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Research Statement

My research is in development economics, with a topical focus on labor markets and firms. My dissertation project is a significant and long-term collaboration with the Government of Ghana to evaluate a national-scale job training program. As much of that work is ongoing, I expect it will continue to yield academic research papers and opportunities to present findings to policymakers. I also have ongoing work on networks among small firm owners in Ghana, and corruption in the Kenyan postal service. I hope in the future to also study large firms in developing countries, and political economy issues relevant to labor markets and firm growth. I anticipate my future research agenda continuing to be shaped by my significant field experience in Sub-Saharan Africa and to retain the broad topical focus of my current work.

1 Labor Markets and Firms in Ghana

1.1 Job Market Paper

Small firms are typically modeled as facing a frictionless market for workers, characterized by full information and a lack of regulation. In my job market paper, I report on a field experiment that recruited unemployed young people interested in apprenticeships and randomly placed them with small firms in Ghana. The program included no subsidy beyond in-kind recruitment services, and wages paid to program apprentices are equivalent on average to those paid to non-program apprentices.

We find, first, that firms offered apprentices hired and retained program apprentices for at least six months. In the absence of the program and in a somewhat remarkable institutional setting, firms require new apprentices to post a bond to begin an apprenticeship. We develop a simple model consistent with ex-ante bond-posting and increased employment as a result of the program, in which productivity differences associated with worker ability necessitate costly screening. Secondly, treatment firms experience relatively large increases in revenues and profits, implying that unemployed young people provide productive labor inputs in small firms. Finally, revenue and profit gains are particularly large for small firms treated with high cognitive ability apprentices, as measured by tests of cognitive ability unobservable to the firm. Taken together, these findings imply that firms find it costly to hire workers on the open market, that the marginal revenue product of labor is positive and quite large, and that there is substantial heterogeneity in these returns as a function of worker ability.

These findings have implications for our fundamental understanding of labor markets in low income settings and in particular suggest that high youth unemployment in developing economies is the result, at least in part, of substantial labor market frictions.

1.2 Worker Cognitive Ability and On-the-job Training

The experiment on which we report in my job market paper was enclosed in a larger randomized controlled trial, which randomized over unemployed young people applying to become apprentices targeted by the government program. That randomization took place before any firms were recruited. We do not report on apprentice outcomes in my job market paper, though labor market impacts of apprenticeship training are the subject of future work.

In particular, we have highly unusual data on worker and firm owner cognitive ability, as well as detailed data on revenues, profits, training experience, work experience, and apprentice progress. Worker cognitive ability is likely to influence not only firm outcomes, but also an apprentice's ability to benefit from on-the-job training. In addition, firm characteristics are likely to affect apprentice outcomes.

We intend to take this analysis in three directions. First, the match randomization leveraged in my job market paper can also be used to measure how firm characteristics affect apprentice outcomes. In preliminary analysis, it appears that program apprentices placed with firms who already have many non-program apprentices progress most quickly in learning outcomes. Secondly, we are conducting pilot work now on a potential training intervention in which firm owners are incentivized to ensure that apprentices pass external craftsmanship exams. Finally, a follow-up survey with treatment apprentices (those included in the data for my job market paper) and control apprentices (not reported on in the job market paper) is funded and scheduled for 2017. That data will allow for experimental estimates of the labor market returns to apprenticeship training.

1.3 The Political Economy of Training Programs in Ghana

Finally, with respect to the job training program that is the subject of both my job market paper and ongoing work on apprentice-level outcomes, there is a unique opportunity to study the political economy of program targeting. In particular, the government agency that initiated and financed the program has no operational presence outside of the capital city. Therefore, the majority of the implementation of the program was carried out by district-level officials of the Ghana Education Service. In addition, the original randomized controlled trial was complicated somewhat by the highly politicized nature of the program (initiated in an election year). In order to both preserve the experimental nature of the apprentice-level evaluation and the central government agency's interest in supporting affiliated local bureaucrats and politicians, the director of the central government agency suggested the following solution: 20% of apprentice spaces were reserved for direct choice by district officials, while 80% of spaces were available to be randomized over (where the applicant pool exceeds the number of spaces, which it always did).

We collected detailed data on the local officials running the implementation of the program and worked together with them closely, in addition to our research collaboration with the central government. Decentralized implementation and the unique design of the program mean that we have variation from 32 districts on both the local bureaucrats making targeting decisions and detailed data on both the full applicant pool and the 20% directly selected by local officials. We plan to develop a simple principal-agent model to frame our inquiry. Preliminary analysis suggests that the majority of districts targeted apprenticeship training spots to wealthier and more connected unemployed young people, though in a few "activist" districts, the district-chosen 20% were in fact the neediest applicants. The apprentice-level follow-up survey will also give us a unique opportunity to determine whether district officials have private information that allows them to identify the potential apprentices who will experience the largest labor market gains from the apprenticeship experience.

1.4 Social Networks Among Small Firm Owners

In a separate sample unaffiliated with the government job-placement program, my coauthor and I have an ongoing project to study networks among small firms owners in Ghana. Like my job market paper, the project is largely motivated by a desire to understand constraints to small firm growth. Qualitative observations suggest that networks among firm owners are important substitutes for missing credit and insurance markets, and for a general lack of institutional support with respect to technology adoption, worker search and screening, infrastructure, and marketing. The project begins with a near full network map of garment-making business owners in Hohoe District, Ghana. A meticulous census activity identified over a thousand such businesses/individuals, over 90% of whom participated in our baseline survey. The data includes demographic information, cognitive tests, profits, assets, labor, management practices, prices, and a production inputs breakdown of the most commonly sold products, in addition to the network map. The network mapping section creates distinct network maps by the type of professional relationship (giving or receiving of gifts or loans, instruction in new skills, sharing of workers or physical capital, direct outsourcing, customer referrals, and general mentorship, all of which are quite common). We also asked about other sources of loans, labor, capital, skills, and marketing, and validate that other garment-makers are indeed the most common substitute for missing business institutions.

In cross-sectional analysis of the baseline data, we find that other garment-makers are the most cited resource for borrowing or buying capital, borrowing or hiring workers, learning new skills, hearing about new business opportunities (and government programs), and increasing one's customer base. We also note rich networks of technological diffusion (new machinery, new styles), customer referral, product outsourcing, and discussion about prices. We are currently planning an experimental study of information diffusion within the network, by randomly seeding information about a real business opportunity. We expect to see strategic behavior that responds both to competition within the network (this is in fact a locally-traded good that responds primarily only to local demand) and to incentives to collaborate (reciprocity, risk-sharing, altruism), making the ultimate degree of information diffusion ambiguous.

We are also interested in the degree to which network relationships constitute co-production across firms, and how that differs from the 10% of the sample firm-owners who have decided to formally integrate/merge their firms. In the cross-section, firms with stronger and broader networks are significantly more profitable, as are integrated firms. The design is in progress, but we hope to provide credible estimates for the gains to integration (document economies of scale, if they exist) and to better understand constraints to integration. The study also offers an opportunity to study network inequality by gender, and price dispersion.

2 Small Scale Corruption in Kenya

Recent research in behavioral economics has led to substantial progress in our understanding of the character and economic consequences of persuasion. From a social welfare perspective one research frontier with particular relevance is persuasion in situations with an established moral imperative. This study addresses these issues in the context of a phenomenon of great importance to policymakers - corruption. In particular, we study theft in the Kenyan postal service. We attempt to (1) estimate empirically the dollar value of honesty messages in discouraging corruption, (2) quantify the comparable effectiveness of the most common policy currently being used to fight corruption - manipulating the perceived risk of detection, (3) evaluate the importance of perceived recipient neediness in the incidence of corruption, and (4) use this experimental variation to estimate a structural model focusing on deviations from rational self-interested calculation in corruption decision-making. This paper is resting, but in progress.