Embedding Field Experiments to Identify "Invisible People" when Conducting Longitudinal Research in Poor, Urban Settings

Nancy Hite-Rubin

Field experiments are an invaluable tool for enhancing research involving repeated observations over time. This paper identifies three formidable methodological challenges that are particularly pertinent for research involving longitudinal data, within urban areas that are both data-poor and socially complex. First, locating and identifying specific individuals or subjects within the sample frame, in a manner that is balanced and effective, is extremely challenging. One must also negotiate access into informal settlements, and build rapport with the people who live there and who must ultimately "comply" with interventions, interviews and/or data collection. The final challenge concerns the utilization of third parties to advance longitudinal studies, and the potential ethical, logistical and inferential concerns that this poses. Drawing upon my own experience, I illustrate how embedding a field experiment helped reduce bias in my qualitative field research, generated a valid sample frame and facilitated entry into the geographically diffuse, poorly mapped peri-urban slums of Manila, Philippines. This methodological innovation was essential for identifying and confirming causal linkages related to my research on the impact of financial market formalization on the retreat of political clientelism. The method advocated herein, when applied properly, can ameliorate biases and prevent false conclusions in a broad range of inferential research that involves numerous field observations over time.

Word Count: 9,178 and 3 ½ page Figures

Intro

Nearly half of the people in the developing world live in substandard housing within poor, urban settlements[i]. These numbers are expected to rise with rapid urbanization and increasing income inequality. In response, there has been a marked shift in focus among political science researchers towards informal settlements in the developing world. These research projects are often longitudinal in nature, involving the systematic collection of information on the same subjects over time, and thus require direct observation and in-depth interviews in the field at a number of different time points. To understand the effects of land titling on political behavior, the circumstances under which clientelism persists over time in low-income communities, the ways in which ethnic cleavages influence public goods provision, or when governments

politicize informal markets and mobilize informal street vendors (just to mention a few cases),[ii] one must draw upon rigorous and socially appropriate field methods when compiling longitudinal data in order to avoid biased sampling frames and false conclusions.

Studies based on longitudinal data are particularly challenging in informal and urban settings, for several reasons. Firstly, the phenomena being studied are rarely contained within a small and convenient geographic space[iii]. Rather than drawing conclusions from a single neighborhood, studies on ethnic politics, economic modernization, clientelism or urban governance (to name a few) necessitate building a sample frame from a subject population that is geographically diffuse. Second, longitudinal studies – especially those based upon experimental interventions -- often require one to locate and identify specific individuals, thus ruling out convenience sampling strategies[iv]. Finding unique persons for repeat visits over a specific time frame, within a large area, is challenging in any research setting. This becomes exponentially more challenging in heavily populated, informal settlements[v] that are often poor, politically unstable and neglected by the state. Finally, in order to observe, measure and ultimately draw inferences regarding the complex social phenomena occurring within these informal urban spaces, the researcher must negotiate access and build trust within the communities to be studied.

These considerable challenges necessitate strategies for navigating and delineating these complex urban spaces where jurisdictions are ill-defined and formal records are scarce, as well as adaptive techniques for locating, identifying and building rapport with specific people who are often socially marginalized and live in localities "invisible" to the state. Indeed, the spatial breadth and observational depth that are both required in longitudinal studies of urban politics present researchers with serious trade-offs.

In this paper, I show how embedding a separate field experiment within a longitudinal study can greatly enhance the process of causal identification and improve contextual understanding when researching comparative political phenomena within complex urban spaces. Specifically, my research demonstrates how utilizing the experimental method to generate my sample frame allowed me to test the political implications of modernizing financial practices on political clientelism within slum communities in Manila, Philippines.

The integration of a field experimental design into such longitudinal research has the potential to ameliorate sampling bias, and facilitate access with difficult-to-reach subject

populations. In my own case, the addition of the field experiment helped me to overcome the obstacles discussed above: identifying the subject population and sample frame, negotiating access, and avoiding coercion and bias that may arise from third-party engagement. The rest of the paper will examine these methodological issues, and ways in which the embedded field experiment enabled me to better deal with them. The first problem explored is how to identify specific individuals within the experimental sample frame in a complex urban setting where administrative boundaries are ambiguous, and subject participants highly mobile. Second, I build off of both my personal experience to provide pointers on how to negotiate access and build rapport with people in these communities. The third methodological challenge concerns the relative tradeoffs of engaging with third parties, such as local experts, partner organizations or governments, when contacting specific individuals from a longitudinal dataset.

In my case, this was accomplished in the form of a mailing experiment, in which packages were mailed to a randomized sub-sample of my larger longitudinal dataset.[vi] This methodological innovation is particularly useful for urban research contexts in developing countries. Given the fluidity of administrative boundaries, the lack of records or maps and the logistical challenges of transportation, it is not usually feasible for a researcher to simply show up at multiple representative research sites and expect to find particular subjects. In this regard, the mailing experiment serves both as a tool for assessing the geography of the sample frame and a starting point for entering communities. Even when the success rate for mail delivery is low, this handful of initial contacts provides an invaluable entry point for "learning" how to navigate these complex social environments. Furthermore, building a sample frame from a randomized draw of the longitudinal database reduces observational biases. The tendency to cluster observations around a convenient subsample is especially acute with projects in informal urban areas, due to the scarcity of data and social complexity. An embedded experiment such as the one just described compels the researcher to access less viable observations, producing a more reliable and representative sample frame. Furthermore, the process of building a sampling from the larger longitudinal database, and executing the additional experiment provides researchers with a new vantage point and information that they would be unlikely to collect. This is particularly valuable in data scarce environments, such as informal urban slums wherein researchers must triangulate from multiple, incomplete and incongruent sources of information. The additional "layer", from embedding a field experiment into the larger study, enriches the

original study while filling in gaps.

This approach of embedding a field experiment within a larger longitudinal study is applicable to any research study that requires re-contacting the same subjects over time. My research example happens to involve a longitudinal database from an independent experimental study; known as an "ancillary experiment".[vii] However, this tool may also be fruitfully applied to longitudinal research that is not based on any experimental intervention. Adding a contact-focused experiment[viii] can help to structure the sample frame and provides new avenues for gaining information for non-experimental studies that involve a numerous specific subjects that require repeat contact. In other work, I describe how I utilized a pre-existing longitudinal database from an experiment on money and credit to test the political implications of modernizing financial practices in slum communities in the Philippines. Dean Karlan and Jonathan Zinman's experiment on expanding access to formal banking services[ix] provided a unique opportunity for me to study how formalizing financial practices influences political clientelism and local governance via a randomized controlled trial (RCT). Yet, embedding an additional field experiment could also be fruitful even if the initial longitudinal study on financial formalization had not been purposefully randomized.[x]

The focus of this paper is to illustrate how embedding the mailing experiment within my broader project helped to ameliorate the logistical and inferential challenges of conducting research on the political implications of economic modernization. More generally, my hope is that this experience will serve as an instructive example for other researchers in the field struggling with the same methodological challenges discussed here. The subject of my study is the urban poor of the greater Metro Manila area, who are essentially invisible to the state, and thus essentially "caught in the crosshairs" of market formalization. The relevant population is thus extremely vast, spanning an urban area of roughly 20 million inhabitants, 4 provinces, 27 municipalities and roughly 300 unique localities. The embedded mail experiment served as an essential bridge between the quantitative research design and the extensive qualitative fieldwork. This strategy arguably enables researchers to harness the strengths of both quantitative and qualitative research traditions. In meeting the strict criteria of RCT studies[xi], field experiments can generate reliable inferences.[xii] Yet, qualitative methods are also necessary in order to draw on complex social phenomena that are highly context-dependent. With the mail experiment, I

was able to utilize an experimental design to structure my qualitative fieldwork and thus arrive at more relevant, nuanced and robust claims.

The remainder of the paper is organized around three methodological challenges (sample frame, access and involving third parties); which are particularly acute for longitudinal studies requiring specific individuals or places in complex urban environments within the developing world.

Constructing a Sample Frame of "Invisible" People

In order to test assumptions and ultimately draw new inferences about a subject population, social science researchers are tasked to identify, make contact with and gather systematic information from a representative and sufficiently large sample (known as the sample frame). From the favelas of Brazil to the wards of Bangladesh, cells of Uganda and barangays of the Philippines, finding specific individuals within poor localities can be extremely challenging. This is because research in informal, urban settings requires access to populations that do not live within clearly demarcated administrative borders, and there is little to no documentation by formal state institutions. Such individuals and populations are often socially marginalized, and wary of the intentions of outsiders and those who may be connected to agencies of social control. Here, I focus on how building an additional experiment into the research design helps to overcome the unique challenges of constructing a sample frame from populations that are essentially "invisible" to the state,

The exact nature of the challenge involved is contingent upon the level of analysis of the research. Longitudinal studies might involve repeated or ongoing analysis at the level of specific individuals or location. To uncover phenomena in urban politics, we often need to study how changing markets and political circumstances affect the most marginalized people through direct observation at the local level. Such research on the political economy and governance of the informal sector[xiii] will often demand repeated access to specific places and people. My ancillary experimental analysis on the political implications of formalizing financial practices focused primarily at the individual level: people who are directly affected (or not) by the phenomenon of financial modernization. To understand this process, I also needed to observe and interpret information about the local communities where people lived, including local political culture and informal financial markets. Yet, the critical level of analysis occurred at the

same individual level as Karlan and Zinman's banking intervention. Therefore, I constructed my sample frame by randomly sampling 200 individuals from the larger longitudinal database (the 1978 banking project participants), while stratifying on municipality to insure a geographic balance among those individual-level observations.[xiv]

Longitudinal studies that focus on localities (such as municipality or neighborhood) also tend to require repeat collection and verification of the representative individual-level information within those locations[xv]. Where people are subject to a random intervention (housing lottery, banking experiment, policy intervention, etc.), or observational phenomena (social movements, policy intervention, violence, historical event, etc.), it is often necessary to re-contact specific individuals. Banerjee et al. (2011)'s[xvi] field experiment on information dissemination at Delhi polling centers provides an example of how to build a sample frame to re-contact subjects of a longitudinal database. The first stage of their research project involved the distribution of newspapers containing political information to informal settlements located next to the "treated" polling stations. This was carried out by an NGO that documented their process of canvassing communities in a baseline dataset. The researchers then needed to re-contact a representative sample several times to verify the intervention and collect follow-up data. This longitudinal study did not include an embedded contact experiment such as the methodological solution proposed in this article; instead, with the vast financial and logistical resources at hand, they actually surveyed all households in adjacent settlements (n=3898). Understandably, not all field researchers have such impressive resources at their disposal;[xvii] when the sample frame is diffusely spread throughout a large geographic area (such as a metropolitan region), it is not feasible to canvas the entire population. However, a contact experiment that samples carefully from this initial database could be fruitfully applied with a modest budget. Rather than collecting additional empirical data on the entire community, an embedded contact experiment could be used to help a researcher insert herself into the community and conduct in-depth, interpretive work. The "thick description" of randomly selected cases (in affected vs. unaffected settlements) would help unpack some of the complex social processes underlying the Banerjee et al. intervention.

As in other types of applied research, the quality of data collected from individual or household surveys depends critically on the quality of the sampling frame from which the survey is selected. Certainly, if every national statistics office created and maintained a master sampling

frame of enumeration areas that matched politically relevant boundaries and were linked to a detailed census, our work would be a lot easier. However, informal settlements, by their very definition, are not fully integrated into formal institutions of the state. People living in informal settlements are residing in neighborhoods that are often unplanned, and/or they have no formal legal claim to the land that they are living on. For this reason, it is extremely unlikely that a researcher will get hold of a zip file with exact population estimates, detailed demographic information, or other quantitative data necessary for his/her sample frame. In short, studies that require follow-up with specific individuals within informal settlements are extraordinarily difficult given that these people are not easily identified by public records, represent a vulnerable group of human subjects calling for ethical and procedural safeguards, and are often transient.

When I began my dissertation work on the impact of formalizing financial services within slum communities of Manila, Philippines in 2007, I faced serious challenges. My longitudinal database consisted only of the initial bank application records of the 1978 experiment participants, who had provided crude address information to nine bank branches in the greater metro region. These records were taken by bank workers and entered into software, without any intention of utilizing the information to physically locate the applicants. Given that the scarcity of official data records and the complexity of this large, urban area the task of interviewing a representative sample of 200 participants from the initial banking experiment seemed impossible.

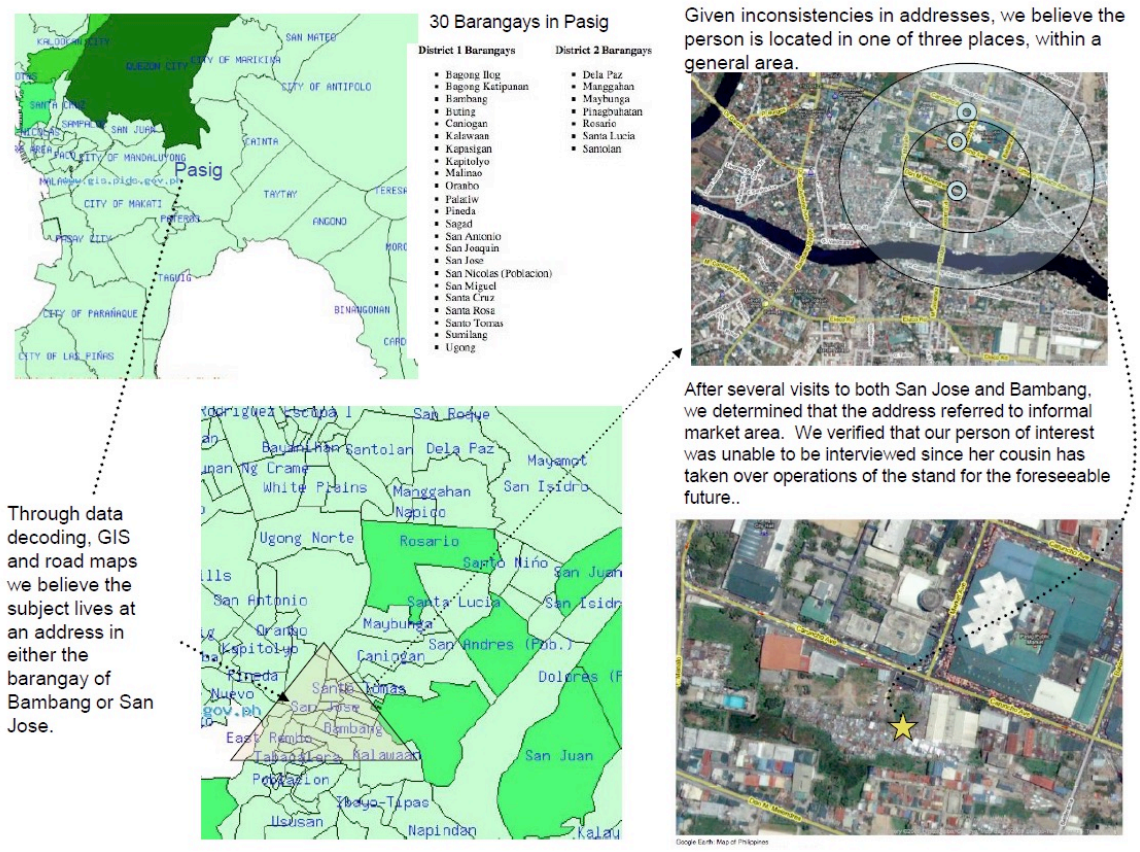
During my initial trip I relied on snowball sampling, which was helpful for the initial exploratory research. My mother played a key role in contacting our local community college librarian, who happens to be Filipino. She then put me in contact with a cousin who would drive me around town and introduce me to his relatives in various informal communities. In this way, I began to build a convenient network of informants; still, it was certainly not representative of the population I sought to study. This experience enabled me to meet local elites, such as "barangay captains" and people with a steady source of income. Yet, I ultimately wanted to meet the people who were "hidden" – and found that most of my contacts were keen to let them stay that way. Moreover, in researching the effects of the banking expansion program, I could not just hope to randomly run into informants who were either "treated" or "untreated." The research had to include reconnecting with people from the original banking study (longitudinal database),

without affiliating myself with the initial banking intervention and placing them in context with the broader population of informal settlement dwellers. After this first round of fieldwork, I returned to New Haven with a clear sense that I needed a systematic and cost-effective way to survey my sub-sample of 200 participants – hence, my idea for the mail experiment.

Embedded Mail Experiment

The idea of embedding another experiment into my longitudinal study occurred to me after my first round of qualitative fieldwork in Manila during the winter of 2007-08. At this time, I was faced with the overwhelming challenge of locating and verifying individuals from the longitudinal database (n=1978), all of whom lived in poorly planned communities within a 100-kilometer area. In addition to the logistical nightmare of tracking down addresses, another concern for the urban politics researcher is how to ethically recruit and interview specific individuals who are both economically vulnerable and politically marginalized. I needed to have a reason to enter the informal settlements that did not involve collaborating with local elites. A typical problem associated with a snowball sampling method is that local elites will cherry-pick individuals to be interviewed. When interviewees are chosen through convenience sampling or local intermediaries, the interviews run the risk of providing inaccurate and biased accounts at best, and coerced accounts at worst. In such circumstances, embedding another experiment can serve as an alternative that will enable researchers to avoid bias within the sample frame through draws that are independently and identically distributed. To this end, I devised a secondary mail experiment that proved to greatly facilitate entry into the informal settlements, provide new information, and help verify the integrity of my primary longitudinal database over the next three years.

Figure 1: Triangulating Maps to Locate Experimental Participants



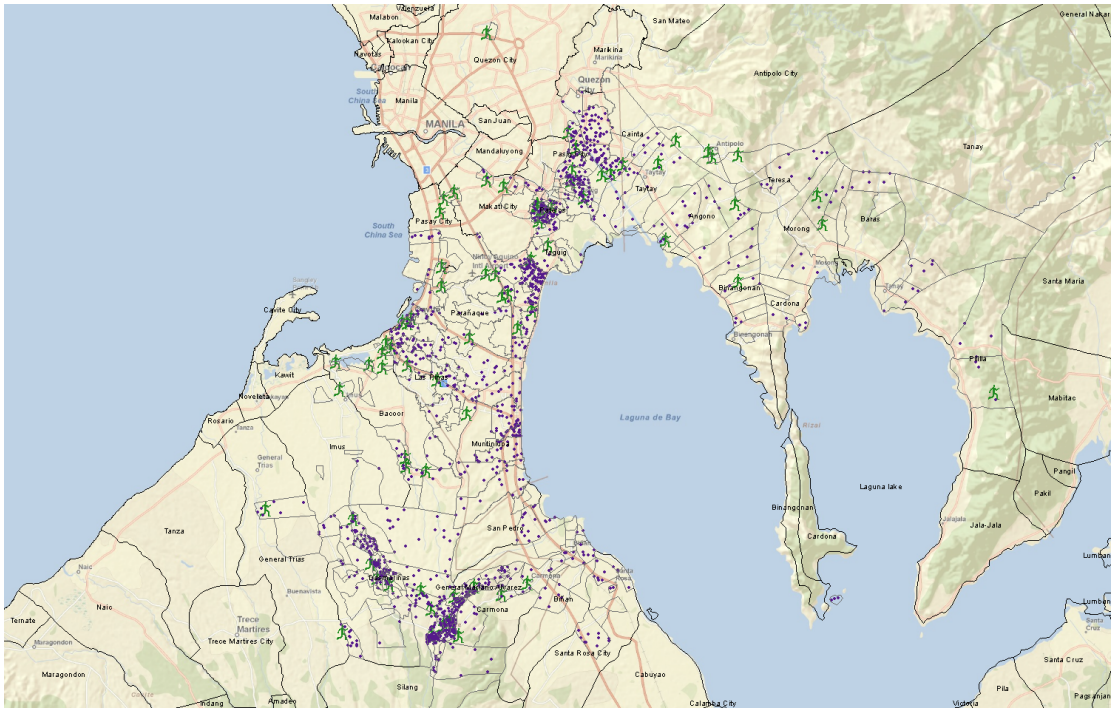
The first step was to organize a database of individual addresses from the bank records. This was accomplished using text analysis algorithms in STATA. At first, I was only able to effectively disaggregate addresses at the level of province and municipality. The smallest unit of governance in the Philippines is the barangay, which is at the village level. There are over 30,000 barangays in the Philippines, and the administrative boundaries are uncertain even to those who reside within them. At the time I began this project, there were no available GIS shape files for barangays, nor was it feasible to layer street maps of the greater metro area into Arc GIS[xviii]. There is no known census of the barangays, and their names and locations were inconsistent even across government-furnished maps. What I did have was a collection of road maps (designed for driving directions), Google Earth (with limited resolution; shown above), Wikipedia and similar online resources and satellite maps from the Philippine Institute for Development Studies (shown above). My evening homework was a process of triangulating across these limited data sources to prepare for day trips finding people slowly through trial and error.

The mail packages proved valuable in helping me to learn how to navigate Manila's

highly complex urban periphery and ultimately build my sample frame. As more packages began to arrive, recipients would send me texts as suggested in the package introduction letter. I then followed up with these texts to see if they were willing to have me visit in person. This type of correspondence proved to have a high success rate and helped to facilitate the trial-and-error approach illustrated in Figure 1, above. Over the course of two years, over sixty people received the package and used the introduction letter and raffle ticket instructions to text me. Although this initial contact sped up the process, it was also not completely unfortunate that many of the packages were not received and texts not sent. Going into communities and looking for a specific person (with whom I had yet to converse) provided me a great deal of insight into local conditions. I had several serendipitous exchanges, and even conducted impromptu interviews with residents who were curious about my comings and goings and wished to engage with me. Such encounters helped me to situate my sample frame within the broader context of the barangay communities. Over time, I became convinced that the sample from Karlan and Zinman's experiment was sufficiently representative of the majority of these residents. Regardless of whether I met someone through trial and error, my mail experiment tool, or happenstance, each additional success in identifying someone from my sample frame improved my efficiency at finding future people.

Over the course of three years spent tracking the 250 packages, for which only 60 had contacted me in advance, I became an expert in navigating these neighborhoods. In the process, I was able to fill in information that the state was lacking. Every package provided not just information about the specific recipient, but clues for dozens of others in the database. At the outset of the fieldwork it would take as many as 3-5 solid field days to track down and meet one survey participant. Over the course of this project, as my database became clear and administrative boundaries verified, I could successfully locate as many as 5 people in a single day! Indeed, the mail experiment provided me with a tool to develop a special set of skills that enabled me to find "invisible" people while becoming an expert on the political geography of Manila's outskirts.

Figure 2: Tracing Mail Packages and Experimental Subjects



Note: This figure is an ARC GIS Generated Dot plot of verified Study Participants (purple dots) and mail packages (green symbol). The map represents the spatial and administrative clustering of individuals in the downstream experimental study. The people in the study reside in four provinces: Metro Manila, Cavite, Laguna and Rizal. The number of verified participants of the longitudinal banking study is (n= 1,576) and verified mail packages (n= 60). Those coded in the map are from 273 unique Barangays, 29 municipalities and 4 provinces.

Negotiating Access and Trust

The researcher's ability to negotiate access and build rapport within the community is profoundly important to the quality of the research, as well as the safety and wellbeing of herself and the people with whom she comes into contact. In this section, I illustrate how embedding a contact experiment into the larger banking study can be employed to facilitate access and trust. First, it is important to research the local context and customs *before* you make initial contact through the embedded experimental intervention. Second, you should develop a consistent and

thoughtful protocol for how you will present your research, as well as your own physical presentation. Finally, the embedded contact experiment should be designed to have as little impact as possible on the community and enable more direct engagement with the subject group. Here, my mailing experiment was indispensable not only for the methodological purposes outlined earlier, but in dealing with these more interpersonal concerns. In this section I illustrate how I attended to these points, and ultimately "learned" to enter informal communities and effectively recruit interview subjects without causing alarm or being intrusive. These considerations are especially important in longitudinal studies, where repeat access to particular communities and persons is a necessity.

An initial concern when initiating the mail experiment was that sending packages to would-be interview contexts could be alarming or alert suspicion. The Philippine diaspora is very large, and nearly everyone in the Philippines has a relative who sends home remittances, packages and greetings. In consultation with initial contacts, I "practiced" with a few packages and met with focus groups on how best to have this activity "blend in" as business-as-usual within the communities.

Packages were mailed over the course of one year in multiple waves, so that they would not alert suspicion at Manila's central mail agency. Each package contained an introductory letter detailing the nature of the ethnographic interviews, a cross-stitch kit, and instructions for how to enter a lottery for a new microwave. The cross-stitch gift served two purposes. First, it was a nominally valuable gift that would provide package bulk. More importantly, cross-stitching is an extremely popular pastime among women living in informal settlements in this area. The introduction letter simply stated (in accordance with Internal Review Board approval[xix]) that I am a PhD student at Yale University interested in meeting the intended recipient to learn about his/her experiences and impressions as a business owner within their local community. It was also critical that the introduction letter clearly indicate that participation would be completely voluntary.[xx] The microwave lottery card included my Philippines cell phone number, and instructed the recipient to text their name as indicated on the package for a 1/300 chance of winning a new microwave.[xxi] The idea here was that I would use their texts to verify if they had received the package, and then solicit a face-to-face interview.

Given the poor quality of addresses to begin with, limitations in public infrastructure and

delivery services, and prevalence of mail theft, most of the packages were never accounted for. Regardless of whether or not the package made it to the intended recipient, the activity provided an access point for entering very poor communities. Gifting additional cross-stitch kits to key informants and passerby alike helped to build rapport with people within the communities. Moreover, in instances where people did receive the package, they were very welcoming of requests to interview them. Over the course of three years, I was able to verify the location of 1369 people (T 1110, C 259) of the longitudinal database (n= 1978), a near-perfect balance to treatment assignment.

The mail experiment proved to be a valuable tool for making initial contact with many of my interview subjects. However, depending upon social customs and varying security considerations, this unique technique may be entirely inappropriate or result in ethical dilemmas. First, it was very important that I consulted with Filipinos who live in the communities being studied to determine whether the package design, introduction letter, gift, and raffle ticket could cause discomfort or even harm. I received assurances that this would be well received by people. One ethical concern that I grappled with was how to structure the IRB-approved letter of introduction in such a way that it would not cause distress to people who were semi-literate. Fortunately, the Yale IRB was amicable to my concern and allowed me to present a simplified letter of introduction in English that also included a translation in the local dialect of Tagalog. It should also be noted that compared to other populations with a similar degree of economic and social marginalization, the literacy rate of Filipinos is outstanding.

Field researchers often face such dilemmas when conducting research in difficult settings such as informal urban communities. It is important that your method of contact be tailored specifically to the local context. All the components of my package were carefully designed to be inconspicuous in my research setting. Yet, it was also important not to arouse suspicion or lead to social conflict within the communities studied. Again, this project was not only a means of making contact but also a project in its own right, aimed at testing whether informational priming (in the form of stickers placed on the package) would deter mail theft. But of course, I did not go into the communities to inquire about theft!

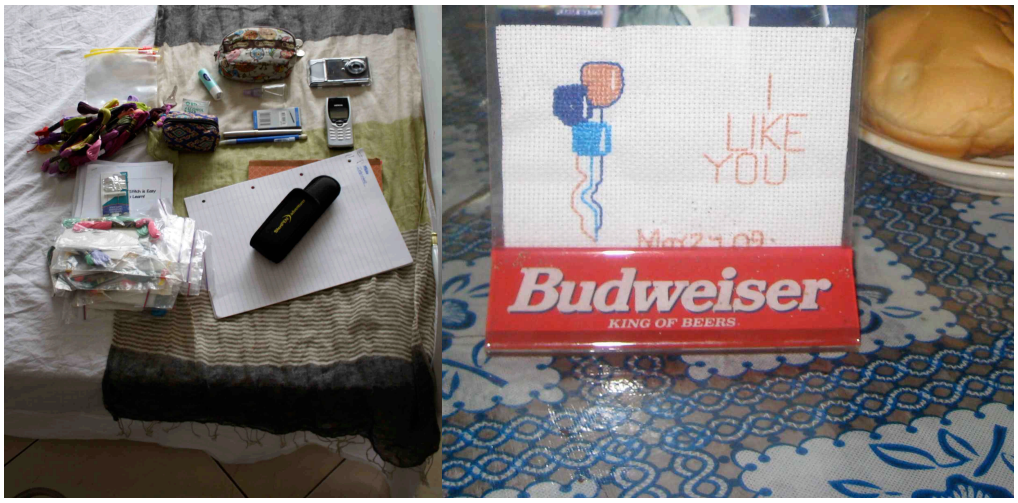
I was aware that this was a potentially sensitive matter, and that an intended recipient could be alarmed or distraught if they believed their package had been stolen. Furthermore, if

one were to go around as an outsider questioning local officials or neighbors about potential theft, it could result in serious conflict and confusion. My advice for anyone who wishes to adapt this research tool is to be extremely careful not to create controversy when attempting to track your packages. Instead, enter the community seeking to meet the person to whom you sent the cross-stitch gift, with a sense of humor regarding the question of whether the package arrived. It is better to tell people that the fault falls completely on your side, since you didn't have the correct address information to begin with. Stress that the purpose of the package was to provide an introduction and help you to meet the specific person for your research study. If there is any concern about the package's whereabouts, always reassure people that the error is yours. For instance, one of the other outcome variables that I initially sought to test was whether the postal carrier had disrupted the package or solicited a bribe upon arrival. This is absolutely not something that you can ask at the point of initial contact. Sometimes, after longer conversations and when an interview subject feels comfortable, they would tell me about such encounters. I could not use this as systematic quantitative evidence for the mail experiment, but it enriched my qualitative research on local politics and the complex lives of informal business people in these communities.

Your manner of dress and how you enter the community will determine people's impression, and ultimately their willingness to engage with you. Your physical presentation will vary depending on subject population, climate, and religious and cultural considerations, as well as personal security needs. During my many trips into barangays in the Philippines I was always consistent in my decorum so as to be unassuming. I wore loose-fitting cotton t-shirts, with khaki shorts or jean capris, and athletic sandals with a slight platform (to help prevent contracting Dengue fever from stagnant water). I kept copies of my identification documents and money in various pockets and a concealed money belt. Additionally, I had a modest bag that contained notebooks, maps, pens, IRB consent materials, meal replacement bars, water and additional cross-stitch kits to give as gifts. I did not come into these communities with any sense of importance or display of wealth. There were various times that people mistook me for a missionary or humanitarian volunteer, which I believe helped ensure my safety and reduce the chance that my presence was disruptive. My aim was always to be inconspicuous. I did not have a driver waiting in a black SUV. To get to locations, I took whatever local form of transportation was available (tricycles, peddled rickshaw, on foot). All of these efforts helped to reduce the

likelihood that my presence would be co-opted by local elites and/or be intrusive or coercive to the people I ultimately wanted to study.

Figure 3: Images from the Field.



Left: Essential items carried into the field. Right: A completed cross-stitch project, received by a package recipient, displayed on the dining table of local eatery.

The degree to which personally identifying or systematic information is requested should be weighed carefully in terms of the potential sensitivity of the research topic. I presented myself as a student working towards my doctoral degree in the United States, and also affiliated with a local development NGO. The purpose of my interview was to learn about people's livelihood activities and experiences as a "business person" in the local community, I told them that I was also interested in knowing more about their engagement in politics and their barangay community. I did not ask people about illegal activities, violence or to identify anyone specifically. At the same time, answering questions about their economic livelihood and dealings in local commerce made people more open to spontaneously discussing the social conflict and political issues to which those activities gave rise. As a rule of thumb, the more sensitive the nature of your research questions, the more safeguards for anonymity you should have. Once you have reflected on the logistical and ethical trade-offs involved, and written a detailed protocol that balances your research needs with the potential risk of harm to local communities, you are far more likely to be deserving of people's trust and gain access to the information that you seek.

Depending on what seems appropriate and natural in the context being studied, gifting

small tokens can go a long way toward facilitating your initial introduction, assuaging uneasiness over your presence, and showing appreciation for the time and effort volunteered by people who allow you to enter their space and converse with them. For my fieldwork in the Philippines, the same cross-stitch kits mailed in my experiment served this purpose beautifully. I made over 500 additional kits individually wrapped in sandwich bags that included a pattern, friendly instruction book, needle, cloth, and three different colors of tapestry yarn. As illustrated in Figure 3 above, I was always prepared with several kits to give to adults and brightly colored threads to give to children (for friendship bracelets). Since cross-stitching is a particularly popular pastime among Filipino women, who comprise 80% of the initial banking experiment, it seemed like an appropriate token. The kits themselves cost less than a dollar to make when purchased in bulk. The key is to find something with nominal monetary value, so that it does not appear that you are "buying" access. Given that I made the cross-stich kits myself, and most households had at least one person interested in this pastime, it served to humanize me.

Third Parties in the Field- Avoiding Ethical Dilemmas and Threats to Inference

Longitudinal studies on politically relevant phenomena in informal urban contexts often collaborate with third parties in their research design, interventions and/or data collection. This can include collaboration across agencies (academic institutions, NGOs, governments). Sometimes a local expert or survey professional is enlisted to help with logistical challenges and provide local knowledge and guidance. Yet, third parties and assistants will bring their own unique biases and expectations, which may result in potential ethical violations and considerable damage to the integrity of the research. Mailing cross-stich kits to a randomized subsample of my longitudinal database gave me a pretext to enter communities without having to enlist as much third-party support. With the techniques described in the prior section, I was able to maintain a relatively small "footprint," and thus reach my target population in a way that would not bias the interview or cause harm[xxii]. Even so, some third party collaboration was still necessary.

In this section, I provide reflections and pointers on enlisting three kinds of third parties. First, I caution against utilizing local political elites or representatives of state institutions when interviewing "hidden" populations. The informal businesspeople I studied in the Philippines live

under precarious conditions, and their socio-economic marginalization can be traced to the role of local elites in reinforcing this "poverty trap" in order to achieve political aims. For this reason, enlisting individuals in the informal settlements, who are on the winning end of the system can problematic. Second, I discuss how developing a deep friendship with someone who herself is an informal businessperson and has lived in informal settlements proved invaluable in my case. Finally, I briefly discuss some concerns about hiring development professionals to aid in following up on longitudinal data. The key here is to ensure that the management and financial components of the project are in properly balanced with the need for credible and ethical research.

I learned very early in my field research not to involve local elites or local officials in my search for specific interview participants. The reason is that people who live in sub-par conditions in informal settlements usually have tenuous relations with state institutions, and have been subject to coercion or mistreatment by local elites. It is tempting to go to the barangay center, give a local official or community volunteer a list of specific people whom you wish to interview, and have them help you locate these people. Given the intensity of local civic engagement, as well as local oversight and policing in the communities, this official or volunteer can locate and recruit more people in a matter of minutes than you would hope to accomplish in a week. Yet, local experts and third parties will bring their own agenda, which may not be in line with the best interests of your interviewees.

Despite the pitfalls one could encounter when enlisting a third party to aid in field research, for many projects this simply cannot be avoided; learning through trial and error is inevitable. Furthermore, working with the right person who is trustworthy, familiar and compassionate about the population you seek to study can prove essential. Bringing a trusted intermediary to assist in fieldwork may at times be vital to security. There are several precautions that interviewers should take when entering economically and political marginalized spaces. As an outsider, you may be the subject of suspicion or the target of an opportunistic violation. A general note of caution to someone attempting to navigate fieldwork in such an area is not to travel alone to completely unknown localities. During my fieldwork in economically disadvantaged spaces in Northern Mexico, Rio de Janiero, southern India and Palestine, I managed to find someone trustworthy to accompany me in the field.

For my research in the Philippines, I was fortunate enough to develop a deep friendship with someone who herself is an informal businessperson and has lived in informal settlements, which proved invaluable. I met Yaying Yu during my first visit to the field and have worked with her ever since. When she accompanies me to informal settlements, wherein she herself does not personally know anyone, her socioeconomic and cultural proximity[xxiii] puts everyone at ease. Yaying is a far more accurate barometer of danger, since she is more familiar with local threats and customs. There were certainly times when she indicated to me that it was "time to get out of here," and I followed her lead without question. Then, there were other moments when a situation seemed tense, but Yaying assured me that in fact everything was perfectly fine.

Third parties may be invaluable in helping to locate interview participants, provide information on local priorities and context, or assist in recruitment and data collection. For large-scale studies with multiple partners such as governments and funding agencies, the utilization of third parties may not even be negotiable. When hiring professionals, it is extremely important that you work with a reputable organization that is transparent and forthcoming about their operations. Bringing additional people into the fold may result in serious ethical dilemmas, as well as possibly biasing your research. It is often very tempting to accept support from other parties to advance your research. Yet, partnerships with the wrong organization or person can have devastating results, particularly if the funding comes with stipulations that you work with specific agencies or personnel whom you are not at liberty to vet. As a general point of caution, you should think about the different agenda that the person you become involved with may have compared to your own.

Embedding a field experiment into a larger longitudinal study helps to reduce one's reliance upon third parties. I did not wish to hire a potentially disruptive team of professionals, since my purpose was to learn about informal markets and politics as they are. With the design of the mail experiment and my research assistant Yaying, I was able to recruit interview subjects through inconspicuous channels. This was essential to avoiding the potential for social conflict and reducing the likelihood that interviews were unduly influenced.

Conclusion

This paper discusses how embedding an experimental study into an existing longitudinal study helps to ameliorate key challenges that are particularly acute in poor, urban settings.

Nearly every aspect of research becomes more complicated in such an information-poor environment, where complex and competing processes make it especially difficult to reliably observe and draw valid inferences. I focused on three aspects of research design and practice that tend to run afoul amidst conditions of data scarcity and social complexity, and present obstacles for both experimental and observational studies: building a sample frame, gaining access to marginalized people and places, and enlisting third parties for research support. These issues are most acute when the research design demands repeat engagement with specific subjects (i.e. longitudinal research).

The previous discussion outlined how embedding a smaller contact-based experiment – in this case, my mailing intervention – can help the researcher identify and validate the survey sample frame, gain more direct access to non-elite urban residents, reduce observational bias, and identify relevant spatial boundaries. This novel solution enables one to collect in-depth data on an unbiased and representative sample, with minimal financial resources, in a low-quality informational environment. For most researchers looking to engage in systematic research on a geographically diffuse, socially marginalized and heterogeneous subject group, it is simply not feasible to "show up" or gather follow-up data from every single person in that pool. Meanwhile, focusing one's efforts on the subjects that happen to be easiest to find in the field will lead to unrepresentative samples and misleading results.

Embedding an experiment in the manner discussed enables researchers to build a sample frame that can better cope with data scarcity, while also safeguarding the research from inferential bias. Through the process of designing, implementing and collecting information on the mail experiment, I accumulated a rich layer of information that is highly relevant to my primary longitudinal study on economic modernization. Navigating numerous localities for specific individuals (treated and untreated by the longitudinal bank intervention) helped to provide useful data that I would otherwise not have come across. Through a process of trial and error, I utilized street maps, satellite imagery, bank records and context-specific observation to track down packages. This process forced me to "fill in gaps" and verify information when address data on the subject group was woefully lacking. In other words, the embedded experiment enabled me to triangulate across multiple insufficient sources of information and ultimately verify the accuracy of my longitudinal database. It structured my research so as to provide a more complete and nuanced picture of my subject group, their experiences with

informal financial networks within their communities, and the implication of their transition to formal banking.

Another benefit of adding the mail experiment to my existing research project is that I collected qualitative and quantitative information on the randomly targeted subjects in a double-blind manner. Such a double-blind ethnographic research design was possible since the initial longitudinal project happened to be based on a field experiment itself. This was accomplished simply by keeping the experiment status of mail recipients (as treatment vs. control in the banking study) in separate encrypted files. Only after returning from the field did I compare my notes to view individual treatment statuses and reflect upon the ways that people in the treatment group were different than those in the control.

In short, embedding an additional experiment within a longitudinal study that is based on experimental intervention (random or "as if") helps to ameliorate two forms of bias inherent to field interview work. First, this tool reduces the tendency for selection bias – selecting on convenience and systematically missing harder-to-reach people. Second, if the initial longitudinal study is based on exogenous phenomena, this methodological tool will help overcome interviewer bias – the tendency to bias observation and questioning towards one's expectations.

A final aim of this paper is to demonstrate how embedding a field experiment into a longitudinal study can deepen our contextual understanding of complex urban environments. This is perhaps a counterintuitive point, since field experiments are often criticized for focusing on short-sighted effects, overlooking contextual factors, neglecting ethical issues, and failing to produce generalizable claims[xxiv]. Yet, the previous discussion has illustrated how this approach helped to guide my qualitative field work in a way that reduced inferential biases, provided me with improved information and clarity regarding local context, and allowed me to enter communities with a lighter footprint. As the breadth and variety of organizations and research opportunities devoted to longitudinal studies (either experimental or observational) expands, so too will opportunities to embed field experiments in a way that enriches comparative politics research.

[i] See U.N. Habitat. "State of the World's Cities 2012/2013: Prosperity of Cities." (New York: Routledge, 2013), https://sustainabledevelopment.un.org/content/documents/745habitat.pdf, p. 126, Table 3.

[ii] Specific examples of the research questions mentioned, which involve longitudinal studies include : Ali, Daniel Ayalew, Collin, Matthew, Deininger, Klaus, Dercon, Stefan, Sandefur, Justin, & Zeitlin, Andrew (2014). The price of empowerment: Experimental Evidence on Land Titling in Tanzania. World Bank Policy Research Working Paper, (6908). Auerbach, A. M. (2015). Clients and communities: The political Economy of Party Network Organization and Development in India's Urban Slums. *World Politics,*1-38.; Barnhardt, S., Field, E., & Pande, R. (2014). Moving to Opportunity or Isolation? Network Effects of a Slum Relocation Program in India (No. WP2014-11-01). Indian Institute of Management Ahmedabad, Research and Publication Department. Household; Bruhn, Miriam (2013). A tale of two species: Revisiting the effect of registration reform informal business owners in Mexico. *Journal of Development Economics,* 103, 275-283. ; Chirau, Takunda J., & Chamuka, Paidashe (2013). Politicisation of urban space Evidence from women informal traders at Magaba, Harare in Zimbabwe. *Global Advanced Research Journal of History, Political Science and International Relations*, *2*(2), 014-026.; Jaramillo, Miguel (2010). "Is there Demand for Formality among Informal Firms? Evidence from Microfirms in Downtown Lima." Jha, Saumitra, Rao, Vijayendra, & Woolcock, Michael (2007). Governance in the Gullies: Democratic Responsiveness and Leadership in Delhi's slums. *World development*, *35*(2), 230-246.Marx, Benjamin, Stoker, Thomas M., & Suri, Tavneet (2015). *There Is No Free House: Ethnic Patronage in a Kenyan Slum*. Working; Rojo,

Guadalupe, Jha, Subhash, & Wibbels, Erik. Political Networks, Clientelism and Public Goods: Evidence from Slums in Udaipur, India (Draft 1.0).

[iii] For discussion, Ulf Hannerz, "Being There…and There…and There! Reflections on Multi-Site Ethnography," *Ethnography,* 4(2003): 201-216

[iv] Convenience sampling, wherein the most accessible subjects are selected, is generally viewed as the least rigorous technique. Further discussion: Julia F. Lynch, "Aligning Sampling Strategies with Analytical Goals" in *Interview Research in Political Science*, ed. Layna Mosley (Ithaca: Cornell University Press, 2013), 31–44.

[v] Definitions: Adrian Guillermo Aguilar and Clemncia Santos, "Informal Settlements' Needs and Environmental Conservation in Mexico City: An Unsolved Challenge for Land-use Policy," *Land Use Policy*, 28(2011):, 649-662. (650) Erhard Berner, "Informal Housing: Asia," *International Encyclopedia of Housing and Home,* ed. Susan Smith (Amsterdam: Elsevier, 2012). P. 56

[vi] Contributor C, "For Law, God or Country: A Field Experiment on Normative and Legal Pressure as a Tool for Improving Public Service Delivery in the Philippines," *Working Paper*.

[vii] Ancillary field experiments are empirical studies of intentionally randomized phenomena in which the experimenter has no control over the randomization of treatment assignment. These differ from natural experiments in that they are based on an intervention that was intentionally randomized, such as a lottery or prior experiment. see Kate Baldwin and Rikhil R. Bhavnani, "Ancillary Experiments: Opportunities and Challenges (No. 2013/024)," WIDER Working Paper.

[viii] "Contact-focused experiment" is not a technical term, referring to experiments where the

intervention itself involves contacting individuals. For example see: Alan S. Gerber and Donald P. Green, "The Effects of Canvassing, Telephone Calls, and Direct Mail on Voter Turnout: A Field Experiment," *American Political Science Review*, 94(2000), 653–63. And Donald P. Green and Alan S. Gerber, *Get Out the Vote!* (Washington: Brookings Institution Press, 2004).

[ix] See Dean Karlan and Jonathan Zinman, "Expanding Microenterprise Credit Access: Using Randomized Supply Decisions to Estimate the Impacts in Manila," *Innovations in Poverty Action and Financial Access Initiative Working Paper* (2009).

[x] See: John Gerring & Rose McDermott, "An Experimental Template for Case Study Research," *American Journal of Political Science*, *51*(2007), 688-701. Also see: David Collier, "Data, Field Work, and Extracting New Ideas at Close Range," *Newsletter of the Organized Section in Comparative Politics of the American Political Science Association*, *10*(1999).; Elizabeth Levy Paluck, "The Promising Integration of Qualitative Methods and Field Experiments," *The ANNALS of the American Academy of Political and Social Science 628*(2010), 59-71.; Lawrence W. Sherman & Heather Strang, "Experimental Ethnography: The Marriage of Qualitative and Quantitative Research," *The Annals of the American Academy of Political and Social Science 595*(2004), 204-222.; Sidney Tarrow, "Bridging the Quantitative-Qualitative Divide in Political Science," *American Political Science Review 89*(1995), 471-474.

[xi] For criteria of experimental design see Alan S. Gerber and Donald P. Green, *Field Experiments: Design, Analysis, and Interpretation* (New York, United States: W.W. Norton & Company, 2012). Also Rebecca B. Morton and Kenneth C. Williams, *Experimental Political Science and the Study of Causality: From Nature to the Lab* (Cambridge: Cambridge University

Press, 2010). Esther Duflo, Rachel Glennerster, and Michael Kremer , "Using Randomization in Development Economics Research: A Toolkit" *Handbook of Development Economics 4*(2007), 3895-3962.; John A. List, Sally Sadoff, & Mathis Wagner, "So you want to run an experiment, now what? Some simple rules of thumb for optimal experimental design" *Experimental Economics*, *14*(2011), 439-457. For a checklist see: Isabella Boutron, Peter John and David Torgerson, "Methodological Items in Randomized Experiments in Political Science," *The Annals of American Academy of Political and Social Science,* 628 (2010)*;* For an example of its application in published research see: Matthew Longo, Daphna Canetti and Nancy Hite-Rubin, "A Checkpoint Effect? Evidence from a Natural Experiment on Travel Restrictions in the West Bank,"*American Journal of Political Science* Vol. 58:4 (October 2014), 1006–1023.

[xii] Morton and Williams define internal validity as "the approximate truth of the inference or knowledge claim within a target population" and external validity as "the approximate truth of the inference or knowledge claim for observations beyond the target population studied." in Rebecca B. Morton and Kenneth C. Williams, *Experimental Political Science and the Study of Causality: From Nature to the Lab* (Cambridge: Cambridge University Press, 2010), p.255. Also see Rose McDermott "Internal and External Validity", in *Cambridge Handbook of Experimental Political Science*, ed. James N. Druckman et al (Cambridge: Cambridge University Press, 2011).

xiii Hernando De Soto, "The Other Path: The Informal Revolution." *New York* (1989), and Alejandro Portes, Silvia Blitzer, and John Curtis, J. (1986), "The Urban Informal Sector in Uruguay: Its Internal Structure, Characteristics, and Effects," *World Development* 14 (1986), 727-741.

[xiv] A detailed account of the technical procedure for producing a randomized draw that insures geographic balance is included in the appendices of my book manuscript- *Including the Other*

Half: How Financial Modernization Disrupts Patronage Politics; STATA seed code available on special request..

[xv] Example of studies involving longitudinal data (experimental and non-experimental), wherein the level of analysis is at the localities (such as a region, municipality or neighborhood): non-experimental, longitudinal study at the "slum" level see: Guadalupe Rojo, Subhash Jha, and Erik Wibbels, "Political Networks, Clientelism and Public Goods: Evidence from Slums in Udaipur, India (Draft 1.0)." at "village" level of analysis: Benjamin Marx, Thomas M. Stoker and Tavneet Suri, *There Is No Free House: Ethnic Patronage in a Kenyan Slum*, Working paper (2015). Experiment-based, longitudinal study at village- level. Vivi Alatas, Abhijit Banerjee, Rema Hanna, Benjamin A. Olken,, & Julia Tobias, "Targeting the Poor: Evidence from a Field Experiment in Indonesia (No. w15980)," *National Bureau of Economic Research* (2010).

[xvi] Abhijit V. Banerjee, Selvan Kumar, Rohini Pande, & Felix Su, "Do Informed Voters Make Better Choices? Experimental Evidence from Urban India," *Unpublished manuscript* (2010). *http://www. povertyactionlab.org/node/2764.*

xvii Organizations such as Innovations for Poverty Action (IPA), Abdul Latif Jameel Poverty Action Lab (J-PAL), UN Evaluation Group, International Initiative for Impact Evaluation (3ie**),** Institute for Financial Management and Research **(**IMFR),Center for Effective Global Action (CEGA) and World Bank Mandate of Development Impact Evaluation **(**DIME) are all large-scale organizations with considerable funding and network infrastructure for development economists. They primarily work on issues pertaining to education, health, labor markets and finance using randomized controlled trials.

[xviii] For distinction and detail on, ArcGIS software, the acronym GIS(geographic information

system) and shape-files see: Graeme Bonham-Carter, *Geographic Information Systems for Geoscientists: Modelling with GIS* (Vol. 13) (Oxford: Pergamon/Elsevier Science Publications, 2014).

[xix] see U.S. National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, *The Belmont Report: Ethical guidelines for the Protection of Human Subjects of Research (*Washington DC: U.S. Government Printing Office, 1979); National Research Council, *Protecting Participants and Facilitating Social and Behavioral Sciences Research,* Panel on Institutional Review Boards, Surveys, and Social Science Research (2003). Constance F. Citro, Daniel R. Ilgen, and Cora B. Marrett, eds. Committee on National Statisticians and Board on Behavioral, Cognitive, and Sensory Sciences (Washington DC: The National Academies Press, 2003); Natural Science Foundation, *Frequently Asked Questions and Vignettes. Interpreting the Common Rule for the Protection of Human Subjects for Behavioral and Social Science Research* (1999). Accessed at www.nsf.gov/bfa/dias/policy/hsfaqs.jsp.

xx Informed consent is upheld when a potential subject agrees to participate in the study only after fully understanding the research, as well as its potential risks and benefits. See the U.S. National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (1979). And Dvora Yanow and Peregrine Schwartz-Shea, "Reforming Institutional Review Board Policy: Issues in Implementation and Field Research," *PS: Political Science and Politics* 40(2008): 483-94. For enlightening discussion on the process and importance of informed consent see Elisabeth Jean Wood, "The Ethical Challenges of Field Research in Conflict Zones," *Qualitative Sociology* 29(2006): 373-386.

xxi In actuality, the chances of winning were much higher (~1/70). To reduce the chances that

individuals would be unreasonably swayed to send me a text message, I underestimated the chances of winning the microwave lottery. This way the expected value of winning the lottery would be relatively insignificant and nearly as cheap as the text itself.

[xxii] Discussion on reducing risk for both interview subjects and research: Elizabeth Wood, "Reflections on the Challenges, Dilemmas, and Rewards of Research in Conflict Zones," Afterword in *Research Methods in Conflict Settings: A View From Below,* eds. Dyan Mazurana, Karen Jacobsen and Lacey Gale (Cambridge University Press, 2013) 293- 308.

[xxiii] English and Tagolog are the official languages of the Philippines. Tagalog is a creole language and consists of a mix of Chinese, Malay, Spanish and English. The mixture is unique, depending upon where it is spoken, and thus people coming from another region do not understand one region's "Tagalog." At times, Yaying spoke Tagalog to signal to people that she was an insider, and to indicate that I was safe. Jean-Paul Dumont, "Far From Manila: Political Identities on a Philippine Island," *Anthropological Quarterly* 68(1995): 14-20.

[xxiv] For critical discussion see *Field Experiments and Their Critics: Essays on the Uses and Abuses of Experimentation in the Social Sciences,* ed. Dawn Langan Teele, (New Haven: Yale University Press, 2014).; Angus S. Deaton, *Instruments of Development: Randomization in the Tropics, and the Search for the Elusive Keys to Economic Development* (No. w14690), National Bureau of Economic Research (2009). Donald P. Green, Shang E. Ha, & John G. Bullock, "Enough Already about "Black Box" Experiments: Studying Mediation is More Difficult than Most Scholars Suppose," *The Annals of the American Academy of Political and Social Science*,*628*(2010), 200-208.; Esther Duflo, Rachel Glennerster, and Michael Kremer, "Using Randomization in Development Economics Research: A Toolkit," *Handbook of Development*

Economics, *4*(2007) 3895-3962.