when a much larger share of economists were doing theory, finding funding was less important than it is now. With advances in computing power, the falling cost of data, and the Credibility Revolution, however, economics has become much more of an empirical discipline (Backhouse and Cherrier 2017a, 2017b; Angrist and Pischke 2010), which means one often needs funds to get data.

Although grants are almost always a necessary condition to fund primary data collection (e.g., lab or field experiments and surveys conducted by the researcher herself), it is not uncommon for researchers to have to buy the data they want (e.g., data collected by market-research firms). Even a researcher who is interested in building a data set from scratch using publicly available sources (e.g., by combining socioeconomic data from one source with geographic information from another) is likely to have to fund the tedious work of merging the various kinds of data together, and so she will need funds to pay someone else to do that.¹

Before proceeding with this chapter, I should define some of the terms I will be using throughout. According to the Carnegie Classification of Institutions of Higher Education,² the various categories of institutions of higher learning in the US include, for the purposes of this discussion:

1. R1 universities, or doctoral universities with very high research activity.
2. R2 universities, or doctoral universities with high research activity.
3. D/PU universities, or doctoral/professional universities.
4. Master's colleges and universities, which "includes institutions that awarded at least 50 master's degrees and fewer than 20 doctoral degrees during the update year." These institutions are divided in tiers M1 (larger programs), M2 (medium programs), and M3 (smaller programs).
5. Baccalaureate colleges, which includes "institutions where baccalaureate or higher degrees represent at least 50 percent of all degrees but where fewer than 50 master's degrees or 20 doctoral degrees were awarded during the update year."
6. Baccalaureate/Associate's Colleges, which includes "four-year colleges . . . that conferred more than 50 percent of degrees at the associate's level."

All of this matters because the category an institution falls into will often determine the type of grant researchers at that institution can apply for. For instance, many National Science Foundation (NSF) grants will not accept applications from institutions outside of the R1 and R2 tiers. Many grants are available only to researchers at undergraduate teaching institutions or liberal arts colleges. As a result, researchers at R1 and R2 institutions will tend to go for large, nationally recognized government-sponsored grants, whereas researchers at D/PU institutions will tend to rely more on grants from foundations since that they are unable to apply for big-ticket governments grants such as those awarded by the NSF or the National Institutes of Health (NIH). Likewise, researchers at undergraduate teaching institutions and liberal arts colleges tend to target a different set of national grants of lower monetary values, and which usually are not to be used to purchase equipment or data unless undergraduate research is involved. Thus, before you put in the hard work of applying for a grant, make sure researchers at your institution can apply for that grant. If you are not eligible for a given grant (say, because your institution is not allowed to apply for specific grants, or because you do not have the necessary administrative support), it is often possible for you to apply for it as a sub-awardee or as a consultant on someone else's grant who is at an eligible institution.

Likewise, different fields get grants from different sources. Researchers in agricultural economics, development economics, environmental economics, and industrial organization are often funded through

government grants. Health economists rely on both government grants and foundation grants, with the most prominent such foundation being the Robert Wood Johnson Foundation. Monetary economists are almost entirely funded through think tanks. Experimental economists tend to be funded through foundations as well; this is especially true of behavioral economists, whose work is often funded by the Russell Sage Foundation. Given how each field has its funding idiosyncrasies, and given increasingly stringent funding disclosure rules at many journals, I suggest reading the acknowledgments footnote of the papers published in your field for indications of where research funding comes from in that field.

5.1 Internal versus External Funding and Indirect Costs

A useful dichotomy when it comes to funding is internal versus external funding. “Internal funding” refers to grants and other sources of funding within your institution, whether at the level of the department, school, college, or university. The higher internal funds are within your institution’s hierarchy, the harder they are to get, both because you will face more competition for every dollar of funding and because your proposal will be read by people who are further removed from your area of research.³

“External funding” refers to grants and other forms of funding outside of your institution. Any funding from local, state, and federal governments or their agencies (e.g., NIH, NSF), from foundations (e.g., Ford Foundation, Pew Charitable Trust, Rockefeller Foundation), or from international organizations (e.g., the Consultative Group on International Agricultural Research) is external funding.

Beyond defining those terms, why is it useful to know the difference between the two? Because typically in a job where grants are seen as outputs more than inputs (i.e., in a job where grantsmanship is an explicit tenure and promotion criterion, and where there are clear incentives to get funding), a dollar of external money is worth more to your career than a dollar of internal money given that it is both more difficult to compete for external funds (and submitting grant proposals and being successful at getting funds is a form of peer review) and literally worth more to your institution because typically, for every external grant dollar you bring in, your institution will have you pay up to an additional 60 percent. This means that if you need \$100,000 for a given research project, you will have to request \$160,000 from the funder to cover these so-called indirect costs.

For most economists, this system of indirect cost recovery (ICR) can be rather frustrating. This is because the stated reason for universities to recover indirect costs—the university has to be able to host your research project and provide the relevant physical and administrative infrastructures—is less likely to apply to economists than to some other disciplines. Unlike natural scientists, who often need expensive laboratories occupying valuable space in university real estate, most economists can do their research on a laptop with a reliable Internet connection. Moreover, when they do change, ICRs almost always go up. As I write these lines, the ICR at my own institution is 54 percent, but it will go up to 55 percent next academic year.

There are various ways to reduce the amount paid in ICR. First and foremost, if you are applying for funding with a team of coauthors, it is worth asking them what the ICR rate is at their institution, and go with the one that has the lowest rate.⁴ Second, if you can argue that a significant portion of the work done as part of the grant will be done off campus, you can request to pay the off-campus rather than the on-campus ICR. I already mentioned that my institution’s (on-campus) ICR is 54 percent. But if I were to get a grant to run an RCT in another country, for example, I could lower my ICR to the off-campus rate of 26 percent if I could argue that more than half of the work done as part of that grant would be done off campus.

5.2 How Much Funding Do You Need?

The first question to ask yourself is “How much funding do I realistically need?” Although we are trained

from the very beginning as economists to think that utility is increasing in money, and so your immediate answer to this question might be “As much as possible!,” it is worth noting that additional grant money always comes at a cost, that a grant is a contract between the funding agency or donor (as principal) and you (as agent), and to recall that in contract theory, the agent’s cost of effort is almost always assumed increasing *and convex* in effort for a good reason. In other words, the expected benefits you derive from grant funding should not exceed the certain costs of getting that funding, starting with the considerable fixed costs involved in preparing grant proposals. The variable costs include the cost of doing the research, the opportunity cost of your time (which you can sometimes cover with your grant, but only up to a point), the cost of supervising grant personnel (sometimes across time zones, to the detriment of a healthy sleep schedule), the cost of managing the grant,⁵ and finally the cost of preparing the deliverables.⁶

So how much funding do you actually need? Before applying for a grant, it is worth asking yourself the following questions:

1. *Are grants an input or an output in your research process?* I have alluded to this earlier in this chapter, but do you need to raise funds as an explicit criterion for tenure or promotion (i.e., grants as an output), or do you only need those funds for your research (i.e., grants as an input)? In the former case, you will need more grant funding (ideally both more grant dollars and more grants from prestigious sources of funding) than in the latter case—at least for tenure or promotion, if not for your actual research.
2. *How excited are you about this particular research project? How excited can you remain about it without working on it for a few months?* Not all research questions are created equal. You will be so excited about some research projects that you will wake up in the middle of the night wanting to work on them. Others merely fulfill someone else’s need for an answer about something you are knowledgeable about, but have no particular interest in. Choose wisely, because although the payoff is uncertain (you may not get the grant), you will bear the certain cost of applying for a grant.⁷
3. *Are there other ways to answer the research question at hand (or a nearly identical one) which do not require grant funding? Or are there other research questions you could answer instead?* I have done most on my research on a shoestring. Part of that involved decisions at the extensive margin (i.e., “I will not work on this question, because it would involve conducting an RCT, which I do not have the human-resource management skills for”), but some of it also involved decisions at the intensive margin (i.e., “Although it would be ideal to collect my own data on this, I can get close enough using an existing data set.”) One of my PhD students, for instance, wanted to look at the effect of output price volatility on whether individuals exited the agricultural sector. After we discussed it together, she realized that no survey of agriculture recorded farm exits, and that any seeming exit could also simply be sample attrition. So instead of getting into a costly data collection effort, she decided instead to look at whether output price volatility drove rural households to make one of theirs migrate, presumably in search of wage work (Lee 2021).
4. *How much do you (dis)like managing finances, human resources, or both?* Some institutions (e.g., R1 universities) will have better administrative resources to help you with this, but getting grants often involves no uncertain amount of financial and human resource management skills. As Dean Yang noted in an interview for the book *Experimental Conversations* (Ogden 2017), such skills are not taught in graduate programs in economics or related disciplines.⁸ If you are the kind of person who dreads doing his or her own taxes, whose eyes glaze over when discussing the details of a mortgage or of an investment strategy for retirement, who dislikes having to tell a subordinate that they are not performing well or, worse, that they are fired, you are better off not getting into the grants game. In the same interview with Ogden (2017) mentioned above, Dean Yang also added that although the skills discussed here are not taught in

graduate programs in economics, they are not necessary to do good research. If there is one aspect of a research career where it is helpful to play to your comparative advantage, it is this one.

5. *How much do you (dis)like managing people?* This sounds the same as managing human resources, but it is not. Managing human resources refers to managing people who work for you. Managing people refers to managing personalities, egos, expectations, and so on of everyone involved in a grant, including those who are not your subordinates or who may be your seniors. Very often, writing grant proposals involves colleagues realizing that there are considerable pay differentials between them, which can lead to frustration with one's employer. In some cases, a grant team will involve people who dislike each other. If you tend to avoid socially uncomfortable situations, it is useful to know what you may be getting into.

5.3 Where to Look for Funding?

The ideal approach to scientific research involves observing some phenomenon in the real world, speculating about the causes or consequences of that phenomenon, generating some testable predictions about some of those causes or consequences, finding data to test those predictions (possibly with the help of grant funding), and then testing those predictions.

But in the real world where we live, not all scientific endeavors proceed in the way just described. Very often, "research" questions are answered because someone outside of the research community (e.g., a government agency, a firm, or a nongovernmental organization) has an interest in knowing the answer to specific questions and is giving out funding for it.

There are thus two broad approaches to research. The first starts from observation and then goes in search of funding to test whatever derives from that observation. The second is much like famous climber George Mallory's reason for climbing Mount Everest,⁹ and it starts from there being some funding available to answer a specific research question posed by the funding source or to answer a research question in the context of the funding source's call for proposals.

Under the former approach, it helps to be on the lookout for calls or requests for proposals or applications (CfPs, RfPs, or RfAs; the US government uses RfP for contracts, but RfA for grants) coming out of various organizations. Many universities will have an entire web page dedicated to upcoming funding deadlines, often searchable by how soon the deadline is coming, by broad research area (e.g., natural vs. social sciences), or by topic. It also helps to be proactive in regularly looking at various prospective sources of funding's websites. Although what those sources are will obviously vary from field to field and from discipline to discipline, there are some aggregator websites outside of research universities that can be very useful. As of this writing, examples of those websites include the Grants.gov website in the US, the websites of the Marie Curie Fellowships, the European Research Council, and the European Commission in Europe, and the Economic & Social Research Council in the United Kingdom. Almost all if not all of those sources of funding will tend to have funding for broad research areas instead of narrower research questions.

Under the latter approach, catch as catch can, and getting funding becomes a matter of applying for any project you feel qualified to undertake and feel like you have the bandwidth for, keeping in mind the points raised in the previous section. This approach may be especially necessary if your position is a soft-money position wherein you have to raise some or all of your salary every year. Such soft-money positions are common in schools of public health (where the universe of obtainable grants is correspondingly much larger than in most areas of economics) and at multilateral institutions like the agencies that compose the CGIAR, such as the International Food Policy Research Institute.

5.4 Sponsored Project Life Cycle

The typical life cycle of a sponsored project goes roughly as follows:

1. *Pre-proposal stage 1.* Many institutions require all grants to be reported and processed through the institution for legal purposes, no matter the size or source of a grant. Your first step should thus be to let the people at your institution whose job it is to oversee such things know that you are planning on applying for a given grant. This is not a binding commitment, as it is common for such plans to fall through. It is merely a heads-up to the staff at your institution so they can plan accordingly. And given which institutions can and cannot apply for specific types of funding, this is a good way to ensure that you are actually eligible for the grant you are targeting.
2. *Pre-proposal stage 2.* The most crucial step here is to read every detail that is provided to you by the funder, both in the CfP or RfP and in the documents available on their website. What will be required of you, and when? Can you deliver on what is expected of you? What do funded projects look like? Does yours come close to that description? Additionally, some funders (e.g., some think tanks) come with ideological baggage. Does the funder whose proposal you are considering applying to come with such baggage? If so, are you willing to live with having a reputation for doing ideologically driven work, even though that reputation may not be deserved? If you answer all of these questions in the affirmative, then you should submit a proposal. But if you have any hesitation, you should probably think twice about submitting a proposal, and wait for a better opportunity. A colleague who sits on the funder side suggested that you may even chat with the program officer to be sure you understand what the funder is looking for, as this may lead you to grasp some of the nuances of the research program being funded, which can in turn help with how you write your proposal.
3. *Set your budget.* This is the right time to set your budget, because (i) it forces you to make your collaborators list their budget needs within the grant, (ii) allows you to adjust your goals or number of team members if your budget is unrealistic, and (iii) the budget itself will determine the scope of the work done under the grant, and who is responsible for it. This is the time to figure out whether you can use your grant to pay part of your salary, get summer support,¹⁰ or buy out of teaching a course, and how much it will cost to do so.¹¹ For more on writing your budget, see Pain (2017).
4. *Make a list of all of the documents you will need to prepare and assemble.* If you apply for a small internal grant, you will usually need nothing more than a short (i.e., two- to five-page) proposal, a short CV, and a budget. But if you apply for a big external grant, you will need a lot more (e.g., a list of all of your current and past coauthors and collaborators, letters of support from research partners, a biosketch, a list of would-be reviewers, and many required forms). To keep track of everything and make sure everything is included and formatted the right way, you will almost surely need the help of professionals. Luckily, most research universities in the US have an office (usually called Office of Sponsored Programs, Sponsored Programs Administration, or some variant) that helps researchers do that. So when you do decide to apply for a large grant (e.g., an NSF or NIH grant), the first thing you should do is to get in touch with your institution's sponsored programs office to give them a heads up that you want to submit a proposal. That office will then assign a professional to your case who will help you navigate the often dazzlingly complex world of big grants.
5. *Assemble your team.* Many big grants will require a whole team composed of a principal investigator, one or more co-principal investigators, research professionals, graduate students, and administrative staff.
6. *Play to your strengths, and focus on the proposal itself; delegate the rest.* If you are reading this book, it is probably a safe bet to say that you are a research economist, and therefore that your

comparative advantage when it comes to preparing grant proposals lies in developing the proposal itself. Focus on that. Delegate the task of filling the various forms required to submit federal grant proposals to your institution's sponsored programs specialists whenever possible.

7. *Get everything assembled at least two weeks before deadline.* For big external grants where you need to work with your institution's sponsored programs office, the institution, not the researcher, submits the grant proposal, and so the sponsored-programs professionals will typically need *at least* five business days to guide your proposal through the relevant channels before submitting on time to meet the deadline. That lead time is necessary not only to ensure that all of your *is* are dotted and your *ts* crossed so your proposal does not get rejected because of some administrative detail, but also because other researchers at your institution are applying for grants of a similar caliber to the one you are applying to.
8. *Wait for a decision on your proposal.* Just because you have submitted your proposal does not mean you should sit back and not work on the research project you are seeking funding for. No research project is ever "finished," not even when the main manuscript from it is accepted for publication. There is always something to be done. You can always think of more robustness checks, additional ways of measuring your outcome variable, and additional papers to be written with the data you are seeking funding to collect. You can get the manuscript started and draft the sections that you can write without seeing the data (e.g., most of the introduction, the theoretical framework, the empirical framework). Out of sight, out of mind; if you are anything like me and your present preferences for your future self are not your future preferences for your future self, this is a way to remain interested in this project and not lose your motivation to work on it if and when you do get the grant and must do the real work.
9. *When you hear the result of your proposal.* If you did not get the grant, look for the next source of funding. If you received comments on your proposal, you should use them to make it better for the next submission. Otherwise, you can often reuse a failed proposal for another CfP or RfP almost lock, stock, and barrel—the rules about self-plagiarism do not apply to grant proposals, as there is a broad understanding that such documents are not meant for public consumption, and so it is not necessary to reinvent the wheel. If you did get the grant, the real work begins. Reassemble your team and make sure everyone is still committed to their roles as stated in the proposal. Familiarize yourself again (because it has probably been months since you checked) with the rules about what you can and cannot spend your grant money on, the various reporting deadlines, and what the deliverables are. And *then* start spending grant money on your research project.
10. *Submit reports on time.* Most big, multi-year grants will require you to submit periodic reports on your grant-related activities, usually one such report every year. Those tend to be financial reports that keep the funders apprised of how you are spending their money, but some will also require a narrative about the progress made since the last report. It may be tempting to do a slapdash job on those reports. In the interest of maintaining a good relationship with those who hold the purse strings, avoid doing so. Also make sure you submit those reports on time; submitting them late (or not at all) on some federal grants can lead to hefty fines, if not jail time. If you do not spend the entirety of the grant by the end of the grant period, you can often request a no-cost extension. Make sure you request those as early as possible before the end of your grant if you realize you cannot do everything before the grant period ends.
11. *Once the grant period concludes, submit your final report and other deliverables on time.* Most grants will require you to submit a final report, and possibly some deliverables (e.g., policy briefs based on the research the grant paid for). Again, it is tempting to do the bare minimum here and to focus instead on the research itself, but if you want to maintain a good relationship with and get more money from this funder, avoid doing so. One thing that is especially easy to overlook here is that knowledge of your bad actions with one funder are likely to easily spread to other funders, because program officers tend to move from job to job within their industry just like academics do, and so funder *B* may withhold funds from you because of your cavalier treatment of funder *A*. As with everything else in this profession, there are few players, you will

repeatedly interact with them, and you do not know when the game ends. Act accordingly. For the final report and deliverables, those documents are more often than not for public consumption, so you should make an effort to write clearly and concisely, but the level of rigor required of you is nowhere near that of a journal article. This is where you will want to get into descriptive statistics and provide deep background as much as you can in order to tell a clear, accessible, and compelling story, just as you would do for a peer-reviewed article.

12. *Be grateful to the funder.* Many journals require authors to disclose any and all sources of funding for a submitted manuscript, and many funders will also require you to acknowledge their support in the work you publish thanks for their financial support. Even in the absence of such requirements, you always should include the funder (and the grant number, if applicable) in the acknowledgement footnote of each paper made possible by the work undertaken in the grant. This is true no matter how big or small the grant. Make sure you send your funders a copy of each article, book chapter, and so on which their funding made possible.
13. *Make yourself available to review proposals for this funder.* If the source of funding for your research relies on external reviewers to determine whether it should fund proposals, it is a matter of simple gratitude to make yourself available to review future proposals. Much like the peer-review process involved with publishing journal articles, you should implicitly agree to review two or three proposals for every proposal of yours that gets funded.

5.5 Preparing Successful Grant Proposals

Having just seen the life cycle of a typical sponsored project, it is now time to discuss how to prepare proposals that maximize your chances of getting funded.

Once you have chosen to submit a proposal in response to a given CfP or RfP, the first thing you should do is ask the funder's contact person (usually their program officer) whether they are willing to make available examples of previous grant proposals, both successful and unsuccessful. Many funders will not be willing to do so, but you will not know unless you ask politely. If the funder is unwilling to make proposals available, you can try asking your institution's office of sponsored programs for examples of proposals submitted to the same funder. Even proposals on entirely different topics can be useful for you to learn how to structure your own proposal, what level of detail to go into, and so on.

Second, you should ask that same program officer about who is going to be evaluating proposals for this specific RfP or CfP. Will your reviewers be other economists in your field? Other economists who may or may not be in your field? A mix of economists and people from other disciplines? Or strictly people from other disciplines? Much like you would want to adapt how you write an article depending on whether you plan on submitting to a field journal, a general economics journal, an interdisciplinary journal, or a general science journal, you should aim to write your proposal with a view to your audience. An audience of economists will almost surely want to see equations when you discuss your theoretical framework, your empirical framework, or both. The same equations, however, are likely to antagonize an interdisciplinary audience.

Third, you should ask around to see whether anyone in your network has previously received the grant you are targeting. If they have, ask them whether they would be willing to share their insights about preparing a successful proposal for this grant.

Fourth, you should write out a rough sketch of your proposal that includes at the very least the following sections:

1. *Introduction and motivations.* Even once you have a good idea of whom your reviewers are going to be, it is a mistake to assume that they know everything you know. Motivate as broadly as you can given your intended audience, state your research question as clearly as possible (e.g.,

“This project aims to estimate the causal impact of having an Asian name on the chances of getting called for a job interview by conducting an audit study in Minneapolis–Saint Paul during the period January 1 to June 30, 2021” is much better than “This project aims to investigate the effect of discrimination against Asian-Americans on the labor market”), explain clearly how your work innovates relative to what has already been done, and then explain how your work fits with the funder’s objectives for this grant, which should have been stated clearly in the RfP, as well as with the funder’s mission statement, which you can usually find on the funder’s website. Some RfPs reference a specific literature when they discuss the goal of the grant. When that is the case, use that literature (as well as references that build on that literature) to motivate your proposal.

2. *Theoretical framework.* This goes by many names (e.g., theory of change), and depending on the grant you are applying for, it can be anything from a simple verbal conceptual model (in cases where the theory behind what you wish to study has already been explored, or in cases where you are writing for an audience that includes non-economists) to a hardcore theoretical model (in cases where the theory behind what you wish to study has not been explored or needs to be expanded *and* your audience consists of your peers). In either case, what should be crystal clear in your theoretical framework is what you wish to test using the funder’s grant money. Perhaps more than anywhere else in your grant proposal, this is where it helps to know who your reviewers are going to be, at least in terms of their disciplines, and to write for the right audience.
3. *Research.* I realize this is vague, but it is necessary for me to remain vague given the breadth of work done by economists. Here, whatever you plan to spend the grant money on must be discussed, whether that means collecting survey data, purchasing one or more data sets, conducting lab or lab-in-the-field experiments, hiring research assistants, what you will be doing in exchange for the salary you may be paying yourself, or the course you may be buying out of using grant funds, and if the funder allows the following expenses: buying software or equipment required to do the work required by the grant, traveling to conferences to discuss the work done under this grant, paying for publication fees for articles produced under this grant, and so on. Whatever methods the proposed research will use, here is where you have to discuss these in detail, clearly explaining why the methods you propose to use will lead to the best possible result for the funder’s money.
4. *Timeline.* Most CfPs will require you to submit a detailed timeline. This is a year-by-year (and, if possible, month-by-month) rundown of what will be done in the context of the grant for the duration of the life of the sponsored project. A good rule of thumb here is to be pessimistic regarding how long things will take; if you think it will take you one month to develop an experimental protocol, budget two months for it instead of falling short on your own expectations and then having to play catch-up for the remainder of the grant’s lifetime. Moreover, many funders now want the timeline to be embedded with a management plan discussing the people and tasks involved at every step.
5. *Other requirements.* Different funders will require sundry other things as part of the proposals they entertain. This can be as minor as a discussion of where you will place the funder’s logo on the materials you give your subjects as part of the treatment whose effects you plan on studying, and as serious as a commitment to taking part in a conference where you present your results to the funder and other grantees.
6. *References.* Any grant proposal worth its salt will appeal to the literature to explain and justify its existence. This means your proposal should include a standard list of references. It also might not hurt to cite the relevant work that the funder has funded in the past.
7. *Anticipated outputs.* What documents or data sets will you receiving this grant make possible? Though you may be driven by the relentless pursuit of peer-reviewed articles (and you should be so driven if you have yet to get tenure or equivalent in your job), funders generally care less about peer-reviewed research. What they do care about will vary from funder to funder, but generally they will want you to prepare some report that can be circulated to stakeholders (e.g., policy makers) or to the general public, to make your data available for others to conduct their

own empirical work, to make presentations at specially convened meetings of grantees or stakeholders, to write blog posts and op-eds on your research findings, and so on. Increasingly, funders will also want you to make the data collected under their aegis publicly available, so it helps to plan for that as well.

Whether it is an explicit part of the proposal itself or not, you will almost always have to submit a budget with your grant proposals. Indeed, it is exceedingly rare for a funder to give you a no-strings-attached lump sum of money to just go do research with. When preparing your budget for a grant, you should keep the following things in mind:

1. *It is fine to ask for the maximum allowed amount of money.* Sure, at the margin, between two proposals that differ only in how much funding they request, the one that is requesting less money is more likely to be funded. The problem with that reasoning, however, is twofold: *ceteris* is rarely ever *paribus*, and your proposal is unlikely to be the marginal proposal. So if a funder is willing to allow you to request up to \$250,000, do not feel compelled to cut your budget in order to improve your chances of getting the grant. It may be especially tempting to cut the salary you are paying yourself out of a grant if you think it will improve your chances of getting funded. Avoid doing so: the funder would much rather know that you are getting paid for the work you are doing under their grant (and thus have an incentive to actually do that work and give it your best effort) than see you work for free (and thus have little to no incentive to perform the work, or treat it as an afterthought).¹²
2. *Provide precise dollar amounts.* It is imprecise to say that your plane ticket from Minneapolis to Lima will be roughly \$1500, and it will make you look sloppy. It is much better to say that your MSP-ATL-LIM return trip on Delta Airlines' main-economy cabin departing August 15 and returning September 5 will cost \$1438.00, as that has the double advantage of (i) allowing you to plan more carefully and precisely, and (ii) signaling that you are taking this grant seriously. It is a small detail, but one that will speak volumes about the kind of attention you pay to details.
3. *Think of everything you will need.* As a graduate student, I was fortunate enough to get an NSF doctoral dissertation improvement grant to conduct a survey in rural Madagascar. So in addition to flights from the US to Madagascar, I would need to pay for a visas, vaccines and prophylaxes, bug repellent, respondent payouts, software for data analysis, and so on.
4. *Do not skimp on anything.* The same logic that applied to the totality of your grant also applies to individual categories: it is better to slightly overestimate how much you will need for those categories where you cannot find exact prices *ex ante* just in case things end up being more expensive than you had initially anticipated. Cost estimates (instead of exact costs) are acceptable in cases where you simply cannot find an exact cost, or where there is cost uncertainty.

Figure 5.1 shows a sample budget for the Peruvian lab-in-the-field component of the experimental work we discuss in Bellemare, Lee, and Just (2020). Notice the precise dates and prices for air travel. Notice transportation costs both from the US to Peru, and also transportation costs in country. Notice the different per diems for different cities in Peru.¹³ Notice how we factored in the cost of immunizations and prophylaxes given that we were traveling to areas with non-negligible health risks. Finally, notice how we only estimated costs for the things we could not be sure of, such as daily salaries for in-country employees.

5.6 Human Subjects

Many of the sponsored projects we work on as economists involve human subjects. This can be as simple as recruiting people for a survey with such innocuous questions as “What is your age?” to surveys with

more intrusive questions like “Do you have HIV?” to downright invasive surveys where blood samples are taken from subjects to measure the level of iron in their blood.

In all cases where a sponsored project involves human subjects—and for economists, that is almost always the case—you will have to seek the approval of a recognized institutional review board (IRB), usually the one at your institution.¹⁴ To make a long story short, ethical protocols surrounding research with human subjects emerged as a byproduct of the Nuremberg trials, which were held by Allied forces after World War II to prosecute not only Nazi leaders, but also Nazi scientists who had conducted abhorrent experiments with human subjects. The Nuremberg Code, which presents principles for ethical research with human subjects, was created so that such inhumane experiments with human subjects would never take place again.

| Sample Budget | | | |
|--|----------|-------|------------------|
| Item | Price | Units | Total |
| Travel | | | |
| Roundtrip Tickets MSP-LIM June 24 to July 4, 2015 | 1293.34 | 2 | 2586.68 |
| Roundtrip Ticket ITH-LIM June 24 to July 4, 2015 | 1436.84 | 1 | 1436.84 |
| Roundtrips LIM-CUZ | 368.93 | 3 | 1106.79 |
| Per Diem for Lima | 353.00 | 12 | 4236.00 |
| Per Diem for Cusco | 333.00 | 18 | 5994.00 |
| Immunizations and Prophylaxes | 200.00 | 3 | 600.00 |
| Summer Support (Bellemare; Includes Fringe) | 14707.00 | 1 | 14707.00 |
| Summer Support (Lee) | 5979.00 | 1 | 5979.00 |
| Graduate Student Fringe (25.5%, Exempt from Indirects) | 1525.00 | 1 | 1525.00 |
| Fieldwork | | | |
| Daily Salary (Field Coordinator) | 100.00 | 20 | 2000.00 |
| Daily Salary (Head Enumerator) | 70.00 | 20 | 1400.00 |
| Daily Salary (Two Enumerators, \$50 Each) | 100.00 | 20 | 2000.00 |
| Per Diem (Field Coordinator and Head Enumerator, \$83.30 Each) | 166.60 | 20 | 3332.00 |
| Per Diem (Two Enumerators, \$50 Each) | 100.00 | 20 | 2000.00 |
| Roundtrips LIM-CUZ (All Field Personnel) | 368.93 | 4 | 1475.72 |
| Internal Transportation (Head Enumerator) | 235.00 | 1 | 235.00 |
| Materials | 83.00 | 1 | 83.00 |
| Road Transportation to Selected Communities (Daily Cost) | 117.00 | 10 | 1170.00 |
| Experimental Payouts | | | |
| Average Payout Per Respondent | 20.00 | 100 | 2000.00 |
| Total Before Indirect | | | 53,867.03 |
| Indirect Costs | | | 13,608.93 |
| Total Requested | | | 67,475.96 |

Figure 5.1
Sample budget

Now, most economic research involving human subjects is a far cry from what the Nuremberg Code sought to prevent, but because economists often collect sensitive data from or experiment with human

subjects, the work that we do falls under the broad umbrella of human subjects research, and an economist interested in running a lab experiment to study how people behave in a public goods game is under the same restrictions as a team of medical doctors who are seeking to test the effectiveness of a new vaccine.

If you have never sought IRB approval before, you will first have to sit through about an afternoon's worth of training on how to approach human subjects—the history of human subjects research ethics, what counts as human subjects research, what you can and cannot do with human subjects, and how you should handle confidentiality issues. There are organizations that provide this training. The CITI program, for example,¹⁵ offers such training for researchers at subscriber institutions (universities, for the most part, but also private-sector firms that conduct research on human subjects) who do not offer their own training. Even though IRB certification is required to apply for most if not all grants involving human subjects, oftentimes we rush through this training because it is just one more thing we have to do in order to submit a grant proposal. It is worth paying attention to what that training entails, however, both because it makes us more responsible researchers and because it makes us more informed citizens.¹⁶

What does tend to get more onerous is filling out the various required forms necessary to get IRB approval for your research with human subjects. This will usually consist of a form provided to you by your institution's IRB that you have to fill out with your answers to various questions (e.g., number of subjects, potential risk to your subjects, whether subjects will include children or members of vulnerable categories), the consent form you will use for your human subjects to give their free and full assent to being included in your research, as well as any translation in the language(s) spoken by your subjects, the various survey instruments, research, and experimental protocols you will be using (or advanced drafts thereof), and so on.

Because the details of any IRB application tend to be specific to a given research project, there is not much to be offered in the way of guidance other than (i) get started as early as you can on getting IRB approval, as the process can take several weeks,¹⁷ and (ii) have patience with your institution's IRB staff, because they generally tend to deal with biomedical research projects instead of social science projects. For example, IRB approval was once withheld from me because the IRB staff deemed that the lab-in-the-field experiments I was planning to run were “gambling.” After I politely explained that lab games were common in economics, marketing, psychology, and other disciplines, and that payouts were necessary for truthful revelation, IRB approval was granted.

Notes

1. Moreover, in some departments, the graduate student funding model is closer to that used in the natural sciences, wherein a graduate student's stipend, tuition, and fees are funded by faculty members' grants, in which case students are admitted in the program to work on specific research projects and with specific faculty members.
2. See <https://carnegieclassifications.iu.edu/> as the reference for this discussion.
3. For many internal sources of funding, you are more likely to get funded if you can clearly explain that you plan on applying for external funding later on, and make a credible case for why you think you are likely to receive that external funding. In that sense, many internal sources of funding are intended as seed money, i.e., as funds to be leveraged to get more funds.
4. That said, bear in mind that the spread of those rates will be rather tight. In a 2014 survey of ICRs at the top 50 institutions in terms of funding received from the NIH (Datahound 2014), New York University had a whopping 69-percent indirect cost rate. The lowest ICR in that survey was the University of Florida's 49 percent. A colleague who teaches at a liberal arts college tells me the ICR at her institution is 39 percent, but that the ICR at another liberal arts college across town is much higher, and on par with the figures quoted earlier.
5. A colleague noted that this is generally independent of the size of the grant, and that managing a multimillion dollar grant is often no more costly than managing a \$150,000 grant. This means that you are often much better off getting one big grant than cobbling together the same funds from many different sources.
6. The same colleague mentioned that the costs of applying for a grant can be significantly reduced if you are sub-awardee on someone else's grant proposal.
7. A colleague also suggested a ratcheting-up strategy, wherein you get a small grants to test out an idea and establish a proof of concept, and if the idea works, scale it up by going for bigger grants.
8. A colleague who teaches at an R2 notes that at R1s, researchers can focus on the research design and have someone else do the rest, but in her case, she only gets minor help with budget-related stuff, which is a huge barrier to her getting external funding.

9. "Because it's there."
10. It is common for people on nine-month appointments to supplement their nine-month salary with one or two months of grant-funded salary.
11. At liberal arts colleges, buying out of teaching is often strongly discouraged if not impossible.
12. Very often, the people in a foundation who will read your budget are not the same as the people who will read your proposal itself.
13. You can find US government-approved per diems for most big cities in the US and in the world online.
14. In cases where researchers from multiple institutions collaborate, it is generally possible to seek approval from only one institution's IRB, and to make that IRB the IRB of record.
15. See www.citiprogram.org.
16. Lest you think of having to get approval for research with human subjects as an antiquated procedure, as I write these lines in October 2020, the American media has just revealed to the public that the US government has allegedly been performing forced hysterectomies on migrant women at Immigration and Customs Enforcement detention facilities (Treisman 2020), and worse stories involving cruel experiments with human subjects have been percolating from North Korea for decades.
17. It is sometimes possible to request an expedited review (instead of a full review) if the risk to your subjects is low. This is often the case with economics research, and so it is well worth asking for an expedited review whenever possible.

Doing Service

“Service” is the broad term whereby economics and other disciplines refer to activities that are aimed at providing the public goods necessary for researchers to be able to do research. Service activities can range from the local (e.g., serving on the undergraduate committee in your department) to the regional (e.g., organizing a session at the annual meeting of the Southern Economic Association), and from the national (e.g., serving on the board of directors of the Canadian Economics Association) to the international (e.g., serving as treasurer of the European Economic Association). Even in a career outside of academia, opportunities for service will abound if you decide to remain involved in research.

If you are planning on a career in academia, it is best to realize sooner rather than later that in addition to doing good research and teaching well, you will eventually have to do your share of service if you wish to get merit raises and promotions.¹ Modern universities are in many ways different from other hierarchies (in the Williamson 1975 sense of the word), but one way in which they clearly differ is faculty governance. At most of the world’s universities, a group of employees who are not professional managers but who instead have emerged from faculty ranks govern the hierarchy. Thus, whereas modern run-of-the-mill widget-making firms often hire someone with an MBA to manage the firm instead of promoting a widget-maker to the rank of manager, universities tend to be run by academics, from the president (or chief executive officer) and the provost (or chief academic officer) on down to department chairs and program directors. So if you hope to have a fruitful academic career, it is best to plan for doing service.

The bad news is that, as its name indicates, service tends to be either unpaid work, or work where the pay falls well short of marginal productivity of labor. The good news is that service comes in many shapes and colors, which means you typically can choose the kind of service that is right for you.

6.1 How Much and What Kind of Service to Do?

As I mentioned above, some departments, schools, colleges, and institutions² will deliberately try to protect their junior faculty’s time by having junior faculty do little to no service. Whether this is a good thing or a bad thing depends entirely on the culture of the institution. I have closely observed institutions where the leadership was keen on saying to whoever would listen that they were protecting their junior faculty’s research time by excusing them from service commitments—a statement which, while strictly true, also concealed a means of asserting existing power structures by depriving junior faculty of a voice when it came to faculty governance. At other institutions, people in leadership positions will say the same thing and mean it, but they will also let junior faculty do as much service as they feel comfortable with.

In some other departments, junior faculty will be asked to do their fair share of service. This is especially true in smaller departments (e.g., departments with fewer than 12 to 15 full-time tenure-track faculty members), where the fixed costs of running the department are borne by fewer individuals. In departments where junior faculty are asked to do their fair share, the best-case scenario is one where this is explicitly recognized come tenure time, and where standards of excellence in teaching and research are thus adjusted as a result. Unfortunately, the opposite scenario, where the senior faculty are completely checked out and expect junior faculty to do all the heavy lifting, is not uncommon.

How much service should you do, if you are given the occasion to do so? When starting out on the tenure track, you should do no more service than what is expected of you, and when considering the marginal decision to take on one more piece of service, you should really consider a handful of factors. The first factor is that, like teaching, no amount of excellence in service can substitute for a research agenda that falls below your institution’s threshold for what constitutes “good enough for tenure” when it comes to *both* research and teaching. The second factor is whether a particular piece of service gives you