Income-Based Homophily and Social Capital:
Experimental Evidence from Malawi*

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Abstract

I study the exogenous impacts of social linking among a sample that is socially isolated, lonely, and economically vulnerable. I experimentally induce social interactions between female rural migrants in Malawi by facilitating low-SES women in inviting low-SES, high-SES, or a random mix of women for a shared meal. I cross-randomize a voucher for meat, a high-price good that improves the experience of sharing a meal. Within just one month of the intervention, participants are 25% more likely to operate small-scale, informal businesses relative to control. One year later, they experience a 0.13 SD increase in food consumption and a 22% reduction in depression. While all groups experience both sets of benefits, inviting high-SES guests leads to more business activity and higher consumption, while inviting low-SES guests leads to greater depression reductions. I find that effort costs prohibit women from initiating any relationship in the absence of the intervention, while the high price of serving meat inhibits cross-SES linking. I draw three conclusions: (1) all social relationships yield large benefits, but frictions inhibit them from forming, (2) different types of relationships are more productive across different domains, underscoring the value of economically diverse networks, and (3) prices reinforce income-based homophily.

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1 Introduction

Economic theory has long posited that social connections are both fundamental for market functions (Becker, 1974; Smith, 1776) and intrinsically utility-generating in themselves (Bentham, 1789; Sen, 1977; Smith, 1759). Empirically, the economics literature has linked social interactions with employment, economic mobility, financial inclusion and increased savings (Beaman, 2012; Cannon et al., 2024; Chetty et al., 2022a,b; Feigenberg et al., 2013). Social connections might be even more critical in low-income contexts, where they provide services to fill missing markets (Banerjee et al., 2024b; Coate and Ravallion, 1993; Karlan, 2007; La Ferrara, 2003; Mobarak and Rosenzweig, 2013; Santos and Barrett, 2011). Despite the view among foundational economic theorists that social interactions matter for markets and well-being, endogenous link formation makes the causal effects of social connection difficult to study. We know even less about *how* social connections form and what constrains them from arising.

In this study, I conduct a randomized controlled trial in Malawi that exogenously provides rural migrant women with social linking opportunities. The study is designed to facilitate and measure the impact of and barriers to forming social linkages within and across class. The sample is composed of women who are uprooted from their existing social networks when they move away from their home villages for marriage. This specific set of circumstances creates the conditions for women to be socially isolated, lonely, and economically vulnerable, and is the modal experience of women worldwide (Murdock, 1967).

In the experiment, I help young low-income female migrants initiate meal-sharing with other female migrants, a common way to engage socially. First I ask participants if they would like their name to be on a list from which others can send them an invitation for a shared meal. I then implement the "Inviter" treatment, in which treated women (Inviters) see six names from that list (Guests) and can send up to five invitations delivered through the enumerator. Although women in the experiment are acquainted with one another, the intervention serves as a genuine shock to status quo social interactions: 81% of Inviters send an invitation through the intervention, 99% of which are to women outside the baseline network. One year later, the Inviter treatment leads to a 0.132 standard deviation increase in an index of food consumption (about half the impact of cash transfers) and a 22% reduction in mild, moderate, or severe depression (twice the impact of cash transfers).[1] I find evidence that these results are driven by increased liquidity and reduced risk during the lean season, which is the period where the consumption effects are largest. Treated women are more likely to operate small-scale businesses (such as selling vegetables or prepared foods to other villagers) within just one month of the

[1] I compare my estimates with the effect of cash transfers estimated in Haushofer and Shapiro (2016), a randomized controlled trial of cash transfers in Kenya. Depression is measured comparably in my study and Haushofer and Shapiro (2016). Haushofer and Shapiro (2016) find a 4.4% reduction in the CESD depression score after 9 months. I find a 9.0% reduction on the CESDR-10, a revised 10-item depression scale. The variables entering our indeces of food security differ, but both are measured in standard deviations from the Control mean. My index the food consumption index include the number of animal protein meals consumed during the lean season; the average number of daily meals during the lean season; the number of animal protein meals consumed in the last month; and the average number of daily meals in the past month.

intervention. Furthermore, they diversify the crops that they cultivate, which, during the lean season, reduces the risk that they face in the upcoming harvest.

These effects are especially remarkable and important given the setting. Due to a combination of persistent drought, macroeconomic instability, and inflation, Malawi was in a food crisis throughout the study period where an estimated 28% of the population suffered acute food insecurity (UNICEF, 2025). The Control rate of depression rose by 32% over this time period, while Inviters' mental health was not affected by these conditions. Given these extraordinary benefits from an intervention that amounts to little more than a nudge, it is remarkable that these interactions do not happen in the absence of the intervention. My treatment includes design elements that allow me to causally evaluate the forces that constrain women from initiating social relationships: I randomize who is available on the list to invite, and the price of sharing a higher-status meal that includes meat. I find that effort costs and information frictions inhibit social interaction within and across socio-economic status. The price of meat also inhibits cross-SES linking when substitution with low-SES linking is available.

I first ask: are there barriers that preclude individuals from interacting with specific types of people, or is social capital broadly under-provided? I analyze social interactions both within and across SES, a salient social cleavage in this setting. For a randomized group of Inviters, the women available to send invitations to are all low-SES, implying that the experiment generates exogenous opportunities to link within-SES for these women. For another randomized group of Inviters, the women available to send invitations to are all high-SES, implying that the experiment generates exogenous opportunities to link across-SES for this second group of women. For the remaining Inviters, the women available to send invitations to are a random mix of both high-SES and low-SES women, implying that the experiment generates exogenous opportunities to link where women can select into the specific match type. This final randomization allows me to understand the degree to which self-sorting aids or impedes social capital formation and its benefits.

I find that the probability of sending an invitation or sharing a meal is non-differential across the groups of women who are restricted to sending an invitation only to low-SES or high-SES women, implying that women are not restricted to social interaction within social classes. However, I do find that interaction with low-SES and high-SES women yield meaningfully different outcomes. The treatment effects on business-operating, cash crop cultivation, and consumption are significantly higher among Inviters with the High-SES Guest List compared to Inviters with the Low-SES Guest List (for consumption, a 0.210 SD treatment effect versus 0.074 SD, $p < 0.05$). Conversely, the treatment effects on depression are significantly larger among Inviters with the Low-SES Guest List relative to Inviters with the High-SES Guest List (an 10.9 percentage point reduction versus a 4.8 percentage point reduction, $p < 0.05$).

I then ask: is social interaction restricted by financial costs? To answer this question I cross-randomize a voucher that is redeemable at a local butcher, which effectively reduces the price of a high-status meal with meat to the same price as a lower-status meal without meat. I find that the voucher does not change invitation-sending or meal-sharing in either of the groups with the Low-SES or High-SES Guest Lists, which suggests that prices do not impose a feasibility constraint on invitation-sending to any type of person. However, among Inviters who have the opportunity to invite either high-SES and low-SES women, receipt of the voucher leads Inviters to be more likely to invite *both* low-SES and high-SES guests. This increase in invitations to both high-SES and low-SES guests is driven by an increase in invitations to high-SES women. Taken together, these results imply that women are not financially constrained from interacting with either high-SES or low-SES women per se, but that they *prefer* to only interact with other low-SES women when the price of meat is high.

I interpret these findings through the lens of a conceptual model of social network formation under budget constraints. The model sheds light on why low-SES women may have a relative preference for social engagement with other low-SES women when the price of meat is high. The predictions that the model generates offer two important insights into income-based homophily. First, the high prices of the most valuable social activities act as a key driver of homophily, implying that income-based homophily—which is defined by one group being unable to afford high-priced goods—is self-reinforcing. Second, within-SES and cross-SES relationships impart unique benefits, implying that the most valuable networks as a whole are those that are economically diverse, where agents can realize the distinct benefits of each type of relationship.

In the model, social relationships impart benefits in two ways. First, people derive intrinsic utility from relationships, which captures the immediate utility somebody experiences from social interaction, such as companionship and mental health benefits. Second, there is a financial return on social relationships. My results rest on two key assumptions: first, that the marginal benefits of initiating new relationships and investing in those relationships are diminishing; and second, that these benefits diminish faster *within-type* than they do *across-type*. This implies that the marginal utility of initiating a diverse set of relationships is greater than the marginal utility of initiating a homogeneous set of relationships. Thus, a subsidy to the price of investing in social relationships should induce more invitations to *both* low- and high-SES women, rather than only one or the other. Furthermore, if low-SES women perceive that the marginal benefits of initiating a relationship with a cross-SES (within-SES) link is increasing in financial investment in the relationship faster than the marginal benefits of investing in a within-SES (cross-SES) link, then the increase in "mixed initiations" will be explained to a greater extent by an increase in relationship-initiations across-SES (within-SES). Crucially, high-prices are not a feasibility constraint, where cross-SES links are strictly precluded without the possibility of financial investment. Instead, the trade-off between economically diverse networks—those that include both high- and low-SES women—and homophilic networks—those that are dominated by other low-SES women—changes with the price of a nice meal.

This paper chiefly contributes to three bodies of work in economics. First, I contribute to multiple strands of work in development economics—including work studying developing-country labor markets, agriculture, and mental health—by demonstrating the key role of social relationships in low-income markets and communities. While many papers study the effects of harnessing social networks for specific poverty alleviation objectives, such as information transmission (Beaman and Magruder, 2012; Beaman, 2012; Banerjee et al., 2024a, 2019; Derksen and Souza, 2024; Schechter and Vasudevan, 2024), technology adoption (Akram et al., 2025; Beaman et al., 2021; Conley and Udry, 2010; Duflo et al., 2023; Foster and Rosenzweig, 1994; Kondylis et al., 2023; Chandrasekhar et al., 2022), the professionalization of businesses (Asiedu et al., 2025), and the enforcement of norms (Breza and Chandrasekhar, 2019; Iacobelli and Singh, 2020), this paper studies the broad-ranging effects of relationships across a wide array of outcomes. Because I purely encourage social connection, rather than social connection whose objective is to fulfill a specific purpose, my study design allows participants to select into the relationships that provide the benefits most useful to them, and allows me to observe the breadth of returns that social connection can produce.

While a growing literature shows mental health disorders and loneliness are highly prevalent among low-income people (Banerjee et al. (2023); Ridley et al. (2020)), there is limited evidence documenting causal pathways, and there is room for finding novel cost-effective mitigation strategies.[2] This study provides evidence that the social isolation that accompanies low-income status is a mechanism underlying mental-health poverty traps, a causal pathway that has not received much empirical attention to date.[3] I document novel patterns in the prevalence of loneliness and causally identify social isolation as a direct contributor to mental health disorders.[4] Furthermore, I provide a practicable intervention that reduces long-term mild-to-severe depressive symptoms among low-income and marginalized women by 22%.

This also adds context to an old literature in development economics on demand for food and nutritional poverty traps by demonstrating that food serves as an input into social relationships as well as a health input or consumption good.[5] I provide evidence that consuming expensive calories can be a rational *investment decision*—rather than, or in addition to, being a luxury consumption good—with substantial economic returns through its role as a social input.

[2]Many of the interventions with the largest positive effects on mental health are not cost-effective, such as cash transfers (see Haushofer and Salicath (2023) and Ridley et al. (2020) for a review). Interventions that are cost-effective and targeted directly at improving psychological well-being, such as psychotherapy and pharmacotherapy, improve mental health across a variety of low-income settings (Angeluci and Bennett, 2024; Bhat et al., 2022; Blattman et al., 2023; McKelway et al., 2023; Patel et al., 2007). However, these interventions explicitly treat mental health disorders and thereby risk low take-up or causing stigma (Smith, 2024; Ridley, 2025; Pescosolido, 2013).

[3]See Haushofer and Salicath (2023) for a review of the evidence on "scarcity" and stress mechanisms, which a multitude of causal studies evaluate but find inconclusive evidence for.

[4]The evidence on the prevalence of loneliness in low- and middle-income countries to date focuses on elderly populations. I provide estimates and correlates of loneliness rates among a younger population.

[5]Much of the literature in development economics has viewed food as a health input or consumption good. Cheap calories (usually staple grains) are often viewed as an input into health and labor productivity, while expensive calories (usually meat) are viewed as a luxury consumption good. Individuals consistently choose to spend excess income on more foods that are much more expensive per calorie, rather than cheap calorie-dense foods, which has brought the nutritional poverty trap model into question (Dasgupta and Ray, 1986; Subramanian and Deaton, 1996; Jensen and Miller, 2008). This paradigm assumes that calories are the only dimension by which foods are an economic input. Dasgupta et al. (2023), which shows that beef bans in India lead to increases in iron-deficiency anemia, provides evidence that there are other dimensions of nutrition beyond calories that might enter into an individual's health investment decision when choosing foods.

Second, I contribute to a broad economics literature documenting the importance of social capital for economic outcomes. While the value of social connection is increasingly espoused in popular media and by respected scientific and governmental institutions (OSG, 2023; WHO, 2023; GOV.UK, 2010; Qiu and Liu, 2019; Ortiz-Ospina, 2019; DiJulio et al., 2018), there are few cases of exogenous shifts in social connectedness and, therefore, limited causal evidence of its value. I find causal evidence that 'bridging' and 'bonding' capital—or, relationships with people who are both different and similar to oneself—both afford important benefits but, consistent with the original theory by Putnam (2000), that these benefits are distinct from each other.

These results add to a growing body of work describing the positive relationship between economic connectedness (or, having many cross-social-class links) and economic outcomes (Cannon et al., 2024; Chetty et al., 2022a; Patel and Wolfe, 2024; Linde and Egede, 2023). A related body of work causally identifies the effects of distinct but related phenomena, such as the effects of higher-income peers in educational contexts (Sacerdote, 2011; Mallah, 2025), peers' employment status (Laschever, 2013), and neighborhood income (Bergman et al., 2024a; Chetty et al., 2016; Ludwig et al., 2013). To my knowledge, this paper provides the first causal evidence of the impact of economic connectedness outside of an educational context, where mechanisms at play, such as classroom conditions, may not replicate to other settings; the first evidence of the impact of economic connectedness in a low- or middle-income country;[6] and the first experimental or intervention-based evidence on economic connectedness.[7]

While my results are consistent with the descriptive evidence, I add nuance to this literature by showing that agents want but are constrained from achieving economic *diversity* in their networks, which is a distinct object from economic *connectedness*. Whereas economic connectedness refers to the overall share of high-SES individuals in one's network, economic diversity refers to having a mix of both low- and high-SES individuals. I show that, although low-income women *do* want to connect across SES more than they do in status quo, they do not want to do it at the expense of within-SES connections, which yield important mental health benefits that are not substitutable for high-SES links. This is consistent with the literature on housing and neighborhoods, which finds that moving from low- to high-income neighborhoods can harm teens due to social network disruption (Kling et al., 2007; Chetty et al., 2016). It also echoes qualitative work showing that social ties to low-income communities can constrain take-up of neighborhood mobility programs (DeLuca and Rosen, 2013, 2016; Bergman et al., 2024b).

Lastly, I contribute to the social networks literature by providing evidence about how social networks form and why they persistently feature homophily. Homophily is descriptively documented across many settings and characteristics, including income, and has important impli-

[6] Much of the evidence documenting the effects of economic connectedness, or even establishing the prevalence of income-based homophily, is from the United States (Chetty et al., 2022a,b; Bergman et al., 2024b; Nilforoshan et al., 2023; Yabe et al., 2023).

[7] The causal evidence of economic connectedness to date either bundles economic connectedness with other goods, or analyzes the impacts of economic connectedness that happens through the randomization of peer groups.

cations for the persistence of differences in economic outcomes across groups (Verbrugge, 1977; McPherson et al., 2001; Jackson, Forthcoming). Homophily also has implications for social and cultural cohesion if, as proposed by the "inter-group contact theory" and demonstrated in some settings empirically, exposure to different-type people is an important mechanism for reducing inter-group prejudice (Allport, 1954; Rao, 2019). Empirically, economic research shows that homophily can hurt economies by stymieing the flow of information or goods (Burchardi and Hassan, 2013; Chaney, 2014), but can also improve loan targeting and health adherence through reduced information asymmetries and improved trust (Alsan et al., 2019; Fisman et al., 2017). Despite the widespread prevalence of homophily and its economic relevance, we know very little about *why* social networks become and remain homophilic. To my knowledge, my experiment presents the first causal evidence to date identifying the drivers of homophily in social networks, and the first conceptual model to propose prices as a mechanism underlying income-based homophily, which makes it self-reinforcing.

The paper proceeds as follows: Section 2 discusses the background and cultural context, Section 3 presents a conceptual model of homophily, Section 4 describes the experimental design, Section 5 presents first-stage results of the experiment (invitation-sending decisions), Section 6 presents the effects of the experiment on second stage outcomes, and Section 7 concludes.

2 Context

In this section, I provide summary statistics and background information about my sample of low-income rural-to-rural female migrants in Malawi. This sample is triply disadvantaged with regards to social inclusion on the basis of their gender, migrant status, and income status. I describe rural migration in this setting, correlates of social inclusion and socio-economic status, and finally discuss the role of meal-sharing in these communities.

2.1 Rural Migration

This project is set in Mchinji, a rural district in Central Malawi. Eighty-five percent of my sample moved across rural villages for marriage. My sample provides a convenient sample among whom to study social inclusion precisely because they face social exclusion *as women*. Furthermore, marriage migration is an exceedingly common phenomenon, especially for women. Seventy-one percent of societies worldwide are traditionally patrilocal (Murdock, 1967)—meaning that women traditionally move to the area where her husband and his kin live—and societies were more likely to shift towards patrilocality throughout the twentieth century (Shenk et al., 2019).

In the 2015 Malawi Demographic and Health Survey, 57% of women in Mchinji were in a different village than the one they grew up in. This is a fairly representative district in Malawi—43% of the women in all other districts in Malawi were in a different village than the one they grew up in for the 2015 Malawi DHS survey, though with regional variation (Figure A.1).

Land ownership is an important predictor of moving villages, even conditional on ethnic and regional kinship norms.[8] In the 2015 Malawi DHS, 67% of women without any land or owned property moved villages, as compared to 39% of women who owned either land or property. Even controlling for region and tribe fixed effects, land ownership was associated with a 22 percentage point decrease in the probability of having moved villages (Table A.1).

2.2 Correlates of Social Inclusion and Socio-Economic Status

I construct an index of socio-economic status, using proxies such as roof material, land-holdings, and business capital (a detailed description of how I construct the index is in Section 4.1.1). Even the women who I code as high-SES are poor on a global scale. On average, only 20% of them a single household member who has completed secondary school, and they eat fewer than three meals per day even right after the harvest. However, they are still significantly more advantaged relative to the women who I code as low-SES, with almost double the landholdings, and almost double the likelihood of operating any business.

I find descriptive evidence that income acts as a social cleavage in my setting, which is consistent with qualitative work in similar contexts (Diyammi, 2025). Socio-economic status and the number of years that women have been in the village are both significantly correlated with measures of social inclusion. As women get richer and have spent more time in the village, loneliness decreases, the number of friends a woman has increases, and the probability she belongs to a women's church group increases (Figures A.2 and A.3).[9] Importantly, the probability that she belongs to a Village Savings and Loan Association (VSLA) also increases dramatically, with women in the top decile of socio-economic status being almost three times as likely to belong to VSLA compared with the bottom decile (Figure A.3). VSLA is the most-preferred financial self-help group in this setting, and the most important source of credit, especially semi-formal credit (bank loans are almost never utilized in this sample).

2.2.1 Baseline Networks

At baseline, participants have six network connections on average (mean = 6.2, median = 6, IQR=2). These networks are, on average, split equally between relatives and non-relatives. The relatives are most often from the husband's side of the family, and the non-relatives are most often people who the respondent met herself (not through her husband).

[8]The population in Mchinji District primarily belongs to two tribes. The predominant group is the Chewa, a traditionally matrilocal tribe (meaning, men move to women's villages at the time of marriage). The second most populous group in the area is the Ngoni, a traditionally patrilocal tribe (meaning, women move to men's villages at the time of marriage). However, these traditional kinship systems have been largely disrupted, and a significant portion of Chewa women move to their husband's village. Due to the diversity of kinship norms in the area, and their dynamic fluidity, it is not immediately obvious which other women are migrants. As kinship norms rapidly develop and change, there are no village- or tribal-level institutions to support women when they migrate, while centuries-old norms and societies exist to support Chewa men when they move to new villages for marriage (Kachapila, 2001).

[9]I only measured church group membership at endline, so I only use the Control group to analyze underlying correlations between church group membership and other demographic characteristics.

Baseline networks are homophilic with respect to income (using roof material, a variable that I have for each network tie, as a proxy for income status). Figure 1 demonstrates village-level homophily by roof material across the twelve villages in my study. In every village, participants with iron sheets roofs are more likely to link with other people with iron sheets roofs than you would expect if they linked with people within the village at random; and in all but four villages, participants with thatched roofs are more likely to link with other people with thatched roofs than you would expect if they linked with people within the village at random.

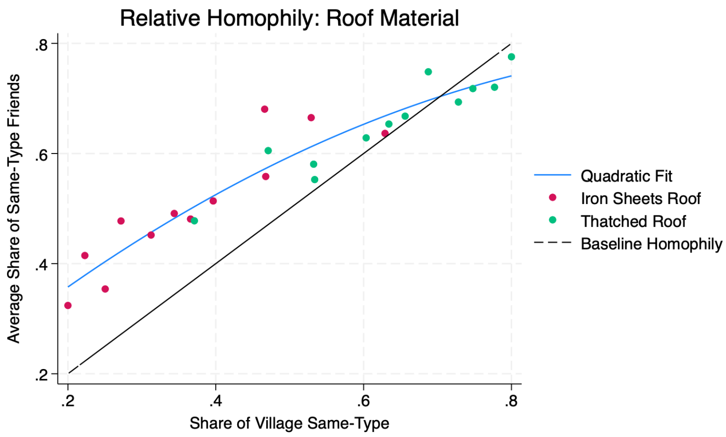


Figure 1: Income-Based Homophily

To elicit networks, enumerators ask participants to list each person with whom she ever engages with in a series of activities. The most common activity to engage with network links in is meal-sharing – on average, 61% of network links are listed as somebody who the participant hosted for a meal in the past year (median = 60%, IQR=37%), and 56% of network links are listed as somebody who the participant visited for a joint meal in the past year (median = 56%, IQR=42%).

2.2.2 Depression and Loneliness

Among the sample of low-income migrant women, 36% are likely depressed or lonely at baseline, with the larger portion of these women at risk of depression (27% depressed, and 14% lonely).[10] Note that, although depression and loneliness are correlated, the correlation is quite weak ($\rho = 0.113$) and only 6% of the sample is both depressed and lonely.

Consistent with recent work documenting high levels of depression among the elderly in low- and middle-income countries (Banerjee et al., 2023), depression is starkly increasing in age – 23% of the youngest decile of the sample are likely depressed (ages 18-20), whereas 36% of the oldest decile of the sample are likely depressed (ages 42 to 69) (Figure A.4, left-side panel). Conversely, loneliness is most prevalent among the youngest generation—the prevalence of

[10] I measure depression using the CESDR-10 tool (Center for Epidemiological Studies Depression Scale revised 10-item questionnaire). Consistent with convention, I denote anyone who scores 10 or greater as at risk of depression. I measure loneliness using the UCLA-3 questionnaire, a three-item loneliness scale. Consistent with convention, I denote anyone who scores 6 or greater as at risk of loneliness.

loneliness is 16% among 18-20 year-old women. Loneliness is steadily decreasing in age up until middle age (the least lonely cohort is women ages 37-41, where 9% are lonely). However, the oldest 10% of the sample—women ages 42 to 69—are as lonely as the youngest generation, with 16% prevalence.

This evidence suggests that loneliness and depression, while correlated, are independent objects with distinct origins. Surprisingly, while there is a significant correlation between the SES index and loneliness, there is *no correlation* between the SES index and and depression. There are two variables that emerge as predictors of *both* loneliness and depression: low food consumption and the difficulty of returning to a woman's home village. Consuming on average three meals a day (38% of the low-income sample) is associated with a 13 percentage point (42%) reduction in depression, and a 9 percentage point (46%) reduction in loneliness. Having consumed *any* meat in the past month (77% of the low-income sample) is associated with a 10 percentage point (28%) reduction in depression, and an 8 percentage point (46%) reduction in loneliness. Recall that the SES index is constructed from variables of productive assets and roof quality, rather than consumption.

I construct a PCA index of how challenging it is for a participant to return to her home village—the price of transport, time that a trip home takes, and visits that the participant makes per year. This index is significantly correlated with both depression and loneliness, which reiterates the importance of migrant status to these women's disadvantage (Figure A.4, right-side panel).

2.3 Meal-Sharing

Meal-sharing is a common social activity. At baseline, 90% of respondents report that they shared a meal with somebody outside their household in the previous week, with 68% of respondents both visiting somebody at least once and hosting somebody at least once in the past week. Participants report hosting others more often than visiting others, though both are common (they hosted 2.3 meals in the past week on average, and visited others for 1.6 meals in the past week on average). For shared meals that participants host and shared meals where they visit others, it is equally common to go after being invited and to initiate a shared meal without an invitation.[11]

Why is meal-sharing such a common activity? While *food*-sharing is a common method of risk-sharing, *meal*-sharing also encompasses sitting down together and eating with one another. Survey evidence suggests that this joint activity has benefits beyond the risk-sharing benefit of sharing food. In a sample of sixty-eight survey participants in rural Lilongwe (the district adjacent to Mchinji, where I conduct my experiment), I asked participants how personal a conversation could become across four settings: a shared meal, while working, while doing chores, and while at church. Both male and female participants overwhelming and consistently rated a shared meal as the setting where a conversation could become the most personal,

[11]Anecdotally, shared meals that happen without an invitation are a result of visiting a friend in her home while she is cooking, and receiving a spontaneous invitation to join.

regardless of if they imagined the shared meal to be with somebody who they typically share meals or with somebody with whom they know from working together (Table A.3).

Despite the high prevalence of meal-sharing, 72% of respondents in my study sample report that they would prefer to share more meals per week than they shared in the past week, and this is true even among women who shared many meals in the past week (Figure A.5).[12] While the objective of this paper is not to decompose the forces underlying this gap, I propose two primary contributors: high costs of initiating social relationships, and information frictions.

2.3.1 High Costs of Initiating Relationships

At baseline, I implement vignettes to understand social norms around meal-sharing and the barriers that women face when sharing meals with other women in the village.[13] When two hypothetical neighbors are both low-income, 55% of respondents believe that one of these neighbors would seek to share a meal with the other for the *food* (financial necessity or seeking out higher-quality food), rather than for the company. When one neighbor is higher income than the other, the percent of respondents who believe that the lower-income neighbor is visiting the higher-income neighbor in search of food rises by another 12 percentage points. Almost all of the remaining participants (43%) say that the lower-income woman seeks to share a meal because she and her neighbor are existing friends. Only 12% and 11% of women believed that the lower-income woman seeks to share a meal because she wants to become friends with the neighbor, or because she simply enjoys being in the company of others (respectively).

Seventy-five percent of respondents said that monetary concerns are the primary issue likely to hold someone back from visiting a neighbor for a meal without an invitation, such as fear of burdening the neighbor financially, fear of appearing poor ("beggar stigma"), and fear of not having the monetary resources to reciprocate a shared meal. Respondents cited social and financial concerns as primary barriers to a woman in the village from inviting a neighbor over for a shared meal, including worry that the neighbor does not like her (28%), and that she does not have enough food to share with the neighbor (26%).

Seventy-five percent of respondents report that they believed that these hypothetical women's concerns about meal-sharing were likely to be valid concerns. These vignettes suggest that women face a myriad of concerns about initiating meal-sharing relationships. Even when women are financially able to share meals, the fact that people share food both for companionship and to assist the needy leads to deep concerns about burdening others, stigmatizing others, or stigmatizing oneself.

[12]Sixty-five percent of respondents would prefer to host others more often, and similarly, 64% would prefer to visit others more often (47% would prefer to host *and* visit others for shared meals more often than they currently do).

[13]At baseline, enumerators read participants a vignette about a hypothetical woman in the village named Grace who would visit a neighbor to eat a meal together. In the vignette, the age and occupation of Grace and her neighbor were randomized (the ages were 25 or 45, and the occupations were subsistence farmers who cultivated their own land, versus agricultural day-laborers). Enumerators asked participants what are the likely reasons that Grace visited her neighbor in hopes of sharing a meal.

A natural question is if these concerns are true, or if this is a society in a state of pluralistic ignorance. Next, I examine descriptive evidence of pluralistic ignorance. Experimental results point towards some degree of pluralistic ignorance, along with real and prohibitive effort costs of initiating relationships.

2.3.2 Information Frictions

Are these valid concerns, or are women pluralistically ignorant of their joint willingness—and even desire—to share more meals? To understand the role of misperceptions about *other's* willingness to share meals, I ask women at baseline: What percent of women similar to you in the village do you believe would accept an invitation for a shared meal *from you specifically*?

On average, participants believe that 49.9% of women similar to her in the village would accept an invitation from her. However, 97% of women report that they themselves *would* accept a hypothetical invitation from another villager. While this is likely an overestimate of the true acceptance rate, as a self-reported and hypothetical figure, I am able to estimate an actual acceptance rate using my experiment, which creates exogenous invitations. One year after the experiment, participants report that 63% of invitations resulted in a shared meal, an invitation acceptance rate which is higher than 76% of participant's baseline estimated acceptance rate. This evidence indicates that there is a significant information friction whereby women systematically and pluralistically underestimate others' willingness to share meals.

3 Conceptual Model of Homophily

I model the actions that individuals choose to socially interact with other people, adapting the model of social network changes from Banerjee et al. (2024b). My model contributes to our understanding of social network formation through two key predictions. First, different types of relationships yield different types of benefits, and can be conceptualized as distinct goods. Consequently, agents prefer social networks where there is diversity in the potential benefits that they can attain from their network's members. Secondly, if the benefits that individuals can attain from some types of relationships are more sensitive than others to financial investments in those relationships, then high prices of socially valuable goods will inhibit agents from initiating these relationships through substitution effects. This has implications for income-based homophily: if the benefits that a low-SES agent can attain from a cross-SES relationship are more sensitive to financial investment than the benefits that a low-SES agent can attain from a within-SES relationship, then prices will inhibit cross-SES links. Even if a high-SES relationship is individually optimal relative to consumption, high prices can induce substitution effects between low-SES and high-SES relationships that induce homophily.

I consider two ways in which individuals obtain utility from social relationships. First, individuals get utility from social interaction itself (for example, the mental health benefits of friendship) which I refer to as "intrinsic utility". Individuals may invest in social relationships purely to experience utility from social connection. Secondly, social network connections have a financial return. Individuals do not experience utility from the money itself, but the extra income can then be used to consume goods and services from which individuals derive utility. I refer to the utility of the consumption that individuals can afford because of the financial return on social interaction as the "instrumental utility" of social relationships. Individuals may invest in social relationships in the hopes of a financial return. This formulation of social capital parallels the Grossman (1972) theoretical formulation of health capital, where health is intrinsically valuable and desired, yet also makes people more productive workers and allows them to earn more.

3.1 Model Set-up

There are $j \in \{1, 2, ...J\}$ individuals in a community and $\theta \in \{\Theta\}$ denotes social types. I consider two social types: L, low-SES individuals, and H, high-SES individuals. Denote J_L as the low-SES subset of individuals ($\theta_j = L$) such that $i \neq j$, and J_H as the high-SES subset ($\theta_j = H$). I model the social interaction activities that a low-SES individual i decides to engage in with low- and high-SES people $j \in J_L \cup J_H$.

First, individual i chooses if she wants to initiate a relationship with j, which bears a fixed effort cost. Then, conditional on initiating a relationship, i can invest in that relationship, which has a price. Let $S_{ij} \in \{0, 1\}$ be the decision to initiate a relationship with person j, and $I_{ij} \geq 0$ be the continuous amount that i invests in her relationship with j. Each action has a positive "value-weight" w^S and w^I, which convert the binary initiation decision and continuous investment level into comparable scalar inputs for the return functions. These weights reflect the value that society places on each action, as shaped by social norms, and are fixed. Investing in a relationship has a per-unit price p^I, which is also invariable across people since it is set by the market. Initiating a relationship bears an effort cost $c_{i.\theta_j}$, which I allow to vary by type θ_j. Let $S_{i,\theta} = \sum_{j \in J_\theta} w^S S_{ij}$ be the value-weighted number of type-θ links that i initiates. Let $I_{i,\theta} = \sum_{j \in J_\theta} w^I S_{ij} I_{ij}$ represent the sum of the value-weighted investments that individual i takes with all type-θ individuals j. Throughout, I assume that intrinsic and financial returns depend only on the aggregate value-weighted initiation and investment portfolios $S_{i,\theta}$ and $I_{i,\theta}$, not on their dyad-level composition.

Agent i chooses consumption Z_i, relationship initiation decisions S_{ij} and relationship investment levels I_{ij} to solve:

$$\max_{Z_i,\{S_{ij},I_{ij}\}_{j\neq i}} U_i\Big(V_i(S_{ij},I_{ij}),Z_i\Big)$$
$$\text{s.t. } Y_i(S_{ij},I_{ij}) \geq Z_i + \sum_{j\neq i} p^I \cdot I_{ij} \cdot S_{ij}$$
$$Y_i(S_{ij},I_{ij}) = \bar{y}_i(n_i,\cdot) + \mathbb{Y}\Big(\mathbb{E}^{net}\big[y^L(S_{i,L},I_{i,L})\big],\mathbb{E}^{net}\big[y^H(S_{i,H},I_{i,H})\big]\Big)$$
$$V_i(S_{ij},I_{ij}) = \bar{v}_i(n_i) + \mathbb{V}\Big(\mathbb{E}^{net}\big[v^L(S_{i,L},I_{i,L})\big],\mathbb{E}^{net}\big[v^H(S_{i,H},I_{i,H})\big]\Big) - \sum_{j\neq i} S_{ij}\cdot c_{ij}$$

where $V_i(S_{ij},I_{ij})$ denotes i's intrinsic utility and $Y_i(S_{ij},I_{ij})$ is i's income, both which depend on i's social-interaction portfolios $S_{i,\theta}$ and $I_{i,\theta}$. I assume that U_i is concave in $V_i(S_{ij},I_{ij})$ and Z_i, and that both terms are additively separable in U_i.

The functions $\mathbb{Y}$ and $\mathbb{V}$ are aggregator functions that determine how relationship portfolios with type-$\theta \in \{L,H\}$ combine to form total instrumental and intrinsic utility of social relationships. These functions capture the degree of separability or interaction between relationships with low-SES and high-SES women. The function $\mathbb{E}^{net}[v^\theta(S_{i,\theta},I_{i,\theta})]$ represents the expected intrinsic utility return from type-θ initiation and investment portfolios $S_{i,\theta}$ and $I_{i,\theta}$ that i chooses, and $\mathbb{E}^{net}[y^\theta(S_{i,\theta},I_{i,\theta})]$ represents the expected financial return from initiation and investment portfolios $S_{i,\theta}$ and $I_{i,\theta}$. For simplicity, denote $\mathbb{E}^\theta_v = \mathbb{E}^{net}[v^\theta(S_{i,\theta},I_{i,\theta})]$ and $\mathbb{E}^\theta_y = \mathbb{E}^{net}[y^\theta(S_{i,\theta},I_{i,\theta})]$. These terms aggregate dyad-specific expected marginal utilities, incorporating both the probability of mutual consent and the return conditional on successful formation, as defined in Appendix F.1. Finally, $\bar{v}_i(n_i)$ is the intrinsic utility that i gets from her pre-existing social network n_i, and $\bar{y}_i(n_i,\cdot)$ is i's pre-existing income, which depends on the pre-existing network.

Let $\lambda_Z = \frac{\partial U_i}{\partial Z_i}$, and let $\lambda_V = \frac{\partial U_i}{\partial V_i}$. Throughout my comparative statics, I scale $\mathbb{Y}(\cdot)$ by λ_Z, which effectively converts financial return to instrumental utility units and ensures that money is weighted by the marginal value of consumption in total utility. I also scale $\mathbb{V}(\cdot)$ by λ_V, which weights intrinsic utility return by the marginal value of intrinsic utility of relationships in total utility.

3.2 Cross-Type Sensitivity of Initiations to the Price of Investment

Assumption 1 (Curvature Favors Diversification after Sufficient Input Imbalance)**.** *Let $\mathbb{E}^\theta_y$ and $\mathbb{E}^\theta_v$ be positive, strictly increasing, continuously differentiable and concave in both arguments $S_{i,\theta}$ and $I_{i,\theta}$. Let the aggregator functions $\mathbb{Y}(\mathbb{E}^L_y,\mathbb{E}^H_y)$ and $\mathbb{V}(\mathbb{E}^L_v,\mathbb{E}^H_v)$ be strictly concave and twice continuously differentiable.*

For all $\theta \in \{L,H\}$ with $\theta' \neq \theta$, there exists $\Delta > 0$ where two conditions hold:

1. *If* $\Delta \leq \lambda_Z(\mathbb{E}_y^\theta - \mathbb{E}_y^{\theta'}) + \lambda_V(\mathbb{E}_v^\theta - \mathbb{E}_v^{\theta'})$*, then,*

$$\frac{d^2U_i}{dS_{i,\theta}^2} < \frac{d^2U_i}{dS_{i,\theta'}^2},$$

evaluated at the aggregator input values corresponding to $(S_{i,\theta}, I_{i,\theta}, S_{i,\theta'}, I_{i,\theta'})$.[14]

2. *Furthermore, assume that* Δ *is small enough so that an individual could feasibly attain a portfolio unbalanced enough to let condition (1) be true:*

$$\Delta < \sup_{S_{i,\theta}, I_{i,\theta}} \left\{ \lambda_Z \cdot \mathbb{E}_y^\theta + \lambda_V \cdot \mathbb{E}_v^\theta \right\},$$

That is, after initiating and investing in relationships with one type of person, I assume there exists a point after which the marginal returns to continuing to interact with that type of person diminishes faster than the returns to interacting with a new type of person.

Assumption 1 is conceptually equivalent to modeling θ and θ'-type relationships as distinct goods. Each yields distinct benefits, and so the returns to more interaction within-type must at some point diminish faster than across-type.

Assumption 2. *The optimal number of initiations* $S_{i,\theta}^*$ *is weakly monotonically increasing in the marginal return to investment, defined as*

$$\frac{\partial}{\partial I_{i,\theta}} \left(\lambda_Z \mathbb{Y}\left(\mathbb{E}_y^L, \mathbb{E}_y^H\right) + \lambda_V \mathbb{V}\left(\mathbb{E}_v^L, \mathbb{E}_v^H\right) \right)$$

That is, if investment in type θ *becomes more valuable, individual* i *will never reduce the number of initiations with type-*θ *individuals in order to concentrate investments in fewer type-*θ *links. However, she can adjust by increasing investments in a fixed number of type-*θ *links, rather than initiating new links.*

Lemma 1 (Eventual Dominance of Diversification)**.** *Let* $\theta \in \{L, H\}$ *and let* $\theta' \neq \theta$*. Consider a globally optimal and feasible portfolio* $(\bar{S}_{i,\theta}, \bar{I}_{i,\theta}, \bar{S}_{i,\theta'}, \bar{I}_{i,\theta'})$ *such that* $\bar{S}_{i,\theta} > \bar{S}_{i,\theta'}$ *and* $\bar{I}_{i,\theta} \geq \bar{I}_{i,\theta'}$*. Let Assumptions 1 and 2 hold. Then there exists a portfolio* $(S_{i,\theta}^*, I_{i,\theta}^*)$ *with* $S_{i,\theta}^* \geq \bar{S}_{i,\theta}$ *and* $I_{i,\theta}^* \geq \bar{I}_{i,\theta}$ *such that:*

$$\left.\frac{dU_i}{dS_{i,\theta'}}\right|_{(S_{i,\theta}, I_{i,\theta}, S_{i,\theta'}, I_{i,\theta'}) = (S_{i,\theta}^*, I_{i,\theta}^*, \bar{S}_{i,\theta'}, \bar{I}_{i,\theta'})} > \left.\frac{dU_i}{dS_{i,\theta}}\right|_{(S_{i,\theta}, I_{i,\theta}, S_{i,\theta'}, I_{i,\theta'}) = (S_{i,\theta}^*, I_{i,\theta}^*, \bar{S}_{i,\theta'}, \bar{I}_{i,\theta'})}$$

That is, for any optimal portfolio in which the number of type-θ *initiations strictly dominate the number of type-*θ' *initiations, there exists a sufficiently large expansion of initiations with type-*θ *such that the marginal utility of initiating an additional type-*θ' *link exceeds that of further expanding type-*θ*.*

[14] Note that, while the condition is expressed in returns, returns are a direct a function of choice variables and the condition can equally be conceptualized in terms of choice variables.

Lemma 1 asserts the existence of a local "switching point": a minimal level of initiations and investment in type θ after which it becomes strictly more beneficial to initiate relationships with type θ'. That is, there must be a point after which diversifying networks becomes preferable to deepening connections with the dominant type in the network.

Proposition 1 (Subsidies Induce Diversification Across Types)**.** *Let $p^I(\tau) = p^I - \tau$ be the per-unit price of investment under subsidy $\tau \geq 0$. Fix a type $\theta \in \{L, H\}$ and let $\theta' \neq \theta$. Let $S^*_{i,\theta}(\tau)$ denote the optimal number of relationships agent i initiates with type θ under subsidy level τ. At $\tau = 0$, let $S^*_{i,\theta}(0) > S^*_{i,\theta'}(0)$.*

Assume that, for all θ-type and θ'-type links and for all τ, an interior solution exists, and the agent faces no prohibitive fixed cost preventing $S_{i,\theta} > 0$ or $S_{i,\theta'} > 0$. We can express the maximum $c_{i,\theta}$ that can allow for an interior solution as the total derivative of the utility of initiating with j with respect to $S_{i,\theta}$ (and the analogous condition for θ'):

$$c_{i,\theta} \leq \frac{d}{dS_{i,\theta}} \left[\lambda_V \mathbb{E}^{net}[v^\theta(S_{i,\theta}, I^*_{i,\theta}(S_{i,\theta}))] + \lambda_Z \mathbb{E}^{net}[y^\theta(S_{i,\theta}, I^*_{i,\theta}(S_{i,\theta}))] - p^N \cdot I^*_{i,\theta}(S_{i,\theta}) \right] \Big|_{S_{i,\theta}=S^*_{i,\theta}(\tau)}, \tag{1}$$

where $I^*_{i,\theta}(S_{i,\theta})$ is the optimal investment level given endogenous adjustments to $S_{i,\theta}$.

Then there exists $\tilde{\tau} > 0$ such that:

$$S^*_{i,\theta'}(\tilde{\tau}) > S^*_{i,\theta'}(0).$$

By Lemma 1, diversifying networks must be preferable to expanding engagement within type-θ after θ reaches a certain level of dominance in the network. Thus, there must be a subsidy large enough to induce enough social interaction within type-θ such that the marginal utility of the next initiation is highest if it is with type θ'.

Proposition 2 (Speed of Diversification by Sensitivity of Returns to Investment)**.** *Let τ be the subsidy introduced in Proposition 1. Let $S^*_{i,\theta}(\bar{\tau})$ and $I^*_{i,\theta}(\bar{\tau})$ be the interior-condition optimal choices of initiations and investment, respectively, under fixed subsidy $\tau = \bar{\tau} > 0$.*

(a) ***Interior Solution Predictions.*** *Assume that Condition 1 holds for θ and θ', at all τ (there is an interior solution). If the marginal return to financially investing in θ' is always greater than the marginal return to financially investing in θ, i.e.*

$$\frac{dU_i}{dI_{i,\theta'}} > \frac{dU_i}{dI_{i,\theta}}, \tag{2}$$

then, given a fixed subsidy $\bar{\tau}$:

$$Pr[S^*_{i,\theta'}(\bar{\tau}) > S^*_{i,\theta'}(0) \mid S_{i,\theta}(0) > S_{i,\theta'}(0)] \quad > \quad Pr[S^*_{i,\theta}(\bar{\tau}) > S^*_{i,\theta}(0) \mid S_{i,\theta'}(0) > S_{i,\theta}(0)].$$

That is, a subsidy is more likely to induce diversification if the type whose returns are less *sensitive to financial investment is dominant in the pre-subsidy bundle.*

(b) ***Corner Solution Predictions.*** *Instead, assume the agent faces a corner solution such that she will never initiate a relationship with a type-θ woman at the optimal bundle:*

$$c_{i,\theta} > \frac{d}{dS_{i,\theta}} \left[\lambda_V \mathbb{E}^{net}[v^{\theta'}(S_{i,\theta}, I^*_{i,\theta}(S_{i,\theta}))] + \lambda_Z \mathbb{E}^{net}[y^{\theta}(S_{i,\theta}, I^*_{i,\theta}(S_{i,\theta}))] - p^N \cdot I^*_{i,\theta}(S_{i,\theta})\right]\Bigg|_{S_{i,\theta}=S^*_{i,\theta}(\bar{\tau})}$$

Define the probability that she initiates new relationships with type-θ' women under $\bar{\tau}$, while in this corner solution, as

$$Pr^c_{\theta'} = Pr[S^*_{i,\theta'}(\bar{\tau}) > S^*_{i,\theta'}(0) \mid S_{i,\theta}(0) = 0, S_{i,\theta'}(0) \geq 0]$$

Now consider that the agent faces an analogous but reversed corner solution such that she will never initiate a relationship with a type-θ' woman at the optimal bundle, but initiating relationships with type-θ is feasible. Define the probability that she initiates a new relationship with a type-θ woman under $\bar{\tau}$ as

$$Pr^c_{\theta} = Pr[S^*_{i,\theta}(\bar{\tau}) > S^*_{i,\theta}(0) \mid S_{i,\theta'}(0) = 0, S_{i,\theta}(0) \geq 0]$$

Let the marginal return to investing in type θ' be strictly greater than for type θ at the optimal interior solution (Condition 2). Then, despite this conditions:

$$Pr^c_{\theta'} \lesseqgtr Pr^c_{\theta}$$

Without type-θ available for substitution, agent i might initiate relationships with all positive-utility social links when $\tau = 0$. As a result, the subsidy can induce purely intensive-margin responses, even when cross-type differences in returns favor increased initiation.

All proofs are in Appendix Section F.2.

From Proposition 1, we know that a sufficiently large subsidy will induce diversity in initiations. By Proposition 2(a), the type whose returns are more sensitive to financial investment requires a lower subsidy to induce diversity of initiations. Thus, a fixed subsidy is more likely to lead to initiations with the type whose returns are more sensitive to financial investment in the relationship, and the subsidy is more likely to induce diversification if the dominant type in the zero-subsidy counterfactual is the type whose returns are less sensitive to investment.

Proposition 2(b) highlights an important counterfactual: even if marginal returns to investment are higher with one type, a subsidy may fail to shift behavior under a corner solution. This arises because, without access to the other type, there is no cross-type margin of substitution available. Consequently, the agent may already initiate the optimal number of type-θ relationships when $\tau = 0$. Evaluating this counterfactual can reveal if prices are a *feasibility* constraint, or if, as the model proposes, the marginal rate of substitution between initiating relationships with high-SES and low-SES links changes across the price domain.

4 Experimental Design and Empirical Specifications

The RCT includes two intervention arms: an inviting service ("Inviter" treatment) and a meat price subsidy ("Voucher" treatment). The Inviter treatment includes information about who in the village would like to share meals, and enumerators send invitations for a shared meal on the participants' behalf. The treatment bundles information and a service that jointly reduce the effort-cost of initiating a shared meal: it reduces the risk of rejection, the hassle cost of finding other women in the village to invite, and the emotional cost of face-to-face rejection. I recruit a sample of 3,600 women who moved to the village after the age of 14 but no more than 20 years ago. I select a 1,600-person subset of the sample for the intervention (henceforth, the Intervention Sample), selected randomly among women in the bottom 80% of the SES index (proxy for lower-income) since high prices are more likely to be prohibitive for lower-income women (SES index construction is described in Section 4.1.1). Of the women in the top 20% of the SES index, I offer 500 the opportunity to be a Guest. Of the women who are in the bottom 80% of the SES index, but are *not* selected for the Intervention Sample, I also offer 500 the opportunity to be a Guest.

Every participant has the opportunity to add their name to a list of women who are interested in sharing meals with other women in the village more often (Sharing List), knowing that at a later stage some women in the village will see the list and have the opportunity to invite people from the list. Almost every woman signs up for the list (99.6%), and almost all agree to have their photo taken and displayed on the list so that women who do not know them by name can still send them an invitation (96.4%). The women who sign up for the Sharing List *and* are randomly selected to be a Guest have the opportunity to actually appear on the Sharing List.

The Intervention Sample is randomized into three groups:

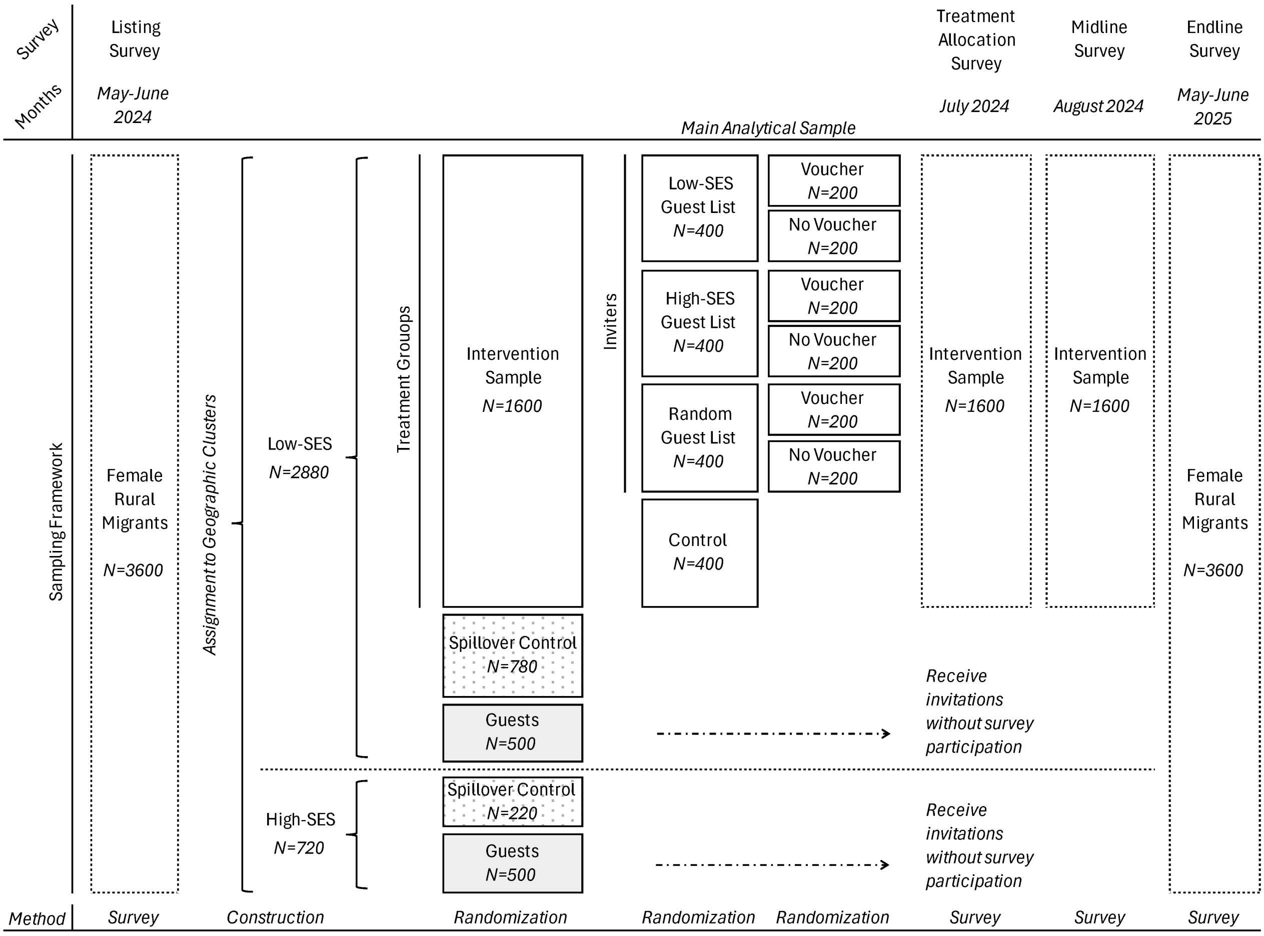
1. Inviter Treatment (n=600) – This group views up to six names from the Sharing List and can invite up to five women on the list to share a meal (invitation delivered by enumerators).

2. Vouchers + Inviter Treatment (n=600) – Recipients receive 4 USD (8% median monthly income) vouchers, redeemable at a local butcher, and the Inviter Treatment.

3. Control (n=400) – This group does not receive any intervention.

Within treatments 1 and 2, participants view one of three types of Sharing Lists: Low-SES Guest List (all women on the list are also in the bottom 80% on the income index), High-SES Guest List (all women on the list are in the top 20% on the income index), or the Random Guest List (names on the list are randomly selected across both the high-SES and low-SES subsamples). For each of these three groups, n=200 in treatment 1, and n=200 in treatment 2.

Figure 2: Study Design



Notes: Women are eligible for the Listing Survey if they are at least eighteen years old; moved to the village after the age of fourteen; and have been there for fewer than twenty years. Geographic clusters were constructed using participant house coordinates from the Listing Survey and k-means clustering. Thus, geographic clusters represent spacially constructed groups of participants based on proximity, rather than political or economic boundaries. Women are coded as "Low-SES" if they fall below the 80th percentile on an SES-index within their geographic cluster; and are coded as "High-SES" if they are in the top quintile on the SES-index within their geographic cluster. The SES index is constructed using Anderson (2008) inverse covariance weighting of the following variables: household roof material, an indicator for if the woman lives in her own house, acres of land owned, and a business capital index. Low-SES women are randomly assigned to be in the Intervention Sample, who participate in every survey and who constitutes the main analytical sample that I use throughout the paper (N=1600); to be a Spillover Control group member, who are not surveyed again until the Endline Survey (N=780); or to be a Guest, who are not surveyed until the Endline Survey but receive inivations during the Treatment Allocation Survey (N=500). High-SES women are randomly assigned to be in the Spillover Control group, who are not surveyed again until the Endline Survey (N=220); or to be a Guest, who are not surveyed until the Endline Survey but receive inivations during the Treatment Allocation Survey (N=500). The Intervention Sample is randomly split into Inviters (N=1200) and Control (N=400). Inviters are randomly assigned to have Low-SES Guest List (meaning they only view the names of Low-SES Guests on their Sharing List); a High-SES Guest List; or a Random Guest List (where they view a mix of high- and low-SES women's names). Conditional on being within 800m of the Inviter, conforming to the Guest List sub-randomization, and appearing on no more than ten lists total, six Guests are randomly assigned to each Inviter's Sharing List. Finally, I cross-randomize a Voucher for a butcher across all Inviter treatments.

The SES index is constructed from variables collected in the listing survey, and has two advantages: because it is continuous, it allows me to draw precise quantiles of income within each village, so that I can control the portions of each village that is classified as High- or Low-SES;[15] and the Anderson (2008) weighting allows me to account for and reward uncorrelated ways of holding wealth within a single index.

Randomization is at the individual level, stratified by geographic-area clusters and quintile of the SES index. Randomization is stratified by geographic clusters to ensure that the density

[15] The treatment design requires precise portions of participants to be classified as High- and Low-SES – otherwise, we might conflate the effects of cross- versus within-SES relationships with the effects of interacting with more- or less-available people. Using a discrete measure such as roof material, which is a very salient and typical variable used as a proxy for income but varies dramatically across villages, would mean that the High-SES-cutoff would be at a different quantile of income in each village.

of the treatment arms does not differ spatially and create differential cultural shifts; and is stratified by the SES index since there are likely differences in income even among the people I classify as Low-SES, and the average income differences between the Inviters and Guests should be constant across treatment arms.

4.1 Data

I conduct four rounds of data collection: a Listing Survey with all 3600 participants (May 2024), a Treatment Allocation Survey with the Intervention Sample (July 2024), a Midline Survey with the Intervention Sample one month later (August 2024), and an Endline Survey with the full sample one year later after the following harvest (May 2025).

The Listing Survey was conducted in May 2024. In this survey, all participants are informed that some people will be selected for a project where they might receive a voucher and can invite other women to share a meal. We then explain to participants that, while we cannot say whether or not they will be selected for that program, they can have the opportunity to put their name on a list that indicates their interest in receiving an invitation for a shared meal from a neighbor. They are informed that the list will not be printed or physically distributed, so nobody will have the opportunity to show the list to others; and that the list will only be used if at least ten women from within their area sign up. Enumerators then request to take a photo of the participant in front of her house, to help others identify her when they see her name on the list (more than 99% of women sign up for the Sharing List, and more than 96% of women agree to have their photo taken).

The Treatment Allocation survey was conducted in July 2024. Women are randomized into treatment groups using a computer program after the Listing Survey. Women in the Intervention Sample all participate in the Treatment Allocation survey, in which they are informed of their treatment status. First, women are informed if they are recipients of the Voucher treatment. After receiving their Voucher treatment status, women in the Inviter treatment see a list of up to six names and photos and receive the opportunity to send invitations to up to five women on the list.

The lists of Guest names that each Inviter views are randomly allocated to Inviters. First I randomize an order among Inviters for which to allocate Guests. One at a time in the pre-assigned order, I randomly select one Guest (among those eligible to appear on that specific Inviter's list) to appear on that Inviter's list. A Guest is eligible to appear for a specific Inviter if she conforms to the Inviter's treatment (for example, a high-SES woman cannot appear on the list of an Inviter randomized to see only low-SES Guest names), lives within 800 meters of the Inviter, and has not already appeared on ten lists.[16]

[16]There are 68 participants who are randomized into the Intervention Sample but who attrit from the Treatment Allocation Survey. These participants are randomly replaced using women in the Control group who originally are not selected for the Intervention Sample and who live in the same geographic cluster as the attriter. Fifty-two of these women who are "replacements" are Inviters. Because the names from the Sharing List that each Inviter sees is dependent on *other* Inviters' Sharing Lists, I do not reconstruct the Sharing List

4.1.1 Defining Socio-Economic Status

I construct an index of socio-economic status. The SES index is the inverse-covariance-weighted index (Anderson, 2008) of the following variables: an indicator for having a high-quality roof material, an indicator for if the respondent lives in her own home,[17] acres of farmland owned, number of garden plots owned, and an index of business capital.[18] There are two main classes of income-generating assets in this region: farmland and a business. Land ownership serves as a proxy for farming assets, and I create a proxy for business capital based on the type of businesses that each woman's household engages in. I use the Anderson (2008) index because the households who engage in farming and business may be different, and Anderson (2008) down-weights correlated variables—thus, both the stock and the diversity of assets are rewarded in the index.

When I need to consider a binary version of socio-economic status, I split the SES index into two groups: high-SES, or the women in the top 20% of the SES index (quintiles drawn within geographic clusters); and low-SES, or the women in the bottom 80% of the SES index. Note that these women are *relatively* lower- and higher-income than one another, but are still all very poor on a global scale, and even within the context of Malawi. That said, there are still stark differences between the high- and low-SES samples (Table A.2).

When I need to consider the income of participant's network connections, I cannot use the SES index. Since participants have network connections who are outside the sample, I do not have the same rich set of data available for them. Furthermore, I cannot ask respondents to report this information about their network connections, because participants are unlikely to have precise information about their network connections' landholdings and business capital. However, it *is* likely that participants know the material of each of their network connections' roofs. Roof material is an observable household feature, and a salient proxy for income. Thus, when I analyze participants' connectedness to high- or low-SES people, I use the roof material of their network connections as a measure of income. While roof material is a more coarse proxy, and is not as good at identifying the highest-income individuals because 38% of the sample has a higher-quality (iron sheets) roof, it approximates the high- and low-SES sub-samples within my full participant sample fairly well (Table A.2).

for these replacement households. Note that this means that, for replacement households, the Guests available for them to invite are not necessarily within 800 meters. In all but 19 cases, I also am able to randomly select a woman from the same wealth quintile, to hold strata constant. In the cases where there is not a Control household available from the same geographic cluster and the same wealth quintile, I select a woman from the same geographic cluster and the proceeding or succeeding wealth quintile.

[17] Since many of the respondents were recent migrants, some did not live in their own home and were staying with a relative or other acquaintance while their home was under construction. In order to account for these cases, where income and roof material may be more likely to be discordant, I included a variable indicating if a respondent did not live in her own home.

[18] See Appendix Section A.1 for a detailed description of how I constructed the business capital index.

4.2 Estimating Equations

4.2.1 First Stage

First I evaluate Inviters' decisions about who to invite using the following specification:

$$I_i = \beta_0 + \beta_1 T_i^{R,V} + \beta_2 T^{H,NV} + \beta_3 T^{H,V} + \beta_4 T^{L,NV} + \beta_5 T^{L,V} + X_i + \delta_i + \gamma_i + \epsilon_i \tag{3}$$

where I_i is an indicator denoting if Inviter i sends an invitation to any Guest, T_i denotes the treatment group (Random Guest List without Voucher, Random Guest List with Voucher, High-SES Guest List without Voucher, High-SES Guest List with Voucher, Low-SES Guest List without Voucher, and Low-SES Guest List with Voucher), X_i is a vector of unbalanced baseline controls and lasso-selected controls, δ_i are wealth-quantile fixed effects, and γ_i are geographic cluster fixed effects (my two randomization strata).[19] For regressions concerning invitation-sending, Inviters with the Random Guest List without the Voucher are the omitted group. To understand the composition of the Guests that Inviters choose to send invitations to, I conduct the following two analyses:

$$I_i^H = \beta_0^H + \beta_1^H T_i^{R,V} + \beta_2^H T^{H,NV} + \beta_3^H T^{H,V} + X_i + \delta_i + \gamma_i + \epsilon_i \tag{4}$$

$$I_i^L = \beta_0^L + \beta_1^L T_i^{R,V} + \beta_2^L T^{L,NV} + \beta_3^L T^{L,V} + X_i + \delta_i + \gamma_i + \epsilon_i \tag{5}$$

where I_i^H is the number of High-SES Guests who Inviter i sends an invitation to, and I_i^L is the number of Low-SES Guests who Inviter i sends an invitation to. I_i^H is mechanically equal to zero for participants in the Inviter Group with the Low-SES Guest List, and I_i^L is mechanically equal to zero for participants in the Inviter Group with the High-SES Guest List. Thus, I restrict the analysis of Equation 4 to Inviters with the High-SES Guest List or the Random Guest List, and restrict the analysis of Equation 5 to Inviters with the Low-SES Guest List or the Random Guest List.

Similarly, using only the Random Guest List, I estimate:

$$I_i^{H\&L} = \beta_0^{H\&L} + \beta_1^{H\&L} T_i^{R,V} + X_i + \delta_i + \gamma_i + \epsilon_i \tag{6}$$

$$I_i^{H\text{-}only} = \beta_0^{H\text{-}only} + \beta_1^{H\text{-}only} T_i^{R,V} + X_i + \delta_i + \gamma_i + \epsilon_i \tag{7}$$

$$I_i^{L\text{-}only} = \beta_0^{L\text{-}only} + \beta_1^{L\text{-}only} T_i^{R,V} + X_i + \delta_i + \gamma_i + \epsilon_i \tag{8}$$

where $I_i^{H\&L} \in \{0, 1\}$ indicates Inviters who select 'mixed bundles' of both high-SES and low-SES Guests, $I_i^{H\text{-}only} \in \{0, 1\}$ indicates Inviters who select at least one high-SES Guest and no

[19] I use the following six comparisons to test for baseline balance: all Inviters versus all Control participants in the Intervention sample (Table B.6), Inviters with the High-SES Guest List versus Inviters with the Random Guest List (Table B.1), Inviters with the Low-SES Guest List versus Inviters with the Random Guest List (Table B.1), and Inviters with the Voucher versus those without in each sub-Inviter-group (Table B.4 and Table B.5). Across all six of these tests, one unbalanced variable emerges: the Inviters with the Low-SES Guest List are less likely than the Inviters with the Random Guest List to have moved to the village for marriage (.177 SD difference) (Table B.1). Thus, in all specifications, I control for an indicator variable denoting if the participant moved to the village for marriage.

low-SES Guests, and $I_i^{L\text{-}only} \in \{0, 1\}$ indicates Inviters who select at least on low-SES Guest and no high-SES Guests.

4.2.2 Model Predictions and Empirical Tests

Each of the following tests maps directly to a theoretical prediction, using the coefficients estimated in Equations 3–8 to empirically evaluate Propositions 1 and 2. I use Inviters' decisions about who to send invitations to, across treatment conditions, as a revealed preference measure of how Inviters perceive the returns to within-SES and cross-SES relationships, given different feasible levels of financial investment in the relationship.

Model Prediction 1: Within-type versus Across-type Diminishing Returns

Returns diminish across-type slower than they diminish within-type, so agents seek economic diversity in their networks (this allows them to achieve more diversity in the potential benefits of their social interactions). Consequently, the marginal returns to a subsidy are increasing for mixed bundles faster than they are increasing for homogeneous bundles [Proposition 1]

Test: $\beta_1^{H\&L} > \beta_1^{H\text{-}only}$ and $\beta_1^{H\&L} > \beta_1^{L\text{-}only}$ (Equations 6, 7 and 8)

Model Predictions 2-3: Understanding Income-Based Homophily

Agents will be most likely to invest more in the type whose returns are more sensitive to financial investment in response to a subsidy. Thus, if the benefits of cross-SES relationships are more sensitive to financial investment than the benefits of within-SES relationships, then prices constrain cross-SES linking [Proposition 2(a)]. Crucially, this is because the rate of substitution between initiating links within-SES and across-SES changes with the price of investment, and so we should not expect to see the same when substitution is not an option [Proposition 2(b)].

Test: $\beta_1^H > 0$ and $\beta_2 = \beta_3 = \beta_4 = \beta_5$ (Equations 3and 4)

This test determines if prices inhibit cross-SES linking, and, to the extent that baseline networks are homophilic by income, network economic diversity. This does not rule out the possibility that prices may also inhibit some degree of linking within-type. I can then ask if prices inhibit economic *connectedness*, where they inhibit cross-SES linking to the extent that the network composition would be skewed more towards cross-SES links in the face of lower prices.

Test: $\beta_1^H > \beta_1^L$ (Equations 4 and 5)

Ruling out Alternate Models

Furthermore, I can test alternate models where effort costs and prices impose feasibility constraints. I describe two alternate tests and the models they imply below:

- $\beta_2 > \beta_4$ (Equation 3): Holding returns constant, the cost of effortful initiation with high-SES women constrains cross-SES relationships

- $\beta_1^H > 0$ and $\beta_3 - \beta_2 > \beta_5 - \beta_4$ (Equations 3 and 4): High prices constrain cross-SES relationships because high-SES links are infeasible without financial investment

4.2.3 Second Stage: Intent-to-Treat Results

To estimate the intent-to-treat treatment effects of the intervention on second-stage outcomes, I conduct the following analysis:

$$Y_i = \beta_0 + \beta_1 T_i^{R,NV} + \beta_2 T_i^{R,V} + \beta_3 T_i^{H,NV} + \beta_4 T_i^{H,V} + \beta_5 T^{L,NV} + \beta_6 T^{L,V} + Y_{BL,i} + X_i + \bar{S}_i + \delta_i + \gamma_i + \epsilon_i \tag{9}$$

where Y_i is a given outcome, T_i denotes the treatment group, $Y_{BL,i}$ is the baseline measure of the dependent variable (following Cilliers et al. (2024)), X_i is a matrix of lasso-selected controls and unbalanced baseline variables, δ_i are wealth-quantile fixed effects, and γ_i are geographic cluster fixed effects. When testing second-stage outcomes, the omitted group is always the Control group.

$\bar{S}_i$ is a vector of four spillover variables that control for exposure to spillovers from the experiment to alleviate potential SUTVA concerns. My four spillover measures are the following: the total number of surrounding Inviters and Guests; the total number of within-SES Inviters and Guests (Inviters with the Low-SES Guest List plus Low-SES Guests); the total number of Inviters with the High-SES Guest List; and the total number of High-SES Guests. The first measure establishes the effect of the treatment as a whole. The second measure establishes the effect of being exogenously surrounded by within-SES relationships. The third and fourth measures establish the effect of be exogenously surrounded by more cross-SES relationships, separately by proximity to the low-SES and high-SES sides of the link. For each spillover measure, I estimate $\bar{S}_i$ by counting the number of participants of interest within fifty meters of each participant, and then recentering the variables to account for endogenous spatial variation following Borusyak and Hull (2023).

5 Results: First Stage

The empirical analysis in this section first establishes that the experiment achieves take-up in the first-stage. Given qualitative differences in take-up, it provides context through which to interpret the downstream results. Additionally, this section aims to enrich our understanding of barriers to social network formation. By analyzing invitation-sending decisions, I assess the roles of costly effort, financial constraints, and preferences in shaping and inhibiting social interaction decisions. I find that, while high prices do inhibit initiating relationships with high-SES women but have no effect on initiations with low-SES women, this is driven by a reduction in the probability that women invite a mixed bundle of *both* low- and high-SES links.

Interpreting my results through the lens of the conceptual model (Section 3), I argue that, while high-SES women are the specific ties that low-SES women are most inhibited from engaging

Table 1: Treatment Effects on Invitation-Sending to Low-SES and High-SES Guests

	(1) Any Guest		(2) Low-SES Guest		(3) High-SES Guest	
Random with Voucher	-0.009	(0.038)	0.011	(0.045)	0.085**	(0.042)
High-SES without Voucher	0.028	(0.038)			0.319***	(0.042)
High-SES with Voucher	-0.025	(0.038)			0.263***	(0.042)
Low-SES without Voucher	-0.042	(0.038)	0.268***	(0.045)		
Low-SES with Voucher	-0.044	(0.038)	0.265***	(0.045)		
Observations	1200		800		800	
Control Mean	0.830		0.530		0.535	
P-values:						
High-SES: Voucher = No Voucher	0.166				0.184	
Low-SES: Voucher = No Voucher	0.950		0.953			
Test: *HSES without V = HSES with V = LSES without V = LSES with V*					[p= 0.432]	
DID Estimates [P-values]						
High-SES without Voucher – Low-SES without Voucher					0.052 [p= 0.403]	
High-SES with Voucher – Low-SES with Voucher					-0.002 [p= 0.977]	
Random with Voucher:						
Invites to High-SES – Invites to Low-SES					0.073 [p= 0.270]	

Standard errors in parentheses
All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. (column 1) indicates if the Inviter sent an invitation to at least one Guest. (column 2) indicates if the Inviter sent an invitation to at least one low-SES Guest (Inviters with the High-SES Guest List did not see any low-SES names, so this outcomes is mechanically zero for this group). (column 3) indicates if the Inviter sent an invitation to at least one high-SES Guest (Inviters with the Low-SES Guest List did not see any high-SES names, so this outcome is mechanically zero for this group).
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

with, women strive to attain *economically diverse* networks, but are inhibited in doing so by price. Low-SES women do not attempt to form social networks that are highly economically connected or highly homophilic.

5.1 Invitation Sending Across Treatment Sub-Groups

First, I analyze Inviter's invitation-sending decisions in the Treatment Allocation Survey. Because the number of Control invitations is mechanically equal to zero, given that they did not have the opportunity to send any invitations, I use Inviters with the Random Guest List without the Voucher as a comparison group for all other sub-treatments. Eighty-one percent of Inviters invite at least one Guest, and the rate of inviting *anybody* is non-differentiable across treatment arms (column (1) of Table 1, and the left-side panel of Figure C.1). Inviters invite 1.4 Guests on average (1.8 Guests on average among Inviters who invite at least one Guest), with the Inviters who had the Low-SES Guest List inviting slightly fewer women (Table 1, and the right-side panel of Figure C.1). The vast majority of these invitations are to women who are not in participants' baseline networks, indicating that effort costs of social linking are prohibitively high, yet easy to overcome with a simple intervention. Furthermore, I cannot rule

Table 2: Treatment Effects on Invitation-Sending to Guest "Bundles"

	(1) Mixed Bundle		(2) Low-SES Only		(3) High-SES Only		(4) >= 2 Invitations	
Random with Voucher	0.105**	(0.043)	-0.097**	(0.042)	-0.023	(0.042)	0.042	(0.047)
Low-SES without Voucher			0.505***	(0.042)			-0.002	(0.067)
Low-SES with Voucher			0.492***	(0.042)			-0.040	(0.067)
High-SES without Voucher					0.547***	(0.042)	-0.061	(0.059)
High-SES with Voucher					0.497***	(0.042)	-0.086	(0.060)
Observations	400		800		800		1200	
Random without Voucher Mean	0.235		0.295		0.300		0.435	
P-values:								
High-SES: Voucher = No Voucher					0.231		0.582	
Low-SES: Voucher = No Voucher			0.753				0.410	
DID Estimates [P-values]								
Random with Voucher:								
(1) Chooses High-SES Only – Chooses Low-SES Only					0.074 [p= 0.267]			
(2) Chooses a Mixed Bundle – Chooses a Homogeneous Bundle			0.202 [p= 0.001]		0.128 [p= 0.053]			

Standard errors in parentheses
All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. (column 1) indicates if the Inviter sent an invitation to at least one low-SES Guest and at least one high-SES Guest (Inviters with the High-SES Guest List or the Low-SES Guest List only saw one type of Guest, so the outcome is mechanically zero). (column 2) indicates if the Inviter sent an invitation to at least one low-SES Guest, and sent no invitations to any high-SES Guests (Inviters with the High-SES Guest List did not see any low-SES names, so this outcomes is mechanically zero for this group). (column 3) indicates if the Inviter sent an invitation to at least one high-SES Guest, and no low-SES Guests (Inviters with the Low-SES Guest List did not see any high-SES names, so this outcome is mechanically zero for this group).
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

out that there are *no differences* in the effort cost that a low-SES woman bears in sending an invitation to a low-SES versus a high-SES woman. In other words, in the model, I cannot rule out that $c_H = c_L$.

In the Inviter treatment arms where participants see only Low-SES Guest names or only High-SES Guest names, there are no differences in the probability of sending an invitation with or without the voucher. Inviters with the Random Guest List also do not change the total number of invitations that they send with the voucher, consistent with a model where the marginal utility of a social relationship is always higher than the marginal utility of personal consumption, regardless of the type of person who Inviters interact with or the feasibility of serving meat.

Next, I investigate how the voucher affects entire bundles of invitations among Inviters with the Random Guest List. In particular, I compare Inviter's probability of inviting a "mixed bundle" (meaning they invite at least one low-SES Guest and at least one high-SES Guest), an all-high-SES bundle (meaning they invite at least one high-SES Guest and no low-SES Guests), or an all-low-SES bundle (meaning they invite at least one low-SES Guest and no high-SES Guests). First, note that "mixed bundles" are significantly more common than inviting two-or-more low-SES Guests, or inviting two-or-more high-SES Guests. Among Inviters with the Random Guest List, without the Voucher, 23.5% of respondents select a mixed bundle, making it the most commonly selected bundle (Appendix Table C.1). In this group, mixed bundles are

Table 3: Model Tests

Within- and Across-Type Marginal Returns			
Test	**Coefs.**	**Interpretation**	**Table**
✓ (1)$\beta_1^{H\&L} > \beta_1^{L\text{-}only}$, and	0.202***	✓ Diminishing marginal returns within-type	Table 2, Col. 2
✓ (2) $\beta_1^{H\&L} > \beta_1^{H\text{-}only}$	0.128**	✓ Marginal returns diminish slower across-type	Table 2, Col. 3

Understanding Homophily			
Test	**Coefs.**	**Interpretation**	**Table**
× $\beta_2 > \beta_4$	−0.052	× Differential effort costs constrain	Table 1, Col. 1
✓ (1) $\beta_1^H > 0$, and	0.085**	✓ Price constrains cross-SES linking	Table 1, Col. 3
⊗ (2) $\beta_3 - \beta_2 > \beta_5 - \beta_4$	0.002	× Price is a feasibility constraint	Table 1, Col. 1
✓ (1) $\beta_1^H > 0$, and	0.085**	✓ Price constrains cross-SES linking	Table 1, Col. 3
✓ (2) $\beta_3 = \beta_2 = \beta_5 = \beta_4$	$p = 0.432$	✓ Price drives substitution ⇒ Trade-off between within-SES and cross-SES linking changes with price	Table 1, Col. 1
× $\beta_1^H > \beta_1^L$	0.073	◯ High prices constrain economic connectedness overall[20]	Table 1, Col. 2/3

more than twice as common as selecting either two-or-more low-SES Guests or high-SES Guests (selected 9.5% and 10.5% of the time, respectively), and slightly more common than selecting one low-SES or one high-SES Guest (selected 20.0% and 19.5% of the time, respectively). This already is highly suggestive that returns diminish faster within-type than across-type.

I find that the Voucher induces an 10.5 percentage point increase (45%, $p < 0.05$) in selecting “mixed bundles”, with no change in the probability of sending invitations to only high-SES women, and a decrease in the probability of sending invitations to only low-SES women (Table 2). This reduction in selecting homogeneous low-SES bundles is accounted for in equal parts by a reduction in sending one invitation to a low-SES Guest, or sending multiple invitations to only low-SES Guests (Appendix Table C.1).

When evaluating the total number of invitations to High-SES Guests and Low-SES Guests, Inviters with the Random Guest List with the voucher invite more High-SES Guests on aggregate (column (3) of Table 1). This pattern suggests that high prices constrain cross-SES relationships because of substitution with within-SES relationships. By revealed preference, cross-SES relationships are relatively more valuable to agents at lower levels of financial investment. The voucher does not induce any increase in invitations to low-SES women, indicating that high prices do not constrain within-SES relationships.

Table 3 presents the first-stage results as a set of empirical tests of the model predictions, outlined in Section 4.2.2. The invitation response patterns provide evidence that high- and low-SES relationships are distinct goods, where marginal returns diminish faster within-type than across type, implying that mixed bundles are preferred. The Voucher makes these bundles even more attractive. Because this shift comes from an increase towards high-SES links, this implies

Table 4: Treatment Effects on Meal-Sharing with Guests within 1 Month

	(1) Any Guest		(2) Low-SES Guest		(3) High-SES Guest	
Random with Voucher	0.102**	(0.049)	0.047	(0.046)	0.103**	(0.046)
High-SES without Voucher	0.011	(0.049)			0.188***	(0.046)
High-SES with Voucher	-0.006	(0.049)			0.166***	(0.046)
Low-SES without Voucher	-0.000	(0.049)	0.177***	(0.046)		
Low-SES with Voucher	0.019	(0.049)	0.208***	(0.046)		
Observations	1190		800		800	
Control Mean	0.401		0.215		0.220	
P-values:						
High-SES: Voucher = No Voucher	0.728				0.637	
Low-SES: Voucher = No Voucher	0.695		0.493			
Test: *HSES without V = HSES with V = LSES without V = LSES with V*					[p= 0.854]	
DID Estimates [P-values]						
High-SES without Voucher – Low-SES without Voucher					0.011 [p= 0.853]	
High-SES with Voucher – Low-SES with Voucher					-0.042 [p= 0.494]	
Random with Voucher:						
Shares Meal with High-SES – Shares Meal with Low-SES					0.056 [p= 0.346]	

Standard errors in parentheses

All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. (column 1) indicates if the Inviter shared a meal with at least one Guest within one month. (column 2) indicates if the Inviter shared a meal with at least one low-SES Guest within one month (Inviters with the High-SES Guest List did not see any low-SES names, so this outcomes is mechanically zero for this group). (column 3) indicates if the Inviter shared a meal with at least one high-SES Guest within one month (Inviters with the Low-SES Guest List did not see any high-SES names, so this outcome is mechanically zero for this group).

* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

that the benefits of high-SES relationships is more sensitive to financial investment. The model tests also clarify the nature of constraints that inhibit cross-SES linking. High-SES invitations increase in response to the voucher only when Inviters can choose between high- and low-SES Guests, but not when they are restricted to high-SES Guests alone. This pattern suggests that high-SES relationships are not infeasible at high prices, but instead become relatively less attractive than low-SES alternatives due to their greater sensitivity to investment. When substitution across types is not possible, behavior is unresponsive to the subsidy, validating the comparative statics prediction that price responsiveness is conditional on choice sets.

5.2 Meal-Sharing Across Treatment Sub-Groups

While 81% of Inviters sent at least one invitation to a Guest, 45% of Inviters shared a meal with a Guest within one month, and 75% shared a meal with a Guest within one year (accounting for multiple invitations per Inviter, 63% of all invitations result in a shared meal within one year). Meal-sharing rates are statistically indistinguishable across Inviter groups with High-SES and Low-SES Guests (Table 4), suggesting that the effort costs of actual social interaction, like those of initiation, are not systematically higher for cross-SES matches. This supports the model assumption that $c_H = c_L$, and also suggests that mutual consent probabilities are non-differential across types.

The rate of meal-sharing is higher for Inviters with the Random Guest List with the voucher. This is largely driven by increases in meals with high-SES Guests, but I cannot rule out that this increase is no different from a small increase in meals with low-SES Guests. This increase occurs only when agents can choose across types and afford higher-quality interaction, suggesting a complementarity between selection and investment. This is consistent with my argument that the benefits of interacting with high-SES links are more sensitive to investment, and the voucher increases their relative marginal utility, but this effect is only realized when substitution across types is possible because these shared meals are always valuable relative to consumption.

6 Results: Second Stage Outcomes

I evaluate the effect of the intervention on three main outcomes: food consumption, farm yields, and depression. Food consumption (consumption today) and farm yields in dollar-value (a proxy for future consumption) serve as two primary measures of instrumental utility, and depression serves as my primary measure of the intrinsic utility of social relationships. First, I evaluate Inviter treatment effects overall, and then compare Inviter treatment effects across Guest List sub-groups. Then, I consider Voucher treatment effects within each Guest List sub-group.

Pooling all Inviters, the Inviter treatment leads to a 0.132 standard deviation increase in food consumption ($p < 0.05$); a 0.078 percentage point reduction in depression (22%, $p < 0.01$); and no distinguishable impact on farm yields. The farm yields measure is extremely noisy, and the 95% confidence interval spans a 13% reduction in the value of farm yields to an 18% increase in the value of farm yields. Despite the noisiness of the measure, farm yields are the best approximation for income. Among Control participants who cultivate crops, the value of their harvest yields are more than four times the business profits in the past year that the women who run businesses report. Furthermore, 80% of participants in the sample report cultivating agriculture, whereas only 25% report running a business. Consequently, I consider agriculture as the most important income-earning opportunity in the year, while other income-earning opportunities (businesses and informal piecework) primarily serve as a means to liquidity outside of the harvest season and protection from shocks.

The effects on consumption are larger among Inviters with the High-SES Guest List than Inviters with the Low-SES Guest List (DID: 0.136 SD, $p = 0.044$), while the treatment effects on depression reductions are larger among Inviters with the Low-SES Guest List than Inviters with the High-SES Guest List (DID: -0.061 percentage points, $p = 0.043$). This is consistent with a key model assumption: because within-SES relationships and cross-SES relationships produce distinct benefits from each other, they can be conceptualized as distinct goods, whose returns diminish within-type faster than they diminish across-type. This is further validated by the treatment effects among Inviters with the Random Guest List, whose treatment effects lie between the other two groups on both outcomes.

6.1 Instrumental Utility

The consumption index is a PCA index of measures of the typical number of meals participants eat per day and the frequency that they consume animal proteins.[21] Food and protein consumption are both particularly consequential in this sample, 50% of whom report pregnancy, child-birth, or breast-feeding at some point during the intervention. The midline consumption index includes these two measures of consumption estimated over the past month. One year later, while consumption in the past month is still a valuable and welfare-relevant measure, a positive shock to consumption during the "lean season"—a time period between the midline and endline surveys when savings are lowest, food prices are highest, and therefore consumption is lowest—is potentially more welfare-enhancing because it has implications for consumption-smoothing.[22] Bearing in mind the value of food consumption in the population broadly, and the augmented importance of food consumption in the lean season, the one-year consumption index incorporates measures of the frequency of daily meals and the frequency of consuming animal proteins, both in the past month and during the lean season.[23]

The endline increase in food consumption is driven by increases in animal protein consumption in any time period, and increases in the typical number of daily meals consumed during the lean season (Appendix Table D.1). The endline survey is conducted towards the end of the harvest season, so the fact that there is no detectable change in farm yields is consistent with the fact that there is likewise no change in the typical number of daily meals consumed in the

[21]The index is constructed from slightly different variables for the midline (one month) and endline (one year) surveys. In each survey, I ask participants how many times they consumed fish, eggs, or meat in the past month. At the midline, the past month was exactly the time period in which Inviters with the Voucher could redeem the voucher at the butcher. Any voucher treatment effects on meat consumption could be purely mechanical. Thus, the one-month consumption index is a PCA index of two variables: the number of times the Inviter consumed eggs or fish in the past month, and the typical number of meals that they ate per day in the past month (normalized into standard deviation units from the Control mean). At the one year follow-up, treatment effects from the voucher on meat consumption are no longer mechanical, so I include meals with meat in the total count of meals consumed with animal protein in the endline consumption index.

[22]The "lean season" is the time period after the previous year's harvest yields are depleted and before next the harvest, when staple food supply is most limited and prices are highest. Most Malawians are not able to afford irrigated farming, and thus there is a yearly harvest that follows seasonal rainfall. After the harvest, food supply is plenty and prices are low. As harvest yields deplete, prices increase. I ask participants to describe the time during the past growing season where they faced the most financial hardship. On average, households report that this time period lasted eleven weeks. In the Control group, 64% report that they ate one meal per day during this time period, and only 6% report that they ate three meals per day. Food consumption is particularly sensitive in this time period because this is also the agricultural growing season, when most of the available work requires strenuous physical exertion. The endline survey is conducted right after the harvest, so consumption measured over the past month represents the theoretical best time for consumption. Consistent with extreme swings in consumption following the agricultural seasons, in the Control group, only 5% report typically eating one meal per day in the past month, while 36% report eating three meals per day.

[23]The endline consumption index is a PCA index of the following four variables: the total number of times that the participant reports consuming an animal protein in the past month (fish, eggs or meat), the typical number of meals per day that the participant reports consuming in the past month, the total number of the times that the participant reports consuming an animal protein during the lean season (fish, eggs or meat), and the typical number of meals per day that the participant reports consuming during the lean season.

Table 5: Treatment Effects on Main Outcomes

	(1)	(2)	(3)	(4)	(5)
	Consumption Index		Farm Yields USD Value	Depression Score	
	1 Month	1 Year	1 Year	1 Month	1 Year
Panel A: Pooled Inviter Treatment Effects					
All Inviters	0.018	0.132**	2.709	0.011	-0.078***
	(0.055)	(0.055)	(25.758)	(0.025)	(0.025)
Panel B: Pooled Inviter by Guest List Treatment Effects					
Inviter with High-SES Guest List	0.059	0.210***	12.327	-0.005	-0.048
	(0.067)	(0.067)	(31.411)	(0.031)	(0.030)
Inviter with Low-SES Guest List	-0.090	0.074	-10.508	0.014	-0.109***
	(0.067)	(0.068)	(31.540)	(0.031)	(0.031)
Inviter with Random Guest List	0.083	0.109	6.196	0.024	-0.078**
	(0.067)	(0.068)	(31.628)	(0.030)	(0.031)
Panel C: Inviter Sub-Group Treatment Effects					
High-SES without Voucher	0.045	0.201**	-6.928	-0.061	-0.059
	(0.082)	(0.083)	(38.567)	(0.037)	(0.037)
High-SES with Voucher	0.075	0.216***	30.172	0.030	-0.045
	(0.081)	(0.083)	(38.498)	(0.037)	(0.037)
Low-SES without Voucher	-0.072	0.021	-33.911	0.036	-0.106***
	(0.082)	(0.083)	(38.557)	(0.037)	(0.037)
Low-SES with Voucher	-0.109	0.128	12.941	-0.003	-0.112***
	(0.082)	(0.083)	(38.416)	(0.037)	(0.037)
Random without Voucher	0.048	0.102	35.129	-0.011	-0.071*
	(0.082)	(0.083)	(38.552)	(0.037)	(0.038)
Random with Voucher	0.119	0.113	-24.488	0.053	-0.087**
	(0.081)	(0.084)	(38.870)	(0.037)	(0.038)
Observations	1585	1528	1528	1585	1528
Control Mean	-0.000	-0.000	324.783	0.299	0.361
P-values:					
Pooled: High-SES vs. Low-SES Guest List	0.026**	0.044**	0.467	0.535	0.043**
Pooled: Voucher vs. No Voucher	0.683	0.432	0.749	0.156	0.866
High-SES: Voucher vs. No Voucher	0.755	0.867	0.403	0.034**	0.751
Low-SES: Voucher vs. No Voucher	0.695	0.263	0.288	0.354	0.888
Random: Voucher vs. No Voucher	0.449	0.909	0.182	0.133	0.699

Standard errors in parentheses
All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. The Consumption Index (columns 1 and 2) is a PCA index in standard deviations from the Control mean. The Consumption Index at 1 Month is a PCA index of: the typical number of meals consumed per day in the past month, and the number of meals with fish or eggs consumed in the past month. The Consumption Index at 1 Year is a PCA index of: the typical number of meals consumed per day in the past month, and the number of meals with meat, fish or eggs consumed in the past month, the typical number of meals consumed per day during the lean season, and the number of meals with meat, fish or eggs consumed during the lean season. To calculate the Farm Yields in USD value (column 3), households estimate their harvest yields for each crop. I multiply market rates in agricultural reports by yields for the most high-yield crops: maize, soy beans, groundnuts, beans, tobacco, sugar cane, sunflower seeds, sweet potatoes, and pumpkin. Depression is calculated using the CESDR-10, a 10-item revised version of the Center of Epidemiologic Studies Depression Scale. (columns 4 and 5) indicates a score greater than or equal to 10.
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

past month. Then what allows women to consume more food total during the lean season, and consume more protein throughout the year? I explore several potential mediators, and identify two persuasive explanations: improved productive time use increases liquidity, and risk mitigation increases the option value of consumption. Two other potential explanations, each for which there is suggestive but not definitive evidence, are reductions in farm and household expenditures, and reductions in savings. I find no evidence for increased borrowing or changes to intra-household bargaining (Appendix Table D.7 and Table D.8).

6.1.1 Improved Productive Time Use

Aside from agriculture, households earn income through business and piecework. Business constitutes self-employment in the sale of goods or services, usually around the village or in the market. Piecework constitutes providing farm labor for farmers with large land-holdings, where large-holder farmers hire piecework laborers on a task-by-task basis. Consequently, workers have to search for jobs each time they need liquidity and job search frictions can be extremely cost. Control respondents report searching for piecework without finding it on average three days per month, implying, if they earn nothing else on those days, 10% of their time is effortful but unproductive. Although the number of days that Inviters report finding piecework per month does not change, they report spending fewer days searching unsuccessfully for piecework (Table 6, columns (1) and (2)). The effect is larger and only detectable in the harvest season, at 0.5 fewer idle search days per month (a 16% decrease, $p < 0.05$), compared to a 0.2 day decrease in idle search days per month in the growing season (a 6% decrease, not statistically significant). The reduction in unproductive search time provides a clue to how participants are able to consume more, but it is not a complete explanation. A complete explanation requires understanding how they fill that time, and an explanation for how they experience the largest consumption gains during the lean season, which corresponds best with the growing season when their idle search time decreases less dramatically.

Turning to Inviters with the High-SES Guest List, who experience the largest gains in food consumption, clarifies how this particular group is able to consume more during the lean season. The Inviters with the High-SES Guest List are 5.4 percentage points (19%, $p < 0.10$) more likely to have operated a business in the past year than the Control group. This increase is largest among Inviters with the High-SES Guest List and the Voucher (an 8.9 percentage point increase, marginally non-differentiable from the 1.9 percentage point increase among Inviters with the High-SES Guest List *without* the Voucher), who also experience the largest decrease in unproductive search days in the growing season (a 7.2 percentage point decrease, statistically distinguishable from Control and from the Inviters with the High-SES Guest List *without* the Voucher). Businesses provide an alternate stream of liquidity, have the potential for much higher earnings than piecework, require less physical exertion, and search frictions with customers may be lower than search frictions with employers.[24]

[24]The most common businesses involve selling simple consumables (the most common business-type is "selling prepared foods"), and the vast majority of participants report that their point of sale is to customers around the

Table 6: Treatment Effects on Productive Time Use

	(1) Idle Search: Growing Season	(2) Idle Search: Harvest Season	(3) Operated Business This Year	(4) Operated Business This Month	(5)
	1 Year	1 Year	1 Year	1 Month	1 Year
Panel A: Pooled Inviter Treatment Effects					
All Inviters	-0.302	-0.573**	0.021	0.045**	0.017
	(0.264)	(0.238)	(0.026)	(0.022)	(0.025)
Panel B: Pooled Inviter by Guest List Treatment Effects					
Inviter with High-SES Guest List	-0.433	-0.267	0.054*	0.087***	0.050*
	(0.321)	(0.290)	(0.031)	(0.027)	(0.030)
Inviter with Low-SES Guest List	-0.299	-0.777***	-0.005	0.012	-0.007
	(0.322)	(0.291)	(0.031)	(0.027)	(0.030)
Inviter with Random Guest List	-0.172	-0.682**	0.014	0.035	0.007
	(0.323)	(0.292)	(0.031)	(0.027)	(0.030)
Panel C: Inviter Sub-Group Treatment Effects					
High-SES without Voucher	-0.053	-0.355	0.022	0.096***	0.035
	(0.394)	(0.357)	(0.038)	(0.033)	(0.037)
High-SES with Voucher	-0.904**	-0.235	0.090**	0.087***	0.067*
	(0.393)	(0.355)	(0.038)	(0.033)	(0.036)
Low-SES without Voucher	-0.367	-0.715**	-0.017	0.007	-0.025
	(0.394)	(0.357)	(0.038)	(0.033)	(0.037)
Low-SES with Voucher	-0.211	-0.826**	0.006	0.015	0.010
	(0.391)	(0.354)	(0.038)	(0.033)	(0.037)
Random without Voucher	-0.290	-0.660*	-0.007	0.045	-0.008
	(0.396)	(0.355)	(0.038)	(0.033)	(0.037)
Random with Voucher	-0.067	-0.719**	0.036	0.027	0.022
	(0.395)	(0.360)	(0.039)	(0.033)	(0.037)
Observations	1515	1506	1528	1585	1528
Control Mean	3.072	2.872	0.277	0.180	0.237
P-values:					
Pooled: High-SES vs. Low-SES Guest List	0.675	0.079*	0.056*	0.005***	0.056*
Pooled: Voucher vs. No Voucher	0.518	0.920	0.080*	0.827	0.185
High-SES: Voucher vs. No Voucher	0.060*	0.768	0.121	0.802	0.445
Low-SES: Voucher vs. No Voucher	0.728	0.786	0.605	0.822	0.406
Random: Voucher vs. No Voucher	0.625	0.886	0.334	0.648	0.477

Standard errors in parentheses

All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. (columns 2 and 3) is the average number of days the participant reports typically searching for piecework in a month, but not finding it. Column (2) is the average number of idle search days per month during the growing season (the agricultural season largely overlapping with the lean season), and Column (3) is the average number of idle search days per month during the harvest season. (columns (4)-(6)) means engaging in the sale of goods or services to earn income. Column (4) indicates operating any business any time in the past year, whereas columns (5) and (6) indicate operating any business in just the past month, measured at different times.

* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Inviters with the High-SES Guest List start these businesses immediately after the experiment begins. In the midline survey, only one month after enumerators send meal-sharing invitations to High-SES Guests, these Inviters are 8.7 percentage points (48%, $p < 0.05$) more likely to be operating businesses than Control participants. Combined with modest increases in the other groups, particularly Inviters with the Random Guest List, Inviters as a pooled group are 4.5 percentage points more likely to be operating businesses than Control participants at the midline survey (25%, $p < 0.05$).

These effects are largely driven by new businesses, many of which are directly copied from the business of a high-SES Guest (Table D.15).[25] How does an intervention that induces one shared meal lead women to diversify their income streams within just one month? One possibility is that women borrow to invest in new businesses. For participants whose household start a new business in the past month by midline—meaning they previously were not in business at all, or they started selling a new good or service—I ask them why they started the new business. Twenty-one percent of respondents report that they start a new business because somebody helped them to find capital, suggesting that loans are important. However, borrowing rates are non-differentiable from Control, suggesting that Inviters use their loans differently, or that there is another explanation.

Another possible explanation is that high-SES women share valuable information in these meals. Most of the businesses that participants engage in involve informal transactions, such as selling baked goods in the market or vegetables to other villagers, and do not require formalization nor a brick-and-mortar business space. Consequently, the fixed capital costs of starting a business are low, and information may be enough to help women develop new businesses. If participants have already shared a meal with their Guest at the midline survey, I ask them to report the conversation topics that they discuss with each Guest. I find that the three Inviter sub-group treatments lead to different conversation topics (Table C.6). Inviters with the Low-SES Guest List are more likely to discuss marriage, romantic relationships, and ways to find piecework. Inviters with the High-SES Guest List are more likely to discuss ways to find business resources, and least likely to discuss social relationships. The most common reason respondents give for starting a new business is that "somebody told me this is profitable" (45%), also suggesting primacy of information. Furthermore, five percent of new business owners say that they have started a new business because they received training, another channel through which information could be relevant.

Finally, the Inviter treatment might lead to effects on businesses by creating market linkages.

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village. Seventy percent of business-people report selling around the village and nowhere else, 12% report selling around the village and in markets or on roadsides, and only 18% sell exclusively in a dedicated marketplace or on a roadside.

[25] Business copying is defined as selling the same good or service that a Guest on the Inviter's list reports selling at *baseline*, for people who do *not* report selling that specific good or service at baseline. To understand the probability of switching into somebody else's business without copying them, I match Control participants to Guests in their area using the same algorithm that I use to determine the Guests who appear on a given Inviter's list. Then, I consider any "business copying" in the Control group to be the base expected rate given normal business switching in the absence of an intervention.

By directly putting individuals in contact with one another, they could have referred each other to customers, suppliers, or other valuable business connections. Indeed, 18% of respondents say in the midline survey that they started their new business because they found customers they did not have before, and Inviters with the High-SES Guest List and the voucher—the respondents whose treatment represents the largest shock to a new potential customer base, given differences in expendable income across SES, and given baseline homophily—are the most likely respondents to report this reason.

6.1.2 Increased Option Value of Lean Season Consumption

Two forces increase the option value of consumption for Inviters, particularly during the lean season, by reducing vulnerability to negative shocks. First, Inviters diversify their crop portfolio, reducing the risk associated with the upcoming harvest. Second, for some Inviters, networks evolve in ways that lead them to perceive their ties as more financially reliable.

Crop Diversification

Although the value of farm yields does not change on average relative to Control, Inviters undertake a striking transformation in their agricultural production function by diversifying their crop portfolios. While there is weak, suggestive evidence that Inviters moderately increase the total number of crops that they grow (Table 7, column (1)), Inviters' primary method of crop diversification is by diversifying the *types* of crops that they cultivate. I consider five classes of crops: maize (the staple grain), other starches, fruits and vegetables, legumes, and cash crops.[26] The probability that Inviters grow at least one crop from at least three of these categories increases by 4.7 percentage points (a 54% increase, $p < 0.01$). All Inviters are more likely to grow fruits and vegetables, while Inviters with the High-SES Guest List are more likely to grow cash crops (Table D.4).

This implies that Inviters face a very different risk portfolio where they are less vulnerable to environmental shocks or market shocks that affect any single crop *or* any single class of crops. Specifically, by investing in cash crop production and thereby gaining access to export markets, households may perceive their future income to be less vulnerable to domestic macroeconomic instability during a year where inflation was particularly salient. This crop-diversification strategy ultimately does not result in total increases in the value of farm yields. However, the value of cash crop yields *does* increase among Inviters with the High-SES Guest List by 29 USD (119% of the Control Mean, $p < 0.05$), with a noisy off-setting reduction in the value of subsistence crop yields (a 30 USD reduction, which is a 10% decrease over the Control mean that is not statistically distinguishable).

Financially Reliable Network Relationships

If Inviters have networks ties that they are confident they can rely on in case of a negative

[26] Other starches include: cassava, sorghum, rice, Irish potatoes, and sweet potatoes. Fruits and vegetables include: bananas, leafy greens, tomatoes, onions and pumpkins. Legumes include: soy beans, plain beans, groundnuts, pigeon peas, and cowpeas. Cash crops include: sugar cane, tobacco, and sunflower seeds.

Table 7: Treatment Effects on Crop Diversification

	(1) Number of Crops Cultivated 1 Year	(2) Cultivated >= 3 Crop Classes 1 Year	(3) Cash Crop Yields USD Value 1 Year	(4) Subsistence Yields USD Value 1 Year
Panel A: Pooled Inviter Treatment Effects				
All Inviters	0.078	0.047***	12.398	-22.967
	(0.062)	(0.018)	(9.422)	(21.530)
Panel B: Pooled Inviter by Guest List Treatment Effects				
Inviter with High-SES Guest List	0.078	0.056***	29.147**	-29.508
	(0.075)	(0.022)	(11.451)	(26.255)
Inviter with Low-SES Guest List	0.021	0.029	11.700	-38.793
	(0.075)	(0.022)	(11.513)	(26.368)
Inviter with Random Guest List	0.136*	0.055**	-4.143	-0.509
	(0.075)	(0.022)	(11.530)	(26.372)
Panel C: Inviter Sub-Group Treatment Effects				
High-SES without Voucher	0.117	0.056**	25.717*	-50.376
	(0.092)	(0.026)	(14.081)	(32.218)
High-SES with Voucher	0.025	0.054**	32.217**	-8.932
	(0.092)	(0.026)	(14.022)	(32.162)
Low-SES without Voucher	0.070	0.038	1.550	-42.882
	(0.092)	(0.027)	(14.079)	(32.213)
Low-SES with Voucher	-0.024	0.020	21.640	-34.512
	(0.092)	(0.026)	(14.031)	(32.099)
Random without Voucher	0.172*	0.054**	-12.394	31.517
	(0.092)	(0.026)	(14.070)	(32.169)
Random with Voucher	0.096	0.057**	4.056	-33.936
	(0.093)	(0.027)	(14.179)	(32.418)
Observations	1528	1528	1528	1528
Control Mean	1.604	0.087	24.487	295.187
P-values:				
Pooled: High-SES vs. Low-SES Guest List	0.449	0.210	0.128	0.723
Pooled: Voucher vs. No Voucher	0.140	0.715	0.130	0.814
High-SES: Voucher vs. No Voucher	0.384	0.930	0.688	0.263
Low-SES: Voucher vs. No Voucher	0.369	0.556	0.212	0.820
Random: Voucher vs. No Voucher	0.474	0.926	0.313	0.079*

Standard errors in parentheses
All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. The outcome for column (1) measures the number of individual crops that each participant cultivates. I then sort crops into , where classes include: maize, other starches, fruits and vegetables, legumes, and cash crops. The outcome for column (2) is an indicator for cultivating at least one crop from at least three of the crop classes. I multiply market rates in agricultural reports by yields for the most high-yield crops: tobacco, sugar cane, sunflower seeds for (column (3)); and maize, soy beans, groundnuts, beans, sweet potatoes, and pumpkin for (column (4)).
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

shock, they may be more comfortable consuming, rather than saving, when they find liquidity. I consider self-reported comfort in risk-sharing with network ties and participation in organized risk-sharing groups as markers of having a network that increases the option value of consumption. I create a PCA index of six variables: three variables of subjective comfort risk-sharing with network ties, and three variables indicating participation in organized risk-sharing groups. In Table 8, I report the index in columns (1)-(2), and a few representative variables entering the index in columns (3)-(7). I report the other variables entering the index in Appendix Table D.5. Among Inviters with the High-SES Guest List, the network option value index increases by 0.104 SD ($p < 0.10$). The index is not significantly different from Control among Inviters with the Random Guest List, but this masks Voucher-level hereogeneity. The index increases by Inviters with the Random Guest List and the Voucher by 0.184 SD, which is statistically distinguishable from Control ($p < 0.05$), and from Inviters with the Random Guest List without the Voucher ($p < 0.05$).

There are two narrow groups of Inviters who they say they would be very comfortable borrowing and lending with more people in their networks, indicating a higher subjective level of trust and comfort in risk-sharing: Inviters with the High-SES Guest List and the Voucher, and Inviters with the Random Guest List and the Voucher (Appendix Table D.5 and Table 8 columns (5)-(6)). Though not definitive, this provides a clue that, when households have exogenous access to high-SES links, they use the Voucher to mitigate their vulnerability to shocks by establishing relationships with subjectively financially reliable ties.

The organized risk-sharing groups I consider include Village Savings and Loan Associations (VSLA), rotating savings and borrowing groups (ROSCA), and home-grown self-help groups that I refer to as "Welfare Groups". VSLA is the most popular risk-sharing group in this setting, but I find little change in VSLA membership among Inviters in the long run. There is some evidence that Inviters with the High-SES Guest List and the Voucher are more likely to belong to VSLA groups at the midline survey, right after the experiment was conducted (Table 8). However, Inviters with the Random Guest List are more likely to join "Welfare Groups", home-grown self-help groups where women pool resources but do not incur debt (Table 8). These self-help groups are not operated by any formal institution, such as the government or an NGO, as many VSLA or ROSCA groups are, and instead are formed informally and without assistance or administration. The most common of these groups functionally operates like informal health and life insurance.[27] In other variants, households pool resources to purchase goods in bulk as a group, thereby benefiting each member with lower per-unit prices (discussed in Section 6.1.3).

6.1.3 Other Plausible Mediators for Increased Consumption

There are several mediators for increased consumption that are plausible and for which I have suggestive evidence, but do not have the data to make conclusive statements. Thus, the following discussion is well-motivated theoretically, but speculative.

Reduced Household and Farm Expenditures

Inviters change the crops that they cultivate, so Inviters may face different input costs throughout the agricultural season. While I do not collect detailed data on farm expenditures, I do

[27] Households agree in advance to an amount that they will contribute to any member who experiences illness or death of a family member (in some groups, each member contributes at the time of the shock, and in other groups, all the members contribute to a central pot of money on a regular basis which then becomes the pool of money to draw on when a household experiences a shock). Affected members do not incur any debt, and contributing members are not paid in return, but reciprocity is expected in the event that another member faces a shock such as illness or death of a family member. In a variation of these groups called 'Chi Sick', members agree to serve as one another's guardians in the hospital in case of illness. Although 'Chi Sick' groups do not insure against financial risk, they insure againt other risks associated with health shocks.

Table 8: Treatment Effects on Network Markers of Increased Option Value of Consumption

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Network Option Value Index		Number Very Comfortable Risk-Sharing		Welfare Group Member	VSLA Member	
	1 Month	1 Year	1 Month	1 Year	1 Year	1 Month	1 Year
Panel A: Pooled Inviter Treatment Effects							
All Inviters	0.040	0.057	0.085	0.106	0.033	0.006	0.006
	(0.039)	(0.051)	(0.091)	(0.116)	(0.020)	(0.022)	(0.025)
Panel B: Pooled Inviter by Guest List Treatment Effects							
Inviter with High-SES Guest List	0.053	0.104*	0.115	0.228	0.035	0.032	0.035
	(0.048)	(0.062)	(0.112)	(0.142)	(0.025)	(0.027)	(0.031)
Inviter with Low-SES Guest List	0.012	-0.031	0.029	-0.090	0.014	-0.019	-0.015
	(0.048)	(0.063)	(0.112)	(0.143)	(0.025)	(0.027)	(0.031)
Inviter with Random Guest List	0.054	0.096	0.109	0.177	0.050**	0.006	-0.003
	(0.048)	(0.063)	(0.112)	(0.143)	(0.025)	(0.027)	(0.031)
Panel C: Inviter Sub-Group Treatment Effects							
High-SES without Voucher	0.092	0.048	0.216	0.095	0.036	0.001	0.045
	(0.059)	(0.077)	(0.137)	(0.175)	(0.030)	(0.034)	(0.038)
High-SES with Voucher	0.029	0.148*	0.018	0.324*	0.032	0.059*	0.024
	(0.058)	(0.076)	(0.136)	(0.173)	(0.030)	(0.033)	(0.037)
Low-SES without Voucher	0.054	-0.044	0.134	-0.118	0.024	-0.001	0.008
	(0.059)	(0.077)	(0.136)	(0.174)	(0.030)	(0.033)	(0.038)
Low-SES with Voucher	-0.035	-0.020	-0.072	-0.064	0.005	-0.037	-0.037
	(0.059)	(0.077)	(0.137)	(0.174)	(0.030)	(0.033)	(0.037)
Random without Voucher	0.118**	0.007	0.264*	0.006	0.017	0.001	-0.012
	(0.059)	(0.077)	(0.137)	(0.174)	(0.030)	(0.033)	(0.038)
Random with Voucher	-0.004	0.184**	-0.037	0.343*	0.083***	0.008	0.006
	(0.058)	(0.077)	(0.136)	(0.176)	(0.030)	(0.033)	(0.038)
Observations	1585	1528	1585	1528	1528	1585	1528
Control Mean	0.002	-0.001	3.638	3.868	0.127	0.420	0.459
P-values:							
Pooled: High-SES vs. Low-SES Guest List	0.391	0.030**	0.440	0.025**	0.401	0.061*	0.102
Pooled: Voucher vs. No Voucher	0.022**	0.060*	0.010**	0.090*	0.507	0.687	0.502
High-SES: Voucher vs. No Voucher	0.345	0.257	0.208	0.254	0.905	0.130	0.631
Low-SES: Voucher vs. No Voucher	0.188	0.784	0.188	0.786	0.586	0.344	0.287
Random: Voucher vs. No Voucher	0.071*	0.047**	0.055*	0.096*	0.060*	0.857	0.671

Standard errors in parentheses

All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. The (columns (1) and (2)) is a PCA index of variables subjective comfort risk-sharing in the network and participation in organized risk-sharing groups. Variables of subjective comfort risk-sharing in the network are: the number of people in the network the participant feels very comfortable lending to; the number of people in the network the participant feels very comfortable borrowing from; and the number of people in the network the participant feels very comfortable both borrowing from and lending to. Variables of participation in organized risk-sharing groups are indicators for participation in each of the following: welfare groups (endline only), ROSCA, and VSLA. For each network tie, participants report their comfort in borrowing from or lending to that person on a Likert scale. The outcomes in columns (3) and (4) report the number of those friends for whom that participant said she would be with both lending and borrowing. , the outcome in column (5), is an indicator for if the respondent reports being in a home-grown self-help group, where the most common version is a mutual-insurance scheme. Other common groups involve methods of pooling resources for group purchases. The outcome of column (6) indicates membership with a Village Savings and Loan Association, a semi-formal savings and borrowing group.

* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

measure fertilizer use and adoption of new agricultural technologies, which both noisily decrease among Inviters (Table D.6 columns (1)-(3)). Though not conclusive, this set of results suggest that farm inputs may change.

Inviters with the Random Guest List are more likely to join "welfare groups", which may represent a more efficient collective use of resources, and thereby lower each individual household's expenditures. In "Kitchen Top-Up Groups", women pool resources to purchase kitchenware, which they then share as a group. Since any one household only needs kitchenware for discrete and limited periods of time in each day, this strategy could reduce household expenditure without reducing household productivity. In "Grocery Top-Up Groups", women pool resources to purchases groceries in bulk, enabling them to purchase goods at a lower per-unit price.

Reduced Savings

Households may have consumed more by withdrawing from their savings. Maize stores, the measure of savings I collect, is a reliable measure since it is a standard method of holding assets that enumerators visually verify. However, since the Inviter treatment changes the method through which people earn, the method that they save could change as well. Reduced maize stores could simply be a reflection of crop diversification (as an example, households will likely sell off the entirety of their tobacco harvest, whereas they save their maize harvest in storage to consume and sell as they need liquidity). I find that there is a noisy reduction in maize stores (15 fewer kilograms stored, or 8% of the Control mean), but this is not a statistically significant difference (Table D.6 columns (4)-(5)).

6.2 Intrinsic Utility

I find that the Inviter treatment leads to very large reductions in mild-to-severe depression. While these depression reductions may be related to consumption increases, it is unlikely that consumption is the primary mechanism through which the Inviter treatment leads to reductions in depression. The group that experiences the largest depression reductions experiences the smallest consumption gains, and vice versa. The decrease in depression is driven by a reduction in mild depression, which is significantly more common that moderate or severe depression. While still potentially clinically relevant, less severe forms of depression are less likely to require professional intervention, and plausibly treatable with social support. Treatment effects on every question in the CESDR-10 questionnaire moves in the direction of "less depression", and the changes are almost always largest among Inviters with the Low-SES Guest List (Table D.2). Two of the questions in which the Inviters with the Low-SES Guest List experience the largest changes relative to Control, and the largest changes relative to either of the other two Inviter groups, are reductions in the frequency of feeling two of the most direct measures of depression and loneliness: "I felt depressed" and "I felt lonely". Among Inviters pooled, the largest changes relative to Control are in the frequency of feeling "bothered by things that do not usually bother me", and the frequency of feeling fearful.

In this section, I investigate changes to the network structure and changes to household relationships that might contribute to mental health improvements, especially among Inviters with the Low-SES Guest List. I find evidence suggesting that mental health might improve via higher-quality relationships with "weak-links", particularly when weak links form a community; and through improved spousal relationships.

6.2.1 Objective Changes to the Network Structure

I elicit networks by asking participants, across a variety of activities, who they engage in those activities together with. Then, for each link, I ask participants questions to understand more qualitatively about that relationship. I find that the network degree (the number of ties in the network) is not affected by the Inviter treatment. However, among all Inviters there is a significant increase in "network churn"—the movement of people in and out of the network, defined as the total number of baseline ties that are absent from the follow-up network, plus the number of ties in the follow-up network that were not present in the baseline network (Table D.9).

To understand the objective nature of these relationships, I ask: how often do participants see each network tie, and do participants typically see that network tie with other people or alone? Across all Inviters, the treatment leads participants to see their network ties more frequently. Even in the Control group, the vast majority of participants see each network link on a weekly basis, but the percent of network ties who respondents see on a weekly basis increases by 1.5 percentage points with the Inviter treatment (Table D.10 column (4)).

Pooling all Inviters, there is no change in the setting that they see their network ties—in groups, one-on-one, or a mix of both. However, among Inviters with the Low-SES Guest List, the percent of friends who they only see in groups increases by 3.7 percentage points (8.4%, $p < 0.05$), which is distinguishable from Inviters with the High-SES Guest List (Table D.10 column (2)). This provides a hint as to how within-SES and cross-SES relationships operate differently. It also suggests that within-SES relationships may offer heightened mental health benefits by fostering community and collective relationships.

6.2.2 Subjective Changes to the Network Structure

Next, I investigate subjective experience with network relationships. I use five characteristics about participants' relationships with their network ties that I use to measure the strength of ties: comfort sharing thoughts and feelings, ease of laughing together, secret-sharing, the "Inclusion-of-Self in Others" score, and reciprocal confidentiality.[28]

[28] Question 1: How comfortable would you feel to trust [NAME] with your thoughts and feelings? *(Five-point Likert scale)*. Question 2: How easy is it for you to laugh with [NAME] when you are together? *(Five-point Likert scale)*. Question 3: "Who do you share secrets with?" *(Binary, =1 if selects name of given tie)*. Question 4: Inclusion-of-Self in Others Score *(Visual measure of relationship "closeness" on a 7 point scale)*. Question 5: Confidante reciprocity status *(0 if the tie is not a confidante; 1 if the tie is a confidante, but the relationship is certainly not reciprocated; 2 if the tie is a confidante, and the relationship is probably not reciprocated; 3 if the tie is a confidante and the relationship is most likely reciprocated; 4 if the tie is a confidante and the relationship*

I conduct a PCA analysis of these five variables across all ties (at the dyad level) in the Listing Sample. I use the first principal component to construct weights that I then apply to these five variables across all following surveys. This method applies the baseline levels and correlation structure of these five variables from to analyze strength of ties in ensuing survey rounds so that the definition of "strong ties" remains fixed. Furthermore, this method allows me to conduct a levels comparison in strength-of-ties over time.

I define "strong ties" as ties whose strength-of-ties index is equal to the maximum (6.2% of baseline ties; 13% of midline ties; and 17% of endline ties). I define "weak ties" as ties whose strength-of-ties index is below the median in the baseline sample. I define all ties with intermediary values as "mid-strength ties." I find that all Inviters experience significantly more network churn among weak ties, a noisy but moderate increase in churn among mid-strength ties, and a small but precise increase in network churn among strong ties (Table 9). Inviters are more likely to drop weak and mid-strength ties from the network (the increase in dropped weak links is precise, while the increase in dropped mid-strength links is noisy), and more likely to add new weak and strong links (Table D.11).

Taken together, these results suggest that the Inviter treatments leads participants to exchange their existing weak ties for new weak ties who they see more frequently and, in some cases, to add strong ties. Furthermore, Inviters with the Low-SES Guest List are more likely to spend time with these links in groups. While other Inviters get new weak links who they see more often than the weak ties they had before, and maybe even new strong ties, Inviters with the Low-SES Guest List get *a community* of new weak ties without any loss to their strong-tie relationships.

6.2.3 Spousal Relationships

Finally, I investigate treatment effects on Inviters' spousal relationships. The treatment may change spousal relationships in a way that could improve mental health if women discuss issues they have with their husbands and help each other solve these problems. Conversely, women may share taboo information, such as information about contraception, which could lead to worsened spousal relationships and worsened mental health. Fourteen percent of Inviters discuss marriage or romance in their first shared meal in the month after the intervention, and Inviters with the Low-SES Guest List are the group most likely to discuss marriage and romance in that meal (Table C.6).

First, I investigate the most basic outcome: marital status. I find that Inviters with the Low-SES Guest list are 5.2 percentage points (6.9%, $p < 0.05$) more likely to be married than Control, and 3.9 percentage points less likely to be divorced, seperated, or widowed (27%, $p < 0.10$) (Table D.12). To help identify if this is a result of improved spousal relationships, or a result of women being discouraged to leave harmful marriages, I also investigate the probability that participants enter new marriages—for the first time, or as a second marriage—and find

is certainly reciprocated)

Table 9: Treatment Effects on Subjective Changes to Relationships

	(1)	(2)	(3)	(4)	(5)	(6)
	Network Churn: Weak Ties		Network Churn: Mid Ties		Network Churn: Strong Ties	
	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year
Panel A: Pooled Inviter Treatment Effects						
All Inviters	0.033	0.219*	-0.059	0.198	-0.022**	0.043*
	(0.056)	(0.116)	(0.100)	(0.161)	(0.011)	(0.024)
Panel B: Pooled Inviter by Guest List Treatment Effects						
Inviter with High-SES Guest List	0.034	0.216	-0.128	0.167	-0.023*	0.040
	(0.069)	(0.142)	(0.123)	(0.196)	(0.014)	(0.030)
Inviter with Low-SES Guest List	0.095	0.287**	-0.080	0.111	-0.028**	0.030
	(0.069)	(0.142)	(0.123)	(0.197)	(0.014)	(0.030)
Inviter with Random Guest List	-0.028	0.154	0.032	0.321	-0.016	0.059*
	(0.068)	(0.143)	(0.123)	(0.198)	(0.014)	(0.030)
Panel C: Inviter Sub-Group Treatment Effects						
High-SES without Voucher	0.028	0.285	-0.149	0.085	-0.018	0.053
	(0.085)	(0.174)	(0.151)	(0.241)	(0.017)	(0.036)
High-SES with Voucher	0.040	0.096	-0.169	0.217	-0.027	0.038
	(0.084)	(0.173)	(0.149)	(0.240)	(0.017)	(0.036)
Low-SES without Voucher	0.078	0.226	-0.094	0.010	-0.031*	-0.010
	(0.084)	(0.174)	(0.149)	(0.241)	(0.017)	(0.036)
Low-SES with Voucher	0.113	0.356**	-0.048	0.212	-0.025	0.069*
	(0.084)	(0.173)	(0.150)	(0.241)	(0.017)	(0.036)
Random without Voucher	-0.014	0.062	0.021	0.161	-0.015	0.069*
	(0.084)	(0.174)	(0.150)	(0.241)	(0.017)	(0.036)
Random with Voucher	-0.042	0.235	0.031	0.476*	-0.016	0.051
	(0.083)	(0.175)	(0.149)	(0.244)	(0.017)	(0.037)
Observations	1585	1528	1585	1528	1585	1528
Control Mean	0.919	2.240	2.281	3.303	0.066	0.158
P-values:						
Pooled: High-SES vs. Low-SES Guest List	0.374	0.613	0.695	0.775	0.712	0.741
Pooled: Voucher vs. No Voucher	0.916	0.781	0.968	0.188	0.917	0.488
High-SES: Voucher vs. No Voucher	0.900	0.345	0.909	0.634	0.659	0.717
Low-SES: Voucher vs. No Voucher	0.717	0.515	0.786	0.465	0.757	0.057*
Random: Voucher vs. No Voucher	0.769	0.390	0.954	0.261	0.930	0.671

Standard errors in parentheses

All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. (columns (1)-(2)) is the number of dropped baseline ties who are defined as at baseline, plus the number of new ties who are defined as in the relevant survey round. In other words, it is a measure of changing links within ties of a given strength (whether change is by entry or exit from the network). The analogous definition holds for mid-strength ties (columns (3)-(4)) and strong ties (columns (5)-(6)). Strength-of-ties is evaluated using five variables: the ability to trust the network link with thoughts and feelings (Likert scale), ease of laughing with the network link (Likert scale), if the link is someone with whom the participant shares secrets (binary), degree to which sharing stories in the relationship happens, and to which it is reciprocal (Likert scale), and the Inclusion-of-Self in Others (ISO) scale (1 to 7). I conduct a PCA analysis of these five variables, using the full sample in the Baseline Survey. I then apply the first principal component weights on these five variables to the same variables in all the surveys. This way, I use the levels and correlation structure of these variables from the Baseline Survey to analyze strength of ties in ensuing survey rounds. This also allows me to construct a levels comparison in strength-of-ties over time. are defined as ties whose strength-of-ties index is below the 20th-percentile of tie-strength in the Baseline Survey. are defined as ties whose strength-of-ties index is equal to the maximum tie-strength in the Baseline Survey. are defined as all ties with an intermediate tie-strength.

* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

that Inviters with the Low-SES Guest List and the Voucher are 2.2 percentage points (138%, $p < 0.10$) more likely to be newly married. Half of new marriages are among women who were married to someone else at baseline, suggesting that the treatment doesn't systematically encourage women to stay in *any* marriage.

To validate this, I investigate the strength of spousal relationships among married women using the same method that I analyze the strength of other network ties. I find that there are no differences in the strength of relationships with husbands in any group, nor any differences in comfort lending to or borrowing from husbands (Table D.12).

6.3 Network Economic Diversity and Connectedness

I use network connections' roof material as a proxy for connectedness to high-SES individuals. Since my sample is comprised of low-SES women, having more high-SES network links represents more economic connectedness. I find that there are no detectable impacts of any Inviter arm on the percent of the network that has an iron-sheets roof, my primary measure of economic connectedness (Table 10). However, the Inviter treatment increases the probability that at least half of the respondent's network links have an iron-sheets roof by 6.2 percentage points (25%, $p < 0.05$). Inviters use the opportunity that the Intervention presents to increase the diversity of their networks, and initiate cross-SES links; however, they do not initiate far beyond ensuring that half of their network is composed of high-SES ties, muting the linear treatment effects of the intervention on the percent of high-SES ties in the network. I interpret these results as evidence that, on aggregate, the Inviter treatment induces cross-SES linking to the extent of establishing economic *diversity* within networks, but there is not an unbounded shift towards economic *connectedness*, even among Inviters with the High-SES Guest List.

Network churn increases among ties with iron sheets roofs and ties with thatched roofs (Table D.14). Replacement rates are very similar across types, indicating that there is no systematic tendency for participants to replace ties who have thatched roofs with ties who have iron sheets roofs, or vice versa, across any group. Most people drop or add both higher- and lower-income ties, including in the Control group, and the treatment does not change the probability of churn among both link-types. However, the Inviter treatment does reduce the probability that participants drop or add *only* network ties with iron sheets roofs.

While there are no large differences in network churn among lower- or higher-income ties on the extensive margin, there could be intensive margin differences. To formalize the difference between the *volume* of the network churn that the treatment induces and the intensive-margin *diversity* of the network churn that the treatment induces, I construct a measure of diversity-weighted network churn:

$$Churn^{Diverse} = (Dropped + New) \cdot \left(\frac{(Dropped_{IS} + New_{IS}) \cdot (Dropped_{Th} + New_{Th})}{Dropped + New} \right)^{\alpha}$$

where $Dropped$ is the number of dropped links, New is the number of new links, IS subscripts ties that have iron-sheets roofs, and Th subscripts ties that have thatched roofs, $Dropped = Dropped_{IS} + Dropped_{Th}$ and $New = New_{IS} + New_{Th}$. Finally, α is a parameter that weights the

Table 10: Treatment Effects on Network Churn across Income

	(1)	(2)	(3)	(4)	(5)	(6)
	% Network Iron Sheets		> 50% Network Iron Sheets		Network Churn: Iron Sheets	Network Churn: Thatched Roof
	1 Month	1 Year	1 Month	1 Year	1 Year	1 Year
Panel A: Pooled Inviter Treatment Effects						
All Inviters	-0.009	0.010	-0.043*	0.062**	0.158	0.474**
	(0.010)	(0.014)	(0.022)	(0.025)	(0.108)	(0.214)
Panel B: Pooled Inviter by Guest List Treatment Effects						
Inviter with High-SES Guest List	0.011	0.026	-0.037	0.069**	0.141	0.241
	(0.012)	(0.017)	(0.027)	(0.030)	(0.130)	(0.258)
Inviter with Low-SES Guest List	-0.018	0.005	-0.035	0.087***	0.127	0.529**
	(0.012)	(0.017)	(0.027)	(0.030)	(0.131)	(0.259)
Inviter with Random Guest List	-0.021*	-0.003	-0.058**	0.027	0.210	0.675**
	(0.012)	(0.017)	(0.028)	(0.031)	(0.134)	(0.265)
Panel C: Inviter Sub-Group Treatment Effects						
High-SES without Voucher	0.006	0.032	-0.041	0.069*	0.189	0.079
	(0.014)	(0.020)	(0.033)	(0.037)	(0.159)	(0.313)
High-SES with Voucher	0.016	0.021	-0.034	0.070*	0.091	0.408
	(0.014)	(0.020)	(0.033)	(0.037)	(0.160)	(0.316)
Low-SES without Voucher	-0.016	0.003	-0.045	0.089**	0.028	0.384
	(0.014)	(0.020)	(0.032)	(0.036)	(0.157)	(0.311)
Low-SES with Voucher	-0.020	0.006	-0.025	0.086**	0.236	0.683**
	(0.014)	(0.021)	(0.033)	(0.037)	(0.161)	(0.319)
Random without Voucher	-0.028*	-0.004	-0.067**	0.016	0.187	0.281
	(0.015)	(0.021)	(0.034)	(0.038)	(0.165)	(0.326)
Random with Voucher	-0.015	-0.001	-0.049	0.038	0.235	1.059***
	(0.015)	(0.021)	(0.034)	(0.038)	(0.163)	(0.324)
Observations	1139	1115	1112	1116	1116	1116
Control Mean	0.327	0.402	0.224	0.245	1.679	3.883
P-values:						
Pooled: High-SES vs. Low-SES Guest List	0.012**	0.181	0.935	0.546	0.912	0.258
Pooled: Voucher vs. No Voucher	0.549	0.870	0.511	0.835	0.601	0.028**
High-SES: Voucher vs. No Voucher	0.533	0.623	0.862	0.992	0.590	0.363
Low-SES: Voucher vs. No Voucher	0.800	0.902	0.593	0.943	0.250	0.403
Random: Voucher vs. No Voucher	0.451	0.908	0.645	0.610	0.799	0.039**

Standard errors in parentheses
All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. The outcome of columns (1) and (2) reports the percent of current network members with an iron sheets roof, as reported by the participant in the survey where she first mentioned that person as a part of her network. The outcome of columns (3) and (4) is an indicator for if at least half of the participant's current network members have an iron sheets roof, as reported by the participant in the survey where she first mentioned that person as a part of her network. The outcome of columns (5) is the number of people with an iron sheets roof in her baseline network who are no longer a part of her endline network, plus the number of people with an iron sheets roof in her endline network who were not a part of her baseline network. The outcome of columns (6) is the number of people with a thatched roof in her baseline network who are no longer a part of her endline network, plus the number of people with a thathced roof in her endline network who were not a part of her baseline network.
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

importance of diversity relative to volume. Note that, if $\alpha > 0$, the total measure is maximized when network churn among ties with iron-sheets roofs is equal to network churn among ties with thatched roofs.

I regress $Churn^{Diverse}$ on my treatment indicators across a range of α. If the treatment effect is maximized when $\alpha = 0$, then the intervention purely induces a greater volume of network churn, among the same types of ties (by income) that we would expect in the absence of

Table 11: $\alpha^* := \alpha$ that Maximizes Treatment Effects on Diversity-Weighted Network Churn

Inviter Arm	α^*
High-SES Guest List without the Voucher	0
High-SES Guest List and the Voucher	0
Low-SES Guest List without the Voucher	0
Low-SES Guest List and the Voucher	0
Random Guest List without the Voucher	0
Random Guest List and the Voucher	0.016

I construct a measure of network churn that is weighted by economic diversity of individuals entering and existing networks: $(Dropped+New)\cdot(p^{IS}\cdot(1-p^{IS}))^{\alpha}$, where p^{IS} is the percent of individuals who enter or exit the network that have an iron sheets roof. I regress this measure on my treatment indicators across a range of α. In this table I report α^*, the α that maximizes the treatment effects for each treatment indicator.

the treatment. Conversely, if $\alpha > 0$, then the intervention induces both a greater volume of network churn and more diversity (by income) in who enters and exits the network. For almost every group, $\alpha^* = 0$ maximizes treatment effects of that group, indicating that the intervention induces a larger volume of network churn within the same groups who would enter and exit the network to a lesser extent in the absence of the treatment. However, consistent with the first-stage treatment effects on invitation-sending, this is not the case among Inviters with the Random Guest List and the Voucher. The α that maximizes the treatment-effect is $\alpha^* = 0.016$, indicating that Inviters with the Random Guest List and the Voucher have a more economically-diverse set of ties enter and exit their networks.

While $\alpha^* > 0$ provides evidence that patterns in invitation-sending carry through to actual changes in the network, the difference between the magnitude of the treatment effect among Inviters with the Random Guest List and the Voucher when $\alpha = 0.016$ and when $\alpha = 0$ is minute.[29] Taken together, this implies that, in all groups, the first-and-foremost impact of the Inviter treatment on networks in the long run is to spur any amount of movement in and out of the network. This suggests that a short-term shock to network activity with economically diverse ties may not be enough to lead to long-run changes; or that agents are satisfied with the economic diversity of their long-term networks, but seek out short-term interactions with a more economically diverse set of people.

7 Conclusion

My results add to our understanding of social network formation in three important ways. First, I show, while social capital is broadly beneficial, the types of benefits that it provides varies by the nature of the tie. In my setting, I show that within-SES links yield large mental health benefits, while cross-SES links yields large benefits for consumption. If people value both consumption and mental health, this implies that people also value economic *diversity* in

[29]When $\alpha = 0.016$, the Inviter treatment with the Random Guest List and the Voucher leads to a 0.698-person increase in network churn. When $\alpha = 0$, the same group leads to a 0.696-person increase in network churn.

Table 12: Treatment Effects Among Guests

	(1)	(2)	(3)	(4)	(5)
	Consumption Index		Farm Yields USD Value	Depression Score	
	1 Month	1 Year	1 Year	1 Month	1 Year
Inviter	0.018	0.123**	-1.414	0.011	-0.074***
	(0.055)	(0.058)	(27.676)	(0.025)	(0.025)
Guest		0.007	13.571		-0.004
		(0.059)	(28.194)		(0.025)
Observations	1585	2738	2738	1585	2738
Low-SES Control Mean					
Spillover Estimates in Control Group					
All Inviters and Guests		0.048	22.512		-0.017
P-value		0.271	0.293		0.337
Within-SES Inviters and Guests		0.137**	20.952		-0.042
P-value		0.039	0.545		0.102
Inviters with High-SES Guests		0.093	24.355		-0.033
P-value		0.309	0.451		0.345
High-SES Guests		-0.093	40.684		0.007
P-value		0.356	0.425		0.883

Standard errors in parentheses

All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. The Consumption Index (columns 1 and 2) is a PCA index in standard deviations from the Control mean. The Consumption Index at 1 Month is a PCA index of: the typical number of meals consumed per day in the past month, and the number of meals with fish or eggs consumed in the past month. The Consumption Index at 1 Year is a PCA index of: the typical number of meals consumed per day in the past month, and the number of meals with meat, fish or eggs consumed in the past month, the typical number of meals consumed per day during the lean season, and the number of meals with meat, fish or eggs consumed during the lean season. To calculate the Farm Yields in USD value (column 3), households estimate their harvest yields for each crop. I multiply market rates in agricultural reports by yields for the most high-yield crops: maize, soy beans, groundnuts, beans, tobacco, sugar cane, sunflower seeds, sweet potatoes, and pumpkin. Depression is calculated using the CESDR-10, a 10-item revised version of the Center of Epidemiologic Studies Depression Scale. (columns 4 and 5) indicates a score greater than or equal to 10.

* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

their networks.

Second, I find that information frictions and effort costs of the activities that form or strengthen network links are prohibitive, amounting to a significant market failure. Resolving these frictions is remarkably easy, and leads to large positive treatment effects for *both* cross-SES and within-SES links. Guests and Control participants who are proximate to Inviters and Guests do not suffer from these interactions across my main outcomes, suggesting that the benefits of these new links are not displaced from anybody else in the sample (Table 12).

If the Inviter treatment, which is little more than a nudge, leads to such high take-up of invitation-sending, and meal-sharing has such large benefits even without the voucher, what prevents these women from sharing more meals with each other in the absence of the intervention? Baseline vignettes and survey questionnaires indicate that there may be misperceptions in the community about *other's* willingness to engage in meal-sharing (this pluralistic ignorance is discussed in more depth in Section 2.3).

I find evidence consistent with information asymmetries acting as an important barrier to social interaction. Women who had the most pessimistic beliefs at baseline are the people most likely to change their meal-sharing behavior within one month. At baseline, I ask participants: "Thinking about ten other women who are similar to you in the village, how many do you think would accept an invitation for a shared meal with you?" At midline, shortly after these

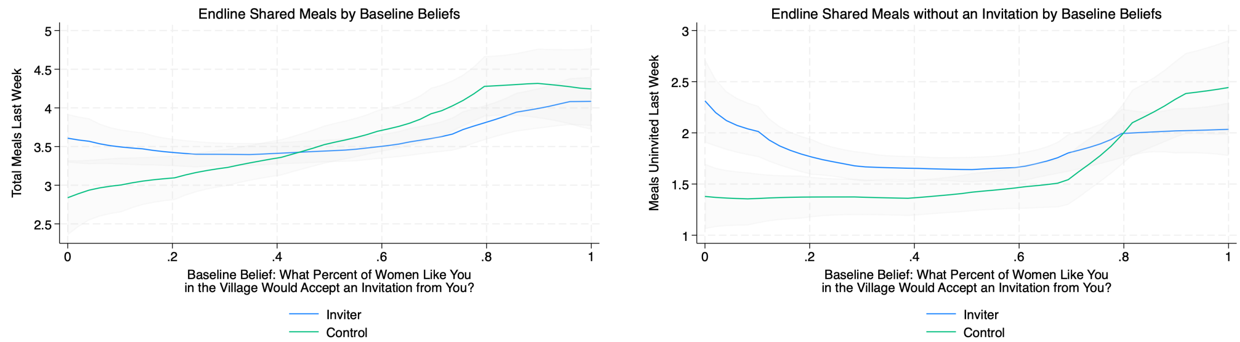

Figure 3: Baseline Beliefs and Midline Meal-Sharing

beliefs update (to the extent that the Inviter treatment serves as an information shock), I ask participants how many meals they shared with people who are not household members in the past week. I find that Inviters with the *most* pessimistic views at baseline share more meals in the past week than Control participants with pessimistic views (Figure 3). In fact, among participants who thought that around 45% of women in the village would accept her invitation – or, the women whose beliefs should *not* update from being in the Inviter treatment at this point in time, since 45% of Inviters shared at least one meal with Guests one month later – there is no gap between Inviter and Control group meal-sharing in the past week. Notably, the nature of meal-sharing changes, even among Inviters who are more optimistic at baseline: meals are more often shared *without* an invitation after experiencing the Inviter treatment (both hosted and visited meals).

A simple information-based solution resolves a large fixed effort cost of initiating relationships, resulting in substantial benefits, which suggests that relationships impart large fixed benefits or that maintenance is meaningfully less costly than initiation. I find evidence that extends this logic to help explain homophily. I create a proxy for 'friending' between Inviters and Guests, which is an indicator for if they share phone numbers within one month. I find that differential rates of friending within-SES and across-SES are entirely explained by differential invitation-sending. Preferences for homophily drive *meeting bias*, which then directly drives friending bias because meeting opportunities are selected (I conduct an analysis of meeting bias and friending bias in Section C.1). In the absence of financial barriers to meeting, friending behavior appears unbiased—implying that descriptive measures of friending bias may conflate underlying preferences with price-constrained selection into meeting opportunities.

Third, I show that the high prices of high-value social activities prevent valuable cross-SES interactions and contribute to the persistence of income-based homophily. This has important implications for community-based interventions. A recent review of group-based interventions among women found that the primary mechanism through which group-based interventions are successful is their ability to reach many women at once, rather than the social interactions that they foster (Díaz-Martin et al., 2023). Without understanding and removing specific barriers to meaningful social interaction, interventions may be ineffective at generating social connection just by bringing people to the same place. This experiment shows that the price of valuable social interaction serves as an important barrier to social connection, and that, without intervening on price specifically, links may form or strengthen in specific ways that can even reinforce existing inequities. A simple implication of this experiment for policy is that, when introducing groups in which women form groups themselves, such as VSLA, providing lower-income women with vouchers for valuable social activities can help them to be included.

These insights into social network formation have important implications for development policy. While evidence shows that group-based development programs have important exogenous economic impacts (VSLA: Annan et al. (2013); Beaman et al. (2014); Karlan et al. (2017); Ksoll et al. (2016);), these are often reported as average impacts and may be concentrated among the relatively higher-income households in a village. Indeed, there is evidence suggesting that development policy relying on self-selection and group-based selection does not reach the poorest households (Lønborg and Rasmussen, 2014). My results show that this exclusion is at least in part driven by social capital deficits, rather than determinants that are strictly relevant for the efficacy of the intervention, such as inability to contribute financially or unobservable characteristics such as financial savvy. *Inclusive* development policy may require specific efforts to help marginalized community members build and access social capital.

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Online Supplementary Material

Appendix A Background and Cultural Context

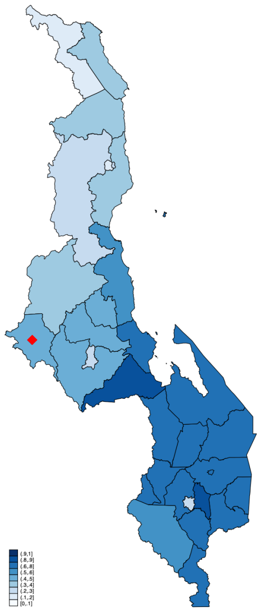


Figure A.1: Percent of Women Who Never Left Their Home Village (Malawi DHS, 2015)

	(1) Ever Moved Villages	(2) Ever Moved Villages	(3) Ever Moved Villages	(4) Ever Moved Villages
Property Owner	-0.287***	-0.222***	-0.277***	-0.220***
	(0.005)	(0.005)	(0.005)	(0.005)
Observations	67987	67987	67987	67987
Mean of Women				
Without Owned Property	0.677	0.677	0.677	0.677
District Fixed Effects		X		X
Tribe Fixed Effects			X	X

Standard errors in parentheses
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table A.1: Malawi DHS 2015: Determinants of Moving Villages

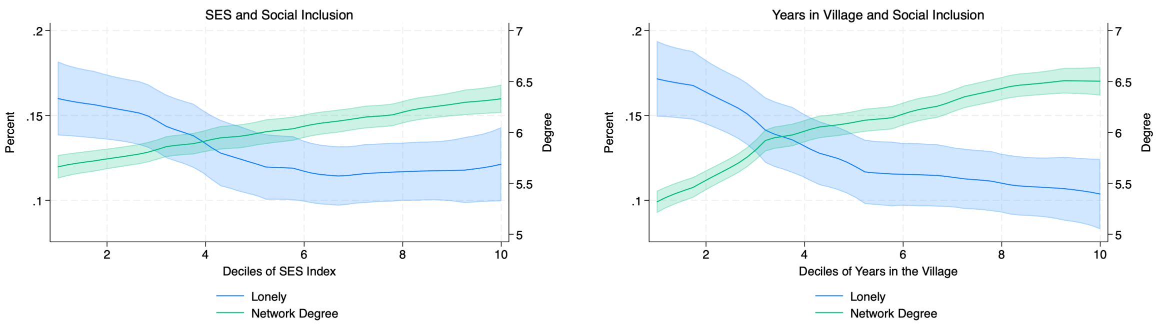


Figure A.2: Social Inclusion – by SES and Years in the Village

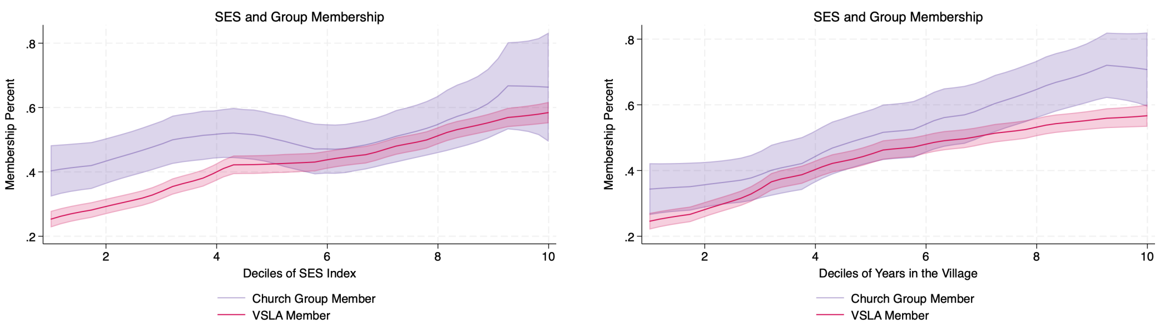


Figure A.3: Group Membership – by SES and Years in the Village

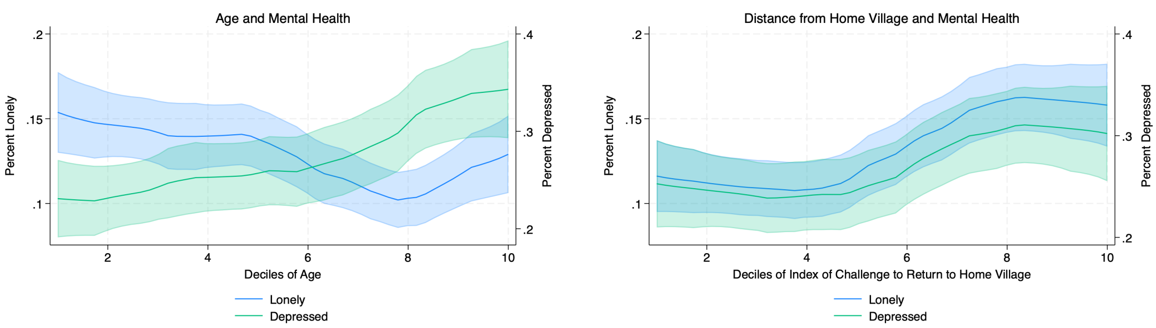


Figure A.4: Mental Health – by Age and Distance from Home Village

	Low-SES	**Thatched**	**High-SES**	**Iron Sheets**
Iron Sheets Roof	0.26		0.84	
Any HH Business	.39	.43	.76	.53
Acres of Owned Farmland	1.7	1.8	3.0	2.3
Meals in Past 2 Days	4.5	4.5	4.9	4.7
Months Consuming Harvest	4.5	4.3	5.5	5.2
Acres of Rented Farmland	0.8	0.7	1.1	1.2
Any HH Sec.-School Grad.	0.13	0.10	0.20	0.22

Table A.2: Summary Statistics by Socio-Economic Status

	(1) Full Sample	(2) Thinking About a Meal-Sharing Friend	(3) Thinking About a Work Friend	(4) Female Sample	(5) Male Sample
Conversation Over a Meal	1.282***	1.276***	1.303***	1.249***	1.452**
	(0.150)	(0.212)	(0.161)	(0.159)	(0.443)
Friend from Work	0.020			0.023	-0.000
	(0.119)			(0.134)	(0.256)
Observations	504	252	252	432	72
Mean in Other Settings	2.045	2.042	2.048	2.123	1.574

Standard errors in parentheses
The outcome is how personal a conversation could become in a given setting, and with a given person, on a scale from 1 to 5 (where higher numbers indicate more personal conversations). Each survey participant was asked to consider a conversation across four settings: over a meal, while working, while doing chores, or while at work. They were also asked to consider two types of people: a person with whom they often share meals, and a person with whom they often work together. The order of questions was randomized. Each observation is at the question level (with eight observations per participatn). All regressions include individual fixed effects and fixed effects for the order in which they were asked the question. Standard errors are clustered at the individual level.
* $p < 0.10$, ** $p < 0.05$, *** $p < .01$

Table A.3: Closeness of a Conversation Across Settings

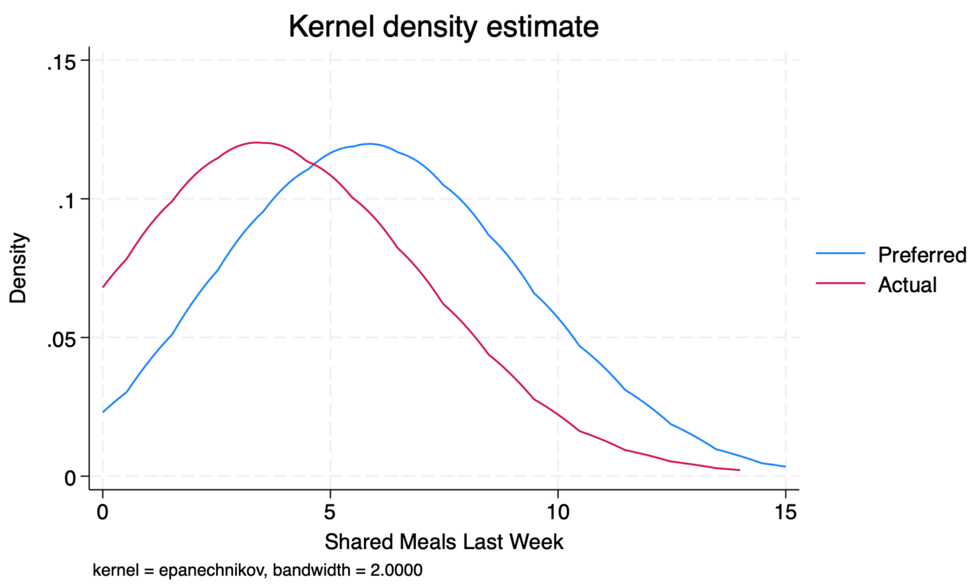


Figure A.5: Preferred versus Actual Meal-Sharing

Figure A.6: Religion-Based Village-Level Homophily

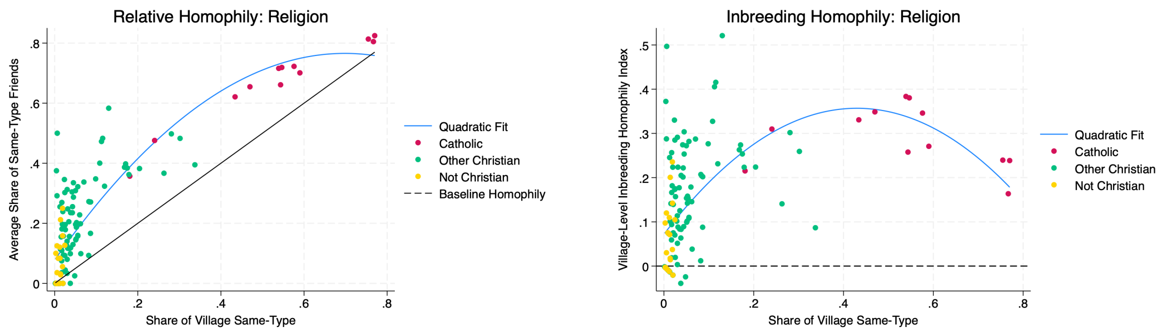


Figure A.7: Asset-Based Village-Level Homophily

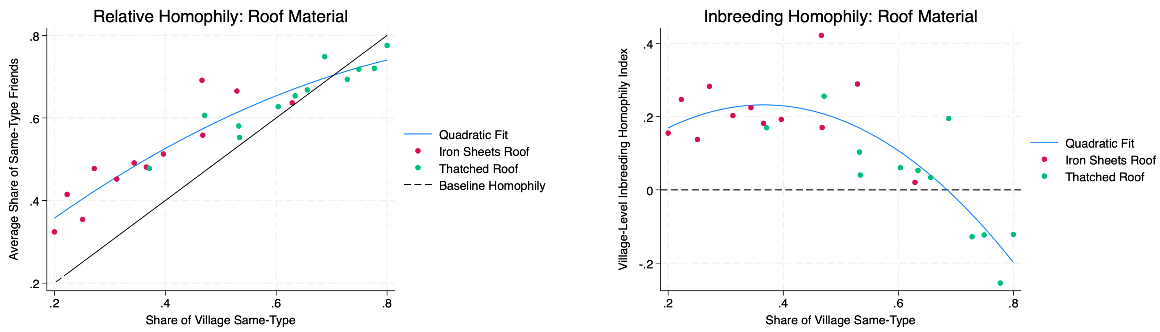


Figure A.8: Education-Based Village-Level Homophily

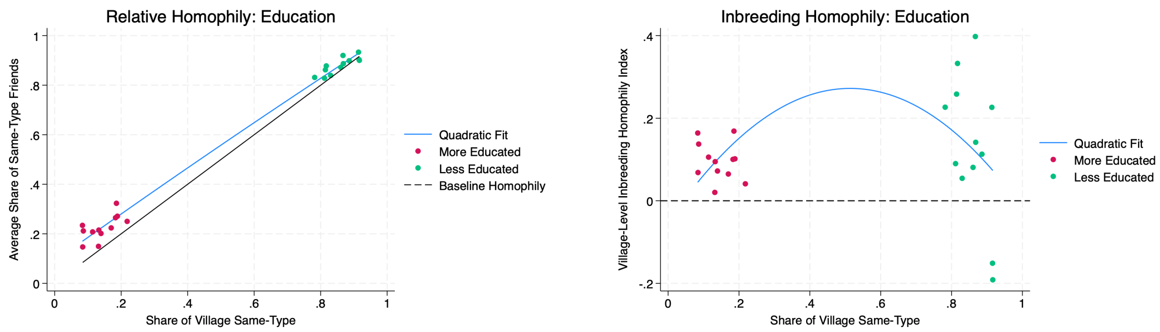
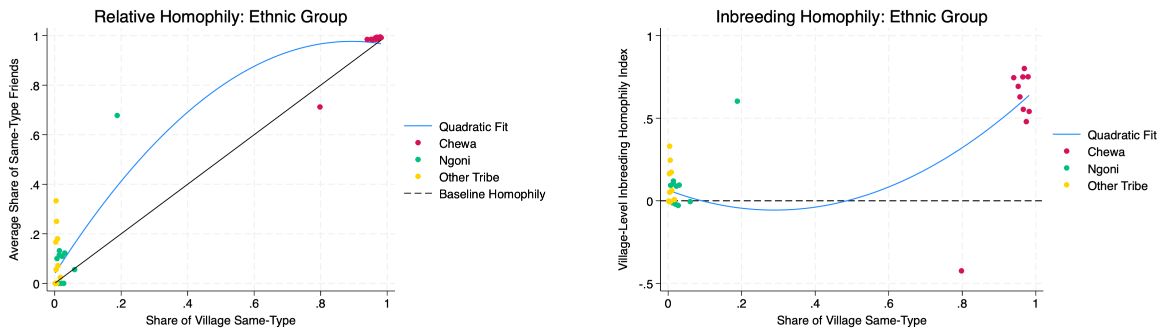


Figure A.9: Ethnicity-Based Village-Level Homophily



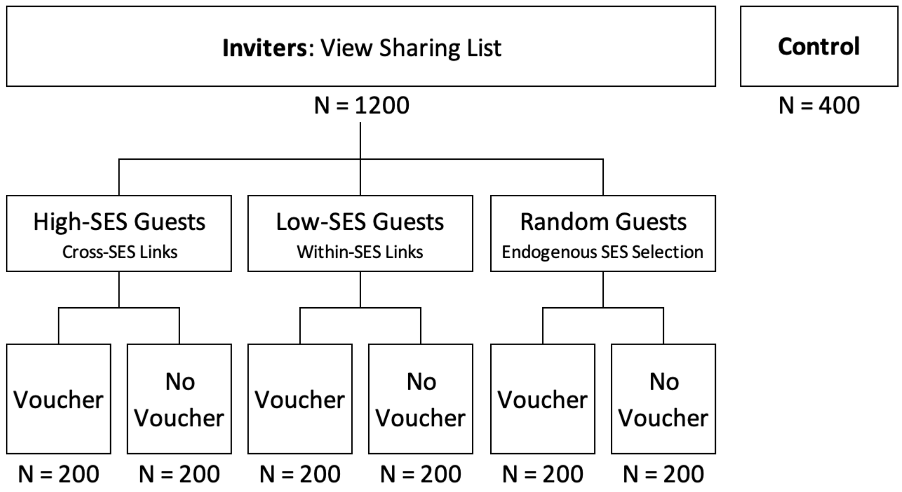


Figure A.10: Intervention Sample – Treatment Groups

A.1 Business Capital Index Construction

GF: EDIT ADD HERE

A.2 Cluster-level Program Saturation

I randomize the saturation of the Inviters and Guests at a geographic cluster level. In a "high-saturation" cluster, 87% of eligible women are randomized to be Inviters or Guests, and 13% of women are randomized to Control. In a "low-saturation" cluster, 35% of eligible women are randomized to be Inviters or Guests, and 65% of women are randomized to Control. First, I define geographic clusters. Then, I randomize each cluster to high or low saturation. Finally, I randomize individuals within clusters to treatment assignments, using the ratios as defined by their cluster-saturation-type.

I define geographic clusters using k-means clustering following Poll (2024). This unsupervised learning technique creates groups based on similarities in latitude and longitude. I specify that clusters must have at least 20 people in them, and should have 36 people per cluster on average. I choose 36 as the average size so that I attain around 100 clusters, in order to ensure sufficient statistical power to detect differences across Control respondents in high- and low-saturation areas. In order to ensure that this is a relevant geographic unit for social networks, I link the names of social network connections with people in my listing dataset and calculate how many relationships with someone in my sample are within the same cluster. I am able to link 7% of network links. Seventy percent of these links are within the same cluster, indicating that this is a network-relevant geographic unit. It is important to note that the relationships between respondents in my sample (the names who I can link) are not representative relationships. They are on average 4.4 minutes (58%) walking-distance closer than other relationships, and are 5 percentage points (16%) less likely to be relatives. However, these relationships are likely good approximations for the types of relationships that my intervention creates.

Table A.4: Sampling Framework

Sampling Group	N	SES	Surveys
Intervention Sample *Main Analytical Sample*	1600	Low-SES	Listing Survey Treatment Allocation Survey Midline Survey Endline Survey
Low-SES Guests	500	Low-SES	Listing Survey *Treatment Allocation: Receipt of invitations, no survey participation* Endline Survey
High-SES Guests	500	High-SES	Listing Survey *Treatment Allocation: Receipt of invitations, no survey participation* Endline Survey
Low-SES Spillover Control	800	Low-SES	Listing Survey Endline Survey
High-SES Spillover Control	200	High-SES	Listing Survey Endline Survey

Table A.5: Timeline

Activity	Months	Participating Groups
Listing Survey	May–June 2024	Full Sample of 3600
Research Team Computer-Based Activities: 1. *SES Index Construction* 2. *Geographic Cluster Construction* 3. *Randomize Clusters to High- or Low-Saturation* 4. *Randomize Participants to Sampling Groups* 5. *Randomize Intervention Sample to Treatment Groups* 6. *Randomize Guests to Inviter Lists*		
Treatment Allocation Survey	July 2024	Intervention Sample
Deliver Invitations to Guests	July 2024	High-SES and Low-SES Guests
Midline Survey	August 2024	Intervention Sample
Endline Survey	May–June 2025	Full Sample of 3600

Appendix B Baseline Balance Tables

Table B.1: Baseline Balance: Comparing Inviter Sub-groups

Variable	(1) Inviter: Random SES Mean/SE	(2) Inviter: High-SES Mean/SE	(3) Inviter Low-SES Mean/SE	T-test Difference (1)-(2)	T-test Difference (1)-(3)
Age	0.005	-0.098	-0.033	0.103	0.038
	(0.062)	(0.054)	(0.058)		
Years in Village	-0.061	-0.088	-0.149	0.027	0.088
	(0.041)	(0.048)	(0.052)		
Chewa	-0.062	0.010	-0.026	-0.073	-0.036
	(0.088)	(0.066)	(0.071)		
Number of Children	0.007	-0.070	-0.110	0.077	0.117
	(0.046)	(0.057)	(0.051)		
SES Index (Z-Score)	-0.340	-0.362	-0.374	0.022	0.035
	(0.034)	(0.032)	(0.035)		
Consuming Own Maize	-0.078	-0.046	-0.130	-0.031	0.052
	(0.066)	(0.060)	(0.065)		
VSLA	-0.134	0.003	-0.028	-0.137	-0.106
	(0.054)	(0.063)	(0.061)		
Rented Acres of Farmland	-0.133	-0.011	-0.093	-0.122	-0.040
	(0.050)	(0.059)	(0.047)		
Rented Gardens	0.012	-0.054	0.115	0.066	-0.104
	(0.059)	(0.049)	(0.064)		
Moved for Marriage	0.008	-0.105	-0.169	0.113	0.177*
	(0.065)	(0.070)	(0.074)		
Yearly Home Visits	-0.002	0.091	-0.099	-0.093	0.097
	(0.054)	(0.068)	(0.042)		
Social Network Size	-0.048	-0.032	-0.018	-0.016	-0.029
	(0.049)	(0.061)	(0.054)		
Husband in Social Network Size	0.028	0.076	0.008	-0.047	0.020
	(0.059)	(0.056)	(0.057)		
Listed in Others' Networks	-0.027	-0.011	-0.005	-0.017	-0.022
	(0.063)	(0.055)	(0.058)		
% Network High-SES	-0.038	0.063	-0.061	-0.101	0.023
	(0.066)	(0.086)	(0.086)		
% Network Same Roof Material	0.036	0.106	0.095	-0.070	-0.059
	(0.051)	(0.053)	(0.052)		
UCLA-3 Score	0.106	0.085	0.023	0.021	0.083
	(0.061)	(0.063)	(0.054)		
Average Strength of Network Links	-0.017	-0.018	-0.009	0.001	-0.007
	(0.062)	(0.046)	(0.057)		
N	400	400	400		
Clusters	97	97	95		
F-test of joint significance (F-stat)				0.940	1.576*
F-test, number of observations				800	800

Notes: The value displayed for t-tests are the differences in the means across the groups. The value displayed for F-tests are the F-statistics. Standard errors are clustered at variable cluster_id. Fixed effects using variable strata are included in all estimation regressions. ***, **, and * indicate significance at the 1, 5, and 10 percent critical level.

Table B.2: Complier Balance (Sent an Invitation): Comparing Inviter Sub-groups

Variable	(1) Inviter: Random SES Mean/SE	(2) Inviter: High-SES Mean/SE	(3) Inviter Low-SES Mean/SE	T-test Difference (1)-(2)	(1)-(3)	(2)-(3)
Age	-0.022	-0.094	-0.048	0.072	0.026	-0.046
	(0.062)	(0.060)	(0.066)			
Years in Village	-0.054	-0.075	-0.115	0.021	0.061	0.040
	(0.045)	(0.055)	(0.061)			
Chewa	-0.085	0.049	-0.034	-0.134	-0.051	0.083
	(0.094)	(0.066)	(0.077)			
Number of Children	0.005	-0.077	-0.115	0.082	0.120	0.038
	(0.048)	(0.063)	(0.058)			
SES Index (Z-Score)	-0.320	-0.339	-0.333	0.019	0.013	-0.006
	(0.041)	(0.037)	(0.036)			
Consuming Own Maize	-0.112	-0.031	-0.126	-0.081	0.013	0.095
	(0.076)	(0.065)	(0.068)			
VSLA	-0.125	0.060	0.045	-0.185	-0.170*	0.015
	(0.058)	(0.069)	(0.072)			
Rented Acres of Farmland	-0.150	0.007	-0.076	-0.156	-0.073	0.083
	(0.054)	(0.064)	(0.052)			
Rented Gardens	-0.011	-0.063	0.136	0.051	-0.147	-0.198**
	(0.060)	(0.054)	(0.067)			
Yearly Home Visits	-0.002	0.118	-0.074	-0.121	0.071	0.192
	(0.059)	(0.071)	(0.053)			
Social Network Size	-0.020	-0.027	0.045	0.008	-0.064	-0.072*
	(0.054)	(0.068)	(0.063)			
Husband in Social Network Size	-0.011	0.044	-0.034	-0.055	0.023	0.078
	(0.063)	(0.057)	(0.057)			
Listed in Others' Networks	-0.057	-0.057	0.027	0.000	-0.083	-0.083
	(0.063)	(0.059)	(0.067)			
% Network High-SES	-0.053	0.038	-0.088	-0.092	0.035	0.126
	(0.071)	(0.080)	(0.088)			
% Network Same Roof Material	0.025	0.076	0.082	-0.051	-0.057	-0.006
	(0.060)	(0.056)	(0.059)			
UCLA-3 Score	0.124	0.124	0.051	0.001	0.073	0.072
	(0.064)	(0.068)	(0.058)			
Average Strength of Network Links	-0.024	0.020	-0.016	-0.044	-0.008	0.036
	(0.069)	(0.053)	(0.062)			
N	329	331	314			
Clusters	95	95	91			
F-test of joint significance (F-stat)				0.975	1.354	1.753**
F-test, number of observations				660	643	645

Notes: The value displayed for t-tests are the differences in the means across the groups. The value displayed for F-tests are the F-statistics. Standard errors are clustered at variable cluster_id. Fixed effects using variable strata are included in all estimation regressions. The covariate variable move_why_1_z is included in all estimation regressions. ***, **, and * indicate significance at the 1, 5, and 10 percent critical level.

Table B.3: Complier Balance (Shared a Meal): Comparing Inviter Sub-groups

Variable	(1) Inviter: Random SES Mean/SE	(2) Inviter: High-SES Mean/SE	(3) Inviter Low-SES Mean/SE	T-test Difference (1)-(2)	(1)-(3)	(2)-(3)
Age	-0.049 (0.072)	-0.106 (0.077)	-0.001 (0.084)	0.056	-0.048	-0.104
Years in Village	-0.039 (0.060)	-0.032 (0.079)	-0.080 (0.079)	-0.007	0.041	0.048
Chewa	-0.020 (0.101)	0.027 (0.097)	-0.051 (0.089)	-0.047	0.031	0.078
Number of Children	-0.027 (0.067)	-0.012 (0.085)	-0.039 (0.081)	-0.015	0.012	0.027
SES Index (Z-Score)	-0.303 (0.060)	-0.302 (0.056)	-0.319 (0.048)	-0.001	0.016	0.017
Consuming Own Maize	0.058 (0.087)	-0.009 (0.098)	-0.059 (0.087)	0.067	0.116	0.049
VSLA	-0.086 (0.080)	0.097 (0.086)	0.136 (0.086)	-0.183	-0.222	-0.039
Rented Acres of Farmland	-0.118 (0.069)	0.011 (0.085)	-0.053 (0.064)	-0.128	-0.065	0.064
Rented Gardens	0.073 (0.087)	0.017 (0.088)	0.176 (0.082)	0.056	-0.102	-0.158
Yearly Home Visits	-0.046 (0.060)	0.147 (0.092)	-0.045 (0.073)	-0.192	-0.001	0.191
Social Network Size	-0.011 (0.072)	0.017 (0.088)	0.192 (0.079)	-0.028	-0.203	-0.175
Husband in Social Network Size	-0.035 (0.079)	-0.047 (0.070)	-0.029 (0.077)	0.012	-0.006	-0.019
Listed in Others' Networks	-0.050 (0.080)	-0.145 (0.081)	0.072 (0.092)	0.094	-0.123	-0.217
% Network High-SES	-0.086 (0.073)	0.127 (0.090)	-0.032 (0.100)	-0.213	-0.055	0.158
% Network Same Roof Material	-0.011 (0.079)	0.029 (0.078)	-0.033 (0.089)	-0.040	0.022	0.062
UCLA-3 Score	0.174 (0.098)	0.176 (0.102)	0.025 (0.082)	-0.002	0.149	0.151
Average Strength of Network Links	-0.021 (0.077)	-0.018 (0.072)	-0.100 (0.074)	-0.003	0.079	0.082
N	181	159	165			
Clusters	83	77	76			
F-test of joint significance (F-stat)				0.558	0.414	0.403
F-test, number of observations				340	346	324

Notes: The value displayed for t-tests are the differences in the means across the groups. The value displayed for F-tests are the F-statistics. Standard errors are clustered at variable cluster_id. Fixed effects using variable strata are included in all estimation regressions. The covariate variable move_why_1_z is included in all estimation regressions. ***, **, and * indicate significance at the 1, 5, and 10 percent critical level.

Table B.4: Baseline Balance: Comparing Voucher Sub-groups

Variable	(1) Low-SES Mean/SE	(2) High-SES Mean/SE	(3) High-SES + Voucher Mean/SE	(4) Low-SES + Voucher Mean/SE	T-test Difference (1)-(2)	(1)-(3)	(1)-(4)
Age	0.036	-0.115	-0.080	-0.101	0.151	0.116	0.137
	(0.080)	(0.076)	(0.069)	(0.073)			
Years in Village	-0.065	-0.137	-0.038	-0.233	0.073	-0.027	0.168
	(0.071)	(0.080)	(0.069)	(0.068)			
Chewa	0.010	0.029	-0.008	-0.062	-0.018	0.018	0.073
	(0.078)	(0.073)	(0.081)	(0.086)			
Number of Children	-0.051	-0.045	-0.094	-0.169	-0.006	0.043	0.117
	(0.072)	(0.084)	(0.069)	(0.063)			
SES Index (Z-Score)	-0.328	-0.344	-0.380	-0.421	0.017	0.052	0.094
	(0.040)	(0.038)	(0.043)	(0.045)			
Consuming Own Maize	-0.141	-0.099	0.006	-0.120	-0.042	-0.147	-0.021
	(0.080)	(0.070)	(0.080)	(0.083)			
VSLA	0.084	-0.007	0.013	-0.139	0.091	0.071	0.223
	(0.079)	(0.079)	(0.077)	(0.067)			
Rented Acres of Farmland	-0.101	-0.112	0.090	-0.085	0.012	-0.191	-0.015
	(0.059)	(0.063)	(0.096)	(0.060)			
Rented Gardens	0.012	-0.071	-0.037	0.219	0.083	0.049	-0.207
	(0.088)	(0.071)	(0.067)	(0.077)			
Moved for Marriage	-0.127	-0.098	-0.112	-0.212	-0.028	-0.014	0.085
	(0.088)	(0.085)	(0.087)	(0.091)			
Yearly Home Visits	-0.029	0.068	0.115	-0.169	-0.097	-0.144	0.140
	(0.062)	(0.093)	(0.094)	(0.048)			
Social Network Size	0.010	-0.015	-0.049	-0.046	0.024	0.058	0.056
	(0.070)	(0.077)	(0.071)	(0.084)			
Husband in Social Network Size	0.008	0.103	0.049	0.008	-0.095	-0.041	0.000
	(0.075)	(0.084)	(0.078)	(0.067)			
Listed in Others' Networks	-0.022	0.011	-0.033	0.011	-0.033	0.011	-0.033
	(0.066)	(0.080)	(0.064)	(0.088)			
% Network High-SES	-0.047	0.041	0.085	-0.075	-0.088	-0.131	0.028
	(0.102)	(0.092)	(0.099)	(0.093)			
% Network Same Roof Material	0.046	0.059	0.153	0.144	-0.013	-0.106	-0.098
	(0.077)	(0.060)	(0.076)	(0.069)			
UCLA-3 Score	0.070	0.076	0.094	-0.024	-0.006	-0.024	0.094
	(0.068)	(0.081)	(0.081)	(0.070)			
Average Strength of Network Links	0.030	-0.067	0.032	-0.048	0.097	-0.001	0.079
	(0.072)	(0.055)	(0.068)	(0.080)			
N	200	200	200	200			
Clusters	92	91	94	92			
F-test of joint significance (F-stat)					0.778	1.353	0.772
F-test, number of observations					400	400	400

Notes: The value displayed for t-tests are the differences in the means across the groups. The value displayed for F-tests are the F-statistics. Standard errors are clustered at variable cluster_id. Fixed effects using variable strata are included in all estimation regressions. ***, **, and * indicate significance at the 1, 5, and 10 percent critical level.

Table B.5: Baseline Balance: Comparing Voucher Sub-groups

Variable	(1) Random Mean/SE	(2) Random + Voucher Mean/SE	T-test Difference (1)-(2)
Age	0.024	-0.014	0.038
	(0.085)	(0.072)	
Years in Village	-0.098	-0.024	-0.074
	(0.064)	(0.059)	
Chewa	-0.080	-0.044	-0.036
	(0.099)	(0.096)	
Number of Children	0.014	0.001	0.012
	(0.078)	(0.065)	
SES Index (Z-Score)	-0.340	-0.340	-0.000
	(0.041)	(0.043)	
Consuming Own Maize	-0.088	-0.067	-0.021
	(0.084)	(0.072)	
VSLA	-0.119	-0.149	0.030
	(0.072)	(0.076)	
Rented Acres of Farmland	-0.180	-0.087	-0.093
	(0.061)	(0.069)	
Rented Gardens	-0.061	0.084	-0.145
	(0.064)	(0.095)	
Moved for Marriage	0.072	-0.056	0.128
	(0.076)	(0.080)	
Yearly Home Visits	0.001	-0.006	0.007
	(0.055)	(0.081)	
Social Network Size	0.002	-0.097	0.100
	(0.063)	(0.073)	
Husband in Social Network Size	0.062	-0.006	0.068
	(0.074)	(0.074)	
Listed in Others' Networks	-0.022	-0.033	0.011
	(0.077)	(0.069)	
% Network High-SES	-0.096	0.019	-0.115
	(0.076)	(0.080)	
% Network Same Roof Material	0.117	-0.044	0.162
	(0.065)	(0.070)	
UCLA-3 Score	0.134	0.078	0.056
	(0.085)	(0.077)	
Average Strength of Network Links	-0.029	-0.004	-0.025
	(0.088)	(0.076)	
N	200	200	
Clusters	94	93	
F-test of joint significance (F-stat)			0.753
F-test, number of observations			400

Notes: The value displayed for t-tests are the differences in the means across the groups. The value displayed for F-tests are the F-statistics. Standard errors are clustered at variable cluster_id. Fixed effects using variable strata are included in all estimation regressions. ***, **, and * indicate significance at the 1, 5, and 10 percent critical level.

Table B.6: Baseline Balance: Comparing Control with Inviters

Variable	(1) Control Mean/SE	(2) Inviter Mean/SE	T-test Difference (1)-(2)
Age	-0.029 (0.068)	-0.042 (0.041)	0.013
Years in Village	-0.197 (0.044)	-0.099 (0.029)	-0.097
Chewa	0.047 (0.059)	-0.026 (0.065)	0.073
Number of Children	-0.108 (0.054)	-0.057 (0.033)	-0.051
SES Index (Z-Score)	-0.372 (0.039)	-0.359 (0.027)	-0.014
Consuming Own Maize	-0.020 (0.072)	-0.085 (0.048)	0.065
VSLA	-0.053 (0.064)	-0.053 (0.047)	0.000
Rented Acres of Farmland	-0.093 (0.042)	-0.079 (0.038)	-0.014
Rented Gardens	-0.009 (0.058)	0.024 (0.038)	-0.033
Moved for Marriage	-0.063 (0.069)	-0.089 (0.055)	0.026
Yearly Home Visits	0.016 (0.050)	-0.003 (0.035)	0.019
Social Network Size	0.008 (0.064)	-0.033 (0.040)	0.041
Husband in Social Network Size	0.055 (0.054)	0.037 (0.038)	0.018
Listed in Others' Networks	-0.044 (0.055)	-0.015 (0.045)	-0.029
% Network High-SES	-0.050 (0.084)	-0.012 (0.070)	-0.038
% Network Same Roof Material	0.082 (0.057)	0.079 (0.034)	0.003
UCLA-3 Score	0.031 (0.042)	0.071 (0.041)	-0.040
Average Strength of Network Links	-0.069 (0.056)	-0.014 (0.041)	-0.054
N	400	1200	
Clusters	94	97	
F-test of joint significance (F-stat)			0.601
F-test, number of observations			1600

Notes: The value displayed for t-tests are the differences in the means across the groups. The value displayed for F-tests are the F-statistics. Standard errors are clustered at variable cluster_id. Fixed effects using variable strata are included in all estimation regressions. ***, **, and * indicate significance at the 1, 5, and 10 percent critical level.

Appendix C First Stage Results: Additional Tables and Figures

Table C.1: Treatment Effects on Invitation-Sending to Low-SES and High-SES Guests

	(1)		(2)		(3)		(4)		(5)	
	Mixed Bundle		1 Low-SES Only		>= 2 Low-SES Only		1 High-SES Only		>= 2 High-SES Only	
Random with Voucher	0.105**	(0.043)	-0.041	(0.043)	-0.055	(0.038)	-0.017	(0.044)	-0.003	(0.041)
Low-SES without Voucher			0.219***	(0.043)	0.286***	(0.038)				
Low-SES with Voucher			0.247***	(0.044)	0.246***	(0.039)				
High-SES without Voucher							0.227***	(0.044)	0.175***	(0.054)
High-SES with Voucher							0.201***	(0.044)	0.149***	(0.054)
Observations	400		800		800		800		800	
Random without Voucher Mean	0.235		0.200		0.095		0.195		0.105	
P-values:										
High-SES: Voucher = No Voucher							0.556		0.519	
Low-SES: Voucher = No Voucher			0.525		0.288					

Standard errors in parentheses
All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. (column 1) indicates if the Inviter sent an invitation to at least one low-SES Guest and at least one high-SES Guest (Inviters with the High-SES Guest List or the Low-SES Guest List only saw one type of Guest, so the outcome is mechanically zero). (column 2) indicates if the Inviter sent an invitation to exactly one low-SES Guest, and sent no invitations to any high-SES Guests; (column 3) indicates if the Inviter sent invitations to at least two low-SES Guests, and sent no invitations to any high-SES Guests (Inviters with the High-SES Guest List did not see any low-SES names, so these outcomes are mechanically zero for this group). (column 4) indicates if the Inviter sent an invitation to exactly one high-SES Guest, and no low-SES Guests; (column 5) indicates if the Inviter sent invitations to at least two high-SES Guests, and sent no invitations to any low-SES Guests (Inviters with the Low-SES Guest List did not see any high-SES names, so these outcomes is mechanically zero for this group).
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

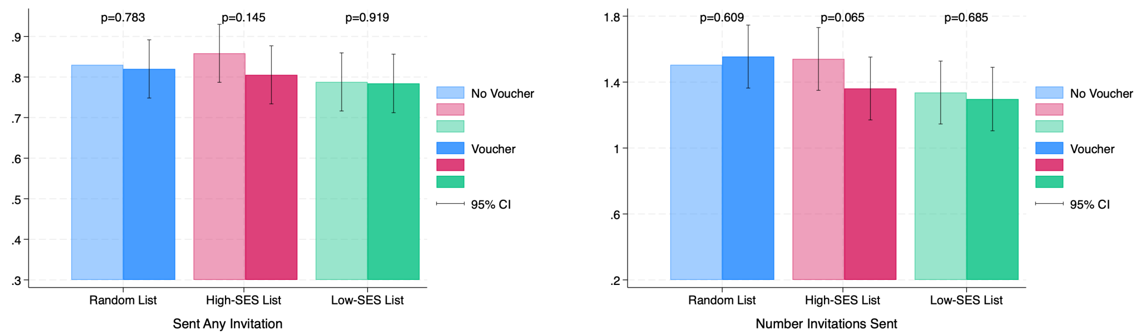


Figure C.1: First Stage Invitation Sending

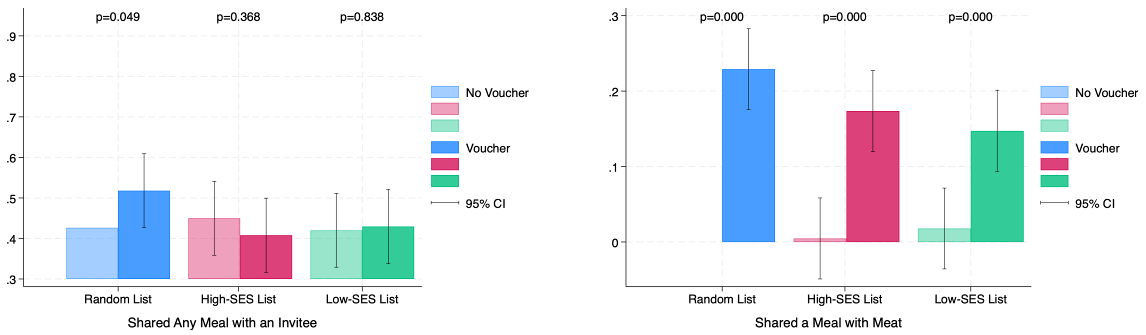


Figure C.2: First-Stage Meal Sharing

Table C.2: Chosen Guest Characteristics

	(1) Age	(2) Networks	(3) SES	(4) UCLA-3	(5) Roof	(6) Distance	(7) HH Power
High-SES	1.985***	0.395***	0.740***	-0.011	0.367***	0.009	-0.033
	(0.703)	(0.131)	(0.053)	(0.097)	(0.061)	(0.013)	(0.077)
Low-SES	-0.948	0.219	-0.799***	0.028	-0.470***	0.009	0.090
	(0.613)	(0.143)	(0.062)	(0.100)	(0.052)	(0.015)	(0.082)
Observations	974	974	974	967	1200	974	974
Controls for Average on List	NO	NO	NO	NO	NO	NO	NO
Control Mean	29.608	6.238	0.600	3.698	0.820	0.198	0.012
P-values							
Low-SES = High-SES	0.000	0.268	0.000	0.728	0.000	0.998	0.183

Standard errors in parentheses
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table C.3: Chosen Guest Characteristics

	(1) Age	(2) Networks	(3) SES	(4) UCLA-3	(5) Roof	(6) Distance	(7) HH Power
Random + Voucher	1.016	0.075	0.177*	-0.157*	0.169*	-0.014	-0.082
	(0.815)	(0.145)	(0.095)	(0.093)	(0.087)	(0.015)	(0.090)
High-SES	1.938**	0.335*	0.793***	-0.110	0.506***	0.003	-0.085
	(0.854)	(0.180)	(0.079)	(0.131)	(0.089)	(0.018)	(0.078)
High-SES + Voucher	2.975***	0.507***	0.859***	-0.091	0.396***	-0.002	-0.074
	(0.900)	(0.185)	(0.077)	(0.127)	(0.078)	(0.015)	(0.101)
Low-SES	-0.603	0.283	-0.724***	0.003	-0.342***	-0.009	0.059
	(0.845)	(0.212)	(0.079)	(0.128)	(0.068)	(0.020)	(0.089)
Low-SES + Voucher	-0.296	0.255	-0.706***	-0.102	-0.433***	0.013	0.047
	(0.865)	(0.183)	(0.077)	(0.135)	(0.071)	(0.020)	(0.082)
Observations	974	974	974	967	1200	974	974
Controls for Average on List	NO	NO	NO	NO	NO	NO	NO
Control Mean	29.113	6.188	0.497	3.776	0.725	0.205	0.061
P-values							
High-SES: Voucher = No Voucher	0.098	0.277	0.153	0.857	0.232	0.737	0.892
: Low-SES: Voucher = No Voucher	0.665	0.893	0.756	0.378	0.070	0.260	0.873
Random + Voucher = High-SES + Voucher	0.031	0.007	0.000	0.536	0.012	0.432	0.944
Random + Voucher = Low-SES + Voucher	0.144	0.309	0.000	0.661	0.000	0.182	0.256

Standard errors in parentheses
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table C.4: Reasons Chose First-Pick Guest

	(1) Generous	(2) Humble	(3) Warm	(4) Knowledgeable	(5) Connected	(6) Business	(7) Mother	(8) Hard-working	(9) Trust-worthy	(10) Respected	(11) Prayerful	(12) Marriage	(13) Needy
Random + Voucher	0.057	0.045	-0.019	-0.014	-0.137**	0.042	-0.008	0.031	0.027	0.024	-0.013	0.029	0.014
	(0.054)	(0.051)	(0.047)	(0.038)	(0.054)	(0.028)	(0.037)	(0.042)	(0.055)	(0.044)	(0.040)	(0.049)	(0.040)
High-SES	-0.013	0.055	0.097	0.071	-0.060	0.039	-0.014	0.012	-0.040	0.036	0.038	-0.033	-0.053
	(0.052)	(0.057)	(0.063)	(0.045)	(0.058)	(0.029)	(0.038)	(0.048)	(0.047)	(0.037)	(0.036)	(0.043)	(0.034)
High-SES + Voucher	0.067	0.084	-0.023	0.095**	-0.111**	0.020	-0.004	0.014	-0.061	0.020	0.064	-0.005	-0.041
	(0.054)	(0.051)	(0.046)	(0.046)	(0.055)	(0.032)	(0.031)	(0.044)	(0.049)	(0.042)	(0.043)	(0.044)	(0.033)
Low-SES	0.043	0.105*	0.002	-0.020	-0.068	0.006	0.027	-0.014	-0.025	0.018	0.043	-0.052	-0.007
	(0.054)	(0.058)	(0.052)	(0.036)	(0.060)	(0.031)	(0.037)	(0.050)	(0.043)	(0.037)	(0.042)	(0.037)	(0.035)
Low-SES + Voucher	0.100*	0.120**	0.126**	-0.003	-0.074	-0.010	-0.035	0.006	-0.042	-0.078**	0.048	0.002	-0.036
	(0.056)	(0.054)	(0.049)	(0.043)	(0.058)	(0.027)	(0.038)	(0.048)	(0.040)	(0.034)	(0.041)	(0.044)	(0.038)
Observations	974	974	974	974	974	974	974	974	974	974	974	974	974
Control Mean	0.259	0.392	0.488	0.139	0.717	0.060	0.175	0.181	0.211	0.157	0.151	0.199	0.127
P-values													
High-SES: Voucher = No Voucher	0.097	0.613	0.038	0.605	0.335	0.527	0.811	0.975	0.657	0.690	0.526	0.416	0.699
: Low-SES: Voucher = No Voucher	0.386	0.795	0.024	0.596	0.916	0.585	0.078	0.688	0.685	0.007	0.900	0.200	0.438
Random + Voucher = High-SES + Voucher	0.847	0.499	0.938	0.007	0.648	0.431	0.909	0.706	0.051	0.923	0.044	0.414	0.130
Random + Voucher = Low-SES + Voucher	0.418	0.168	0.011	0.784	0.280	0.084	0.491	0.607	0.188	0.005	0.143	0.542	0.161

Standard errors in parentheses
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table C.5: Reasons Chose Guest (Average Across Guest)

	(1) Generous	(2) Humble	(3) Warm	(4) Knowledgeable	(5) Connected	(6) Business	(7) Mother	(8) Hard-working	(9) Trust-worthy	(10) Respected	(11) Prayerful	(12) Marriage	(13) Needy
Random + Voucher	0.017	0.006	-0.026	0.019	-0.044***	0.004	0.009	0.002	-0.012	-0.004	-0.018	0.014	0.005
	(0.015)	(0.014)	(0.018)	(0.013)	(0.015)	(0.009)	(0.011)	(0.013)	(0.015)	(0.012)	(0.013)	(0.014)	(0.013)
High-SES	-0.009	0.014	0.028*	0.024**	-0.026	0.005	-0.009	-0.009	-0.027*	-0.005	0.004	-0.005	-0.014
	(0.014)	(0.014)	(0.015)	(0.012)	(0.017)	(0.008)	(0.010)	(0.014)	(0.014)	(0.011)	(0.010)	(0.013)	(0.011)
High-SES + Voucher	0.019	0.032**	-0.005	0.025**	-0.037**	0.006	0.004	-0.008	-0.035**	-0.009	0.011	-0.008	-0.012
	(0.014)	(0.014)	(0.012)	(0.011)	(0.016)	(0.009)	(0.010)	(0.012)	(0.014)	(0.012)	(0.011)	(0.011)	(0.011)
Low-SES	0.013	0.028*	0.002	0.004	-0.020	-0.001	0.007	-0.016	-0.016	-0.004	0.005	-0.013	-0.004
	(0.014)	(0.015)	(0.016)	(0.010)	(0.018)	(0.009)	(0.011)	(0.012)	(0.013)	(0.011)	(0.012)	(0.012)	(0.011)
Low-SES + Voucher	0.028**	0.031**	0.030*	0.007	-0.027	-0.003	-0.010	-0.015	-0.031**	-0.023**	0.003	-0.002	-0.008
	(0.014)	(0.013)	(0.017)	(0.012)	(0.018)	(0.008)	(0.010)	(0.011)	(0.012)	(0.011)	(0.010)	(0.013)	(0.011)
Observations	974	974	974	974	974	974	974	974	974	974	974	974	974
Control Mean	0.104	0.139	0.172	0.047	0.246	0.027	0.061	0.073	0.089	0.063	0.065	0.071	0.047
P-values													
High-SES: Voucher = No Voucher	0.059	0.232	0.026	0.929	0.507	0.918	0.256	0.947	0.515	0.690	0.504	0.738	0.812
: Low-SES: Voucher = No Voucher	0.296	0.832	0.093	0.762	0.688	0.821	0.076	0.926	0.210	0.057	0.832	0.343	0.680
Random + Voucher = High-SES + Voucher	0.868	0.085	0.183	0.648	0.694	0.807	0.653	0.416	0.097	0.732	0.023	0.025	0.135
Random + Voucher = Low-SES + Voucher	0.421	0.082	0.001	0.326	0.356	0.385	0.054	0.153	0.215	0.075	0.098	0.170	0.311

Standard errors in parentheses
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Variable	(1) Inviter: Random SES Mean/SE	(2) Inviter: High-SES Mean/SE	(3) Inviter Low-SES Mean/SE	T-test Difference (1)-(2)	(1)-(3)	(2)-(3)
Discussed with an Invitee: Marriage/Romance	0.134	0.137	0.145	-0.004	-0.012**	-0.008
	(0.020)	(0.020)	(0.020)			
Discussed with an Invitee: Childcare	0.108	0.109	0.095	-0.001	0.013	0.014
	(0.017)	(0.017)	(0.017)			
Discussed with an Invitee: Other Family	0.101	0.099	0.080	0.002	0.021	0.019
	(0.016)	(0.016)	(0.015)			
Discussed with an Invitee: Social Relationships	0.134	0.096	0.133	0.037*	0.001	-0.036
	(0.017)	(0.015)	(0.017)			
Discussed with an Invitee: Professional Relationship	0.028	0.046	0.015	-0.018	0.013	0.031
	(0.010)	(0.011)	(0.006)			
Discussed with an Invitee: Business Resources	0.043	0.033	0.008	0.010	0.035	0.025**
	(0.011)	(0.008)	(0.004)			
Discussed with an Invitee: Finding Piecework	0.033	0.046	0.070	-0.013	-0.037**	-0.024
	(0.009)	(0.011)	(0.012)			
Discussed with an Invitee: Growing Businesses	0.040	0.036	0.025	0.005	0.015	0.010
	(0.009)	(0.010)	(0.008)			
Discussed with an Invitee: Finding Loans	0.015	0.008	0.018	0.007	-0.002	-0.010
	(0.006)	(0.004)	(0.006)			
Discussed with an Invitee: Agriculture	0.116	0.086	0.080	0.030	0.036	0.006
	(0.016)	(0.013)	(0.016)			
Discussed with an Invitee: Stories from our Past	0.038	0.033	0.023	0.005	0.015	0.010
	(0.012)	(0.009)	(0.008)			
Discussed with an Invitee: Stories from the Village	0.058	0.048	0.055	0.010	0.003	-0.007
	(0.013)	(0.012)	(0.013)			
Discussed with an Invitee: Discussions about Norms	0.030	0.020	0.028	0.010	0.003	-0.007
	(0.008)	(0.007)	(0.008)			
Discussed with an Invitee: Health	0.045	0.018	0.020	0.028	0.025	-0.002
	(0.012)	(0.007)	(0.007)			
Discussed with an Invitee: Religion	0.020	0.008	0.023	0.013	-0.002	-0.015
	(0.007)	(0.004)	(0.008)			
N	397	394	399			
Clusters	97	97	95			
F-test of joint significance (F-stat)				1.286	2.035**	1.698*
F-test, number of observations				791	796	793

Notes: The value displayed for t-tests are the differences in the means across the groups. The value displayed for F-tests are the F-statistics. Standard errors are clustered at variable cluster_id. Fixed effects using variable strata are included in all estimation regressions. The covariate variable move_why_1_z is included in all estimation regressions. ***, **, and * indicate significance at the 1, 5, and 10 percent critical level.

Table C.6: Meal Conversation Topics

C.1 Meeting and Friending Bias Accounting

The social networks literature identifies two biases that lead to homophily: friending bias, or a higher probability of becoming friends with a same-type person *conditional* on meeting them; and meeting bias, or a higher probability of meeting a same-type person in the first place. These biases are often viewed as the roles of preferences (friending bias) and constraints (meeting bias). Descriptively, both meeting bias and friending bias contribute to homophily (Currarini et al., 2010; Chetty et al., 2022b).

However, meeting opportunities are *not* exogenously given. In the case of biased opportunities, homophily arises because people don't have as many opportunities to meet different-type individuals—but selection into meeting opportunities could be correlated with, or even *driven* by, preferences for homophily. In the case of biased preferences, homophily arises because people simply prefer interacting with same-type individuals. However, if meetings are not exogenous, friending bias is measured on a selected group. Furthermore, it is feasible that constraints could be an important contributor to friending bias.[30] While rich descriptive data can quantify meeting and friending bias, it cannot determine the degree to which preferences and constraints *drive* each bias. Consequently, it is problematic to conflate meeting bias with constraints and friending bias with preferences, and descriptive data cannot adequately inform us if supply-side or demand-side forces drive homophily.

First, I exogenously measure the role of preferences as a driver of meeting bias, both under high- and low-price regimes. Next, I measure friending bias conditional on exogenous meeting opportunities.

C.1.1 Meeting Bias

I am not able to measure meeting bias directly, because I do not record real-world meeting opportunities. However, I can measure the extent to which preferences and high prices drive meeting bias. To do this I consider: to what extent do Inviters substitute *away* from sending invitations to high-SES Guests when they have the opportunity to choose, as compared to the extent that Inviters substitute away from inviting low-SES Guests when they have the opportunity to choose. Comparing these two estimates in the group *without* the voucher gives me a measure of the role of preferences in driving meeting bias under a high-price regime. Comparing these two estimates in the group *with* the voucher gives me a measure of the role of preferences in driving meeting bias under a low-price regime.

My empirical specification is the following:

$$InviteLSES_i = \beta_0^L + \beta_1^L L_i + \gamma_i + \theta_i + X_i + \epsilon_i$$

[30] If, for example, individuals are missing the resources or skills to link with a different-type person, even after meeting them. For example, people from cultural backgrounds may have different ways of communicating to one another that they are interested in forming a relationship.

$$InviteHSES_i = \beta_0^H + \beta_1^H H_i + \gamma_i + \theta_i + X_i + \epsilon_i$$

where the first regression is estimated among Inviters with Low-SES or Random Guest Lists, and the second regression is estimated among Inviters with High-SES or Random Guest Lists. $InviteLSES_i$ is the number of invitations an Inviter sent to a Low-SES Guest, and $InviteHSES_i$ is the number of invitations an Inviter sent to a High-SES Guest. L_i and H_i indicate, respectively, if a participant was an Inviter with a Low-SES Guest List or a High-SES Guest List (in both regressions, Inviters with the Random Guest List are the omitted group). Let γ_i be geographic-cluster fixed effects, θ_i be wealth-quintile fixed effects, and X_i be a matrix of unbalanced baseline variables and lasso-selected controls. Then β_1^L represents the number of invitations an individual sends to a Low-SES person because they are restricted to do so, and β_1^H represents the number of invitations an individual sends to a High-SES person because they are restricted to do so. If β_1^L is lower than β_1^H, this means that a restricted Guest List takes people further away from their preferred allocation when the Guest List is all High-SES than when the Guest List is all Low-SES. In other words, this implies that people have a preference for homophilic meetings.

Let $\beta_1^{L,NV}$ and $\beta_1^{H,NV}$ represent β_1^L and β_1^H estimated on the samples *without* the voucher, and let $\beta_1^{L,V}$ and $\beta_1^{H,V}$ represent β_1^L and β_1^H estimated on the samples *with* the voucher. Then $\beta_1^{H,NV} - \beta_1^{L,NV}$ measures preferences-in-meeting bias under a high-price regime (the additional number of invitations someone sends to a homophilic link relative to a non-homophilic link, when they have the ability to exercise preferences versus not); $\beta_1^{H,V} - \beta_1^{L,V}$ measure preferences-in-meeting bias under a low-price regime; and $(\beta_1^{H,NV} - \beta_1^{L,NV}) - (\beta_1^{H,V} - \beta_1^{L,V})$ measures the number of invitations to homophilic links induced *because* of high prices.

I find that preferences for homophily are an important driver of meeting bias, but that this pattern is only true in the high-price regime. Among Inviters without the voucher, Inviters with the Random Guest List send 0.790 fewer invitations to High-SES Guests than Inviters with the High-SES Guest List (Table C.7). Inviters with the Random Guest list only send 0.606 fewer invitations to Low-SES Guests than Inviters with the Low-SES Guest List. The difference between these two estimates is 0.184 invitations, and is just shy of conventional levels of statistical significance ($p = 0.118$). In other words, when Inviters do not have the ability to exercise preferences over the SES of the women who they invite, they have the same propensity to invite low-SES and high-SES women. However, when they can choose, they are more likely to invite Low-SES women.

This pattern *does not* hold when we evaluate the sample of Inviters who had the voucher. Inviters with the Random Guest List send 0.527 fewer invitations to High-SES Guests than Inviters with the High-SES Guest List, while Inviters with the Random Guest List only send 0.609 fewer invitations to Low-SES Guests than Inviters with the Low-SES Guest List. The difference between these two estimates is -0.082, indicating that the biased preference for homophily is completely eliminated by the voucher. Comparing the preferences-in-meeting bias across the high-price and low-price regimes, I find that high prices lead to an additional 0.266 in-

Table C.7: Meeting Bias

	(1) Low-SES vs. Random	(2) High-SES vs. Random	(3) Low-SES + Voucher vs. Random + Voucher	(4) High-SES + Voucher vs. Random + Voucher
Outcome: Number of Invitations to Low-SES Invitees	0.606***		0.609***	
	(0.094)		(0.094)	
Outcome: Number of Invitations to High-SES Invitees		0.790***		0.527***
		(0.090)		(0.095)
Observations	397	394	399	397
Control Mean	0.750	0.755	0.700	0.885
DD: (H–R) – (L–R)	0.184 [p= 0.118]		-0.082 [p= 0.486]	
DDD: [(H–R) – (L–R)] – [(H+V – R+V) – (L+V – R+V)]	0.266 [p= 0.110]			

Standard errors in parentheses
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

vitations per person to low-SES women, just shy of conventional levels of statistical significance ($p = 0.110$).

C.1.2 Friending Bias

These results imply that there is a high degree of selection into meeting opportunities under "real-world" conditions (Inviters with the Random Guest List, without the voucher) that is endogenous to demand for homophily. This implies that using descriptive data to measure friending bias likely suffers from sample selection, and that the measures of friending bias we have from this data may not represent preferences conditional on exogenous meetings.

To test for friending bias, I consider an Inviter and a Guest as "linked" if the Inviter reports that, one month after the intervention, she has the phone number of the Guest saved.[31] In order to understand the rates of friending that we would expect without the intervention, I ask Control participants if they have the phone numbers of a random placebo list of women, selected by the same methodology that Guest Lists were designed.

My empirical specification is the following:

$$PhoneLSES_i = \beta_0^L + \beta_1^L L_i + \gamma_i + \theta_i + X_i + \epsilon_i$$

$$PhoneHSES_i = \beta_0^H + \beta_1^H H_i + \gamma_i + \theta_i + X_i + \epsilon_i$$

where $PhoneLSES_i$ is the number of low-SES Guest phone numbers that the Inviter has saved,

[31] Enumerators did not verify these phone numbers for the sake of expediency. However, we did ask participants to tell us the name of each woman on the Guest List based on a photo. We then use a fuzzy merge on a string to match the names that respondents gave us to the names of each Guest that we have recorded, which assigns a "match-probability" to these two strings. We interpret this match probability as the probability that the Inviter knows the Guest's name, an objective and verifiable measure of how well the Inviter knows the Guest. The average percent of names that an Inviter knows is correlated with the number of phone numbers they say they have. We do not use the percent of names that the Inviter knows because they could learn a name only from reading the Guest List, so we would likely over-estimate linking if we used this measure.

Table C.8: Friending Bias

	(1) Low-SES Numbers Saved		(2) High-SES Numbers Saved	
High-SES × No Voucher			0.057***	(0.018)
High-SES × Voucher			0.022	(0.018)
Low-SES × No Voucher	0.029*	(0.016)		
Low-SES × Voucher	0.036**	(0.017)		
Random × No Voucher	0.025	(0.016)	-0.015	(0.018)
Random × Voucher	0.018	(0.016)	0.003	(0.018)
Observations	1134		1143	
Control Mean	0.016		0.032	
Random DD: L – H	0.041 [p= 0.032]			
Random DD: L+V – H+V	0.015 [p= 0.482]			
Random DDD: [L – H] – [L+V – H+V]	0.026 [p= 0.257]			
LSES/HSES DD: L – H	-0.028 [p= 0.284]			
LSES/HSES DD: L+V – H+V	0.014 [p= 0.571]			
LSES/HSES DDD: [L – H] – [L+V – H+V]	-0.041 [p= 0.192]			

Standard errors in parentheses
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

and $PhoneHSES_i$ is the number of high-SES Guest phone numbers that the Inviter has saved.

Appendix D Second Stage Results: Additional Figures and Tables

Table D.1: Treatment Effects on Consumption Index Components

	(1) Lean Season Protein Consumption	(2) Last Month Protein Consumption	(3)	(4) Lean Season Daily Meals	(5) Last Month Daily Meals	(6)
	1 Year	1 Month	1 Year	1 Year	1 Month	1 Year
Panel A: Pooled Inviter Treatment Effects						
All Inviters	0.639**	0.143	0.520*	0.070**	-0.000	0.065
	(0.279)	(0.178)	(0.302)	(0.032)	(0.030)	(0.149)
Panel B: Pooled Inviter by Guest List Treatment Effects						
Inviter with High-SES Guest List	0.831**	0.196	0.997***	0.094**	0.033	0.258
	(0.340)	(0.218)	(0.367)	(0.038)	(0.037)	(0.181)
Inviter with Low-SES Guest List	0.387	-0.182	0.305	0.079**	-0.039	-0.049
	(0.341)	(0.218)	(0.369)	(0.039)	(0.037)	(0.182)
Inviter with Random Guest List	0.698**	0.414*	0.248	0.035	0.005	-0.019
	(0.342)	(0.218)	(0.369)	(0.039)	(0.037)	(0.183)
Panel C: Inviter Sub-Group Treatment Effects						
High-SES without Voucher	0.718*	0.139	0.938**	0.111**	0.033	0.465**
	(0.418)	(0.269)	(0.451)	(0.047)	(0.046)	(0.223)
High-SES with Voucher	0.943**	0.265	1.014**	0.080*	0.031	0.074
	(0.417)	(0.266)	(0.448)	(0.047)	(0.045)	(0.222)
Low-SES without Voucher	0.366	-0.158	-0.135	0.094**	-0.027	-0.051
	(0.418)	(0.266)	(0.451)	(0.047)	(0.045)	(0.223)
Low-SES with Voucher	0.406	-0.210	0.745*	0.064	-0.050	-0.047
	(0.417)	(0.267)	(0.450)	(0.047)	(0.046)	(0.222)
Random without Voucher	0.734*	0.422	0.083	0.047	-0.021	-0.001
	(0.418)	(0.268)	(0.450)	(0.047)	(0.046)	(0.223)
Random with Voucher	0.657	0.407	0.403	0.024	0.029	-0.028
	(0.422)	(0.266)	(0.454)	(0.048)	(0.045)	(0.225)
Observations	1528	1585	1528	1528	1585	1528
Control Mean	3.185	3.051	6.135	1.420	2.230	2.309
P-values:						
Pooled: High-SES vs. Low-SES Guest List	0.191	0.082*	0.059*	0.693	0.054*	0.090*
Pooled: Voucher vs. No Voucher	0.831	0.893	0.163	0.376	0.802	0.350
High-SES: Voucher vs. No Voucher	0.640	0.685	0.883	0.566	0.965	0.126
Low-SES: Voucher vs. No Voucher	0.932	0.865	0.089*	0.573	0.650	0.987
Random: Voucher vs. No Voucher	0.873	0.962	0.541	0.677	0.342	0.915

Standard errors in parentheses
All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. Protein meals consumed during the lean season and during the last month at the 1 Year follow-up include meals with meat, fish, or eggs (columns 1 and 2). Meals consumed with protein during the last at the 1 Month follow-up include meals with fish or eggs (column 3). Daily meals in the lean season (column 4) and daily meals in the past month (columns 5 and 6) are the number of meals consumed on a typical day during those time periods.
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table D.2: Treatment Effects on CESDR-10 Score (Depression Score) Components

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
	I was unusually bothered		I was unfocused		I felt depressed		Everything was effortful		I felt hopeful		I felt fearful		My sleep was restless		I was happy		I felt lonely		I could not get going	
	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year
Panel A: Pooled Inviter Treatment Effects																				
All Inviters	0.029	-0.097**	0.041	-0.052	-0.043	-0.036	0.084**	-0.068	0.098*	-0.014	0.008	-0.075*	0.064	-0.060	-0.001	0.068	0.067*	-0.066	-0.004	-0.042
	(0.050)	(0.046)	(0.048)	(0.047)	(0.049)	(0.049)	(0.042)	(0.044)	(0.051)	(0.052)	(0.043)	(0.045)	(0.047)	(0.048)	(0.046)	(0.046)	(0.038)	(0.042)	(0.044)	(0.050)
Panel B: Pooled Inviter by Guest List Treatment Effects																				
Inviter with High-SES Guest List	0.013	-0.065	0.043	-0.005	-0.059	0.021	0.073	-0.007	0.106*	-0.008	-0.033	-0.044	0.034	-0.032	-0.025	0.085	0.045	0.003	-0.043	0.012
	(0.061)	(0.057)	(0.059)	(0.057)	(0.060)	(0.060)	(0.052)	(0.054)	(0.063)	(0.064)	(0.053)	(0.055)	(0.057)	(0.058)	(0.056)	(0.056)	(0.047)	(0.051)	(0.054)	(0.060)
Inviter with Low-SES Guest List	0.027	-0.132**	-0.001	-0.080	-0.047	-0.128**	0.070	-0.129**	0.113*	-0.005	0.073	-0.130**	0.073	-0.094	0.029	0.079	0.072	-0.123**	0.040	-0.094
	(0.061)	(0.057)	(0.059)	(0.058)	(0.060)	(0.060)	(0.052)	(0.054)	(0.063)	(0.064)	(0.053)	(0.055)	(0.057)	(0.058)	(0.056)	(0.056)	(0.047)	(0.051)	(0.054)	(0.061)
Inviter with Random Guest List	0.048	-0.095*	0.080	-0.071	-0.024	-0.002	0.110**	-0.070	0.075	-0.031	-0.017	-0.051	0.087	-0.056	-0.008	0.038	0.085*	-0.080	-0.008	-0.045
	(0.061)	(0.057)	(0.059)	(0.058)	(0.059)	(0.060)	(0.052)	(0.054)	(0.063)	(0.064)	(0.053)	(0.055)	(0.057)	(0.058)	(0.056)	(0.057)	(0.047)	(0.051)	(0.054)	(0.061)
Observations	1584	1525	1583	1524	1585	1528	1585	1527	1585	1527	1585	1527	1584	1527	1584	1527	1585	1528	1585	1527
Control Mean	1.757	1.651	1.610	1.615	1.856	1.879	1.395	1.594	2.889	3.119	1.486	1.608	1.570	1.681	2.944	3.008	1.347	1.480	1.719	1.728
P-values:																				
Pooled: High-SES vs. Low-SES Guest List	0.822	0.229	0.452	0.191	0.837	0.012**	0.957	0.024**	0.903	0.956	0.047**	0.116	0.487	0.277	0.327	0.917	0.562	0.013**	0.123	0.078*
Pooled: Voucher vs. No Voucher	0.622	0.477	0.360	0.991	0.809	0.722	0.526	0.557	0.514	0.761	0.338	0.490	0.089*	0.644	0.487	0.693	0.558	0.485	0.562	0.449
High-SES: Voucher vs. No Voucher	0.012**	0.274	0.304	0.553	0.414	0.780	0.233	0.948	0.852	0.867	0.219	0.511	0.012**	0.412	0.709	0.394	0.228	0.289	0.127	0.791
Low-SES: Voucher vs. No Voucher	0.139	0.843	0.650	0.750	0.637	0.554	0.690	0.130	0.279	0.685	0.397	0.345	0.617	0.446	0.641	0.881	0.727	0.701	0.572	0.324
Random: Voucher vs. No Voucher	1.000	0.989	0.238	0.430	0.510	0.327	0.616	0.617	0.849	0.956	0.175	0.117	0.968	0.418	0.196	0.920	0.802	0.862	0.842	0.621

Standard errors in parentheses
All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. Each column represents a question from the CESDR-10, a 10-item revised version of the Center of Epidemiologic Studies Depression Scale. For each question, participants self-report the frequency with with they experienced the feelings that the question describes in the past two weeks. Each question is answered on a scale of 1-4: (1) Never, (2) Rarely, (3) Sometimes, (4) Always.
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table D.3: Treatment Effects on Depression

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Any Depression		CESDR-10 Score		Mild Depression		Moderate Depression		Severe Depression	
	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year
Panel A: Pooled Inviter Treatment Effects										
All Inviters	0.224	-0.439	0.011	-0.074***	-0.003	-0.067***	0.020	-0.016	-0.018**	0.003
	(0.284)	(0.285)	(0.025)	(0.025)	(0.023)	(0.024)	(0.015)	(0.016)	(0.008)	(0.005)
Panel B: Pooled Inviter by Guest List Treatment Effects										
Inviter with High-SES Guest List	0.111	-0.136	-0.005	-0.043	-0.002	-0.048	0.005	-0.010	-0.020**	0.006
	(0.348)	(0.346)	(0.031)	(0.030)	(0.028)	(0.030)	(0.019)	(0.019)	(0.009)	(0.007)
Inviter with Low-SES Guest List	0.179	-0.793**	0.014	-0.106***	-0.004	-0.092***	0.025	-0.015	-0.016*	-0.001
	(0.349)	(0.348)	(0.031)	(0.030)	(0.028)	(0.030)	(0.019)	(0.020)	(0.009)	(0.007)
Inviter with Random Guest List	0.382	-0.394	0.024	-0.070**	-0.002	-0.062**	0.030	-0.023	-0.017*	0.004
	(0.348)	(0.349)	(0.030)	(0.030)	(0.028)	(0.030)	(0.019)	(0.020)	(0.009)	(0.007)
Observations	1585	1528	1585	1528	1585	1528	1585	1528	1585	1528
Control Mean	7.089	7.303	0.299	0.361	0.197	0.261	0.066	0.090	0.035	0.011
P-values:										
Pooled: High-SES vs. Low-SES Guest List	0.845	0.057*	0.535	0.032**	0.949	0.140	0.291	0.791	0.653	0.234
Pooled: Voucher vs. No Voucher	0.663	0.977	0.156	0.811	0.192	0.135	0.610	0.153	0.867	0.859
High-SES: Voucher vs. No Voucher	0.121	0.588	0.034**	0.751	0.120	0.176	0.548	0.032**	0.603	0.973
Low-SES: Voucher vs. No Voucher	0.217	0.452	0.354	0.888	0.540	0.815	0.651	0.869	0.917	0.906
Random: Voucher vs. No Voucher	0.510	0.741	0.133	0.699	0.186	0.375	0.494	0.630	0.865	0.826

Standard errors in parentheses

All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. Depression is measured using the CESDR-10, a 10-item revised version of the Center of Epidemiologic Studies Depression Scale. For each question, participants self-report the frequency with with they experienced the feelings that the question describes in the past two weeks. Each question is answered on a scale of 1-4: (1) Never, (2) Rarely, (3) Sometimes, (4) Always. The CESDR-10 score (column (1)) is the aggregate of these scores across all ten questions. (column (2)) is a score ¿=10; (column (3)) is a score from 10-15; (column (4)) is a score from 16-21; and (column (5)) is a score ¿=22.

* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table D.4: Treatment Effects on Crop Diversification

	(1)	(2)	(3)	(4)	(5)
	Grows Maize	Grows Other Starches	Grows a Legume	Grows a Fruit or Vegetable	Grows a Cash Crop
	1 Year	1 Year	1 Year	1 Year	1 Year
Panel A: Pooled Inviter Treatment Effects					
All Inviters	0.003	0.009	0.027	0.017**	0.020
	(0.011)	(0.020)	(0.031)	(0.008)	(0.018)
Panel B: Pooled Inviter by Guest List Treatment Effects					
Inviter with High-SES Guest List	0.004	0.011	0.042	0.013	0.051**
	(0.013)	(0.024)	(0.038)	(0.010)	(0.022)
Inviter with Low-SES Guest List	0.008	0.003	-0.023	0.017*	0.005
	(0.013)	(0.024)	(0.038)	(0.010)	(0.022)
Inviter with Random Guest List	-0.003	0.012	0.060	0.022**	0.001
	(0.013)	(0.024)	(0.038)	(0.010)	(0.022)
Panel C: Inviter Sub-Group Treatment Effects					
High-SES without Voucher	0.007	-0.018	0.044	0.019	0.075***
	(0.016)	(0.029)	(0.047)	(0.012)	(0.027)
High-SES with Voucher	0.001	0.040	0.040	0.007	0.025
	(0.016)	(0.029)	(0.047)	(0.012)	(0.027)
Low-SES without Voucher	0.007	0.009	-0.027	0.018	0.008
	(0.016)	(0.029)	(0.047)	(0.012)	(0.027)
Low-SES with Voucher	0.009	-0.003	-0.019	0.016	0.002
	(0.016)	(0.029)	(0.047)	(0.012)	(0.027)
Random without Voucher	-0.004	0.003	0.058	0.029**	-0.017
	(0.016)	(0.029)	(0.046)	(0.012)	(0.027)
Random with Voucher	-0.001	0.022	0.062	0.014	0.020
	(0.016)	(0.029)	(0.046)	(0.012)	(0.027)
Observations	1216	1216	1216	1216	1528
Control Mean	0.974	0.106	0.599	0.013	0.103
P-values:					
Pooled: High-SES vs. Low-SES Guest List	0.754	0.738	0.087*	0.712	0.035**
Pooled: Voucher vs. No Voucher	0.986	0.271	0.952	0.258	0.675
High-SES: Voucher vs. No Voucher	0.757	0.089*	0.931	0.425	0.108
Low-SES: Voucher vs. No Voucher	0.917	0.734	0.886	0.902	0.826
Random: Voucher vs. No Voucher	0.868	0.571	0.937	0.297	0.238

Standard errors in parentheses
All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. The outcome for each column indicates if the participant grew at least one crop in the column's given crop category. Other starches include: cassava, sorghum, rice, Irish potatoes, and sweet potatoes. Legumes include: soy beans, plain beans, groudnuts, pigeon peas, and cowpeas. Fruits and vegetables include: bananas, leafy greens, tomatoes, onions and pumpkins. Cash crops include: sugar cane, tobacco, and sunflower seeds.
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table D.5: Treatment Effects on Network Markers of Increased Option Value of Consumption

	(1)	(2)	(3)	(4)	(5)	(6)
	Number Very Comfortable Lending		Number Very Comfortable Borrowing		ROSCA Member	
	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year
Panel A: Pooled Inviter Treatment Effects						
All Inviters	0.112	0.103	0.036	0.121	-0.015	0.002
	(0.093)	(0.117)	(0.093)	(0.118)	(0.019)	(0.015)
Panel B: Pooled Inviter by Guest List Treatment Effects						
Inviter with High-SES Guest List	0.137	0.210	0.068	0.236	-0.007	-0.013
	(0.114)	(0.142)	(0.114)	(0.144)	(0.023)	(0.018)
Inviter with Low-SES Guest List	0.054	-0.109	-0.008	-0.075	-0.010	0.019
	(0.114)	(0.143)	(0.114)	(0.145)	(0.023)	(0.018)
Inviter with Random Guest List	0.144	0.203	0.049	0.199	-0.027	-0.000
	(0.114)	(0.143)	(0.114)	(0.145)	(0.023)	(0.018)
Panel C: Inviter Sub-Group Treatment Effects						
High-SES without Voucher	0.220	0.095	0.171	0.131	-0.017	-0.008
	(0.140)	(0.175)	(0.140)	(0.178)	(0.029)	(0.022)
High-SES with Voucher	0.056	0.291*	0.009	0.315*	-0.004	-0.016
	(0.138)	(0.174)	(0.139)	(0.176)	(0.028)	(0.022)
Low-SES without Voucher	0.146	-0.137	0.078	-0.088	-0.030	0.023
	(0.139)	(0.175)	(0.139)	(0.177)	(0.028)	(0.022)
Low-SES with Voucher	-0.035	-0.082	-0.115	-0.063	0.012	0.014
	(0.139)	(0.174)	(0.139)	(0.177)	(0.029)	(0.022)
Random without Voucher	0.281**	0.050	0.181	0.016	-0.058**	0.008
	(0.140)	(0.174)	(0.140)	(0.177)	(0.029)	(0.022)
Random with Voucher	0.014	0.351**	-0.070	0.379**	0.003	-0.008
	(0.138)	(0.176)	(0.139)	(0.179)	(0.028)	(0.022)
Observations	1585	1528	1585	1528	1585	1528
Control Mean	3.808	3.979	3.846	3.997	0.159	0.069
P-values:						
Pooled: High-SES vs. Low-SES Guest List	0.472	0.025**	0.504	0.031**	0.906	0.079*
Pooled: Voucher vs. No Voucher	0.027**	0.133	0.036**	0.124	0.047**	0.455
High-SES: Voucher vs. No Voucher	0.304	0.329	0.312	0.366	0.694	0.739
Low-SES: Voucher vs. No Voucher	0.256	0.782	0.227	0.903	0.199	0.711
Random: Voucher vs. No Voucher	0.095*	0.138	0.118	0.078*	0.061*	0.517

Standard errors in parentheses
All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. For each network tie, participants report their comfort in borrowing from or lending to that person on a Likert scale. The outcomes in columns (1) and (2) report the number of those friends for whom that participant said she would be lending to. The outcomes in columns (3) and (4) report the number of those friends for whom the participant said she would be borrowing from. The outcome of columns (5) and (6) indicates membership with a rotating savings and credit association, a semi-formal savings and borrowing group.
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table D.6: Treatment Effects on Farm Inputs and Maize Stores

	(1) Full Fertilizer Use	(2) Partial Fertilizer Use	(3) Adopted New Ag. Technology	(4) Maize Stores in KGs	(5) Maize Stores in KGs
	1 Year	1 Year	1 Year	1 Month	1 Year
Panel A: Pooled Inviter Treatment Effects					
All Inviters	-0.027	-0.025	-0.033	0.355	-15.143
	(0.023)	(0.027)	(0.022)	(3.617)	(10.299)
Panel B: Pooled Inviter by Guest List Treatment Effects					
Inviter with High-SES Guest List	-0.020	-0.011	-0.021	0.472	-11.759
	(0.027)	(0.032)	(0.027)	(4.407)	(12.566)
Inviter with Low-SES Guest List	-0.041	-0.051	-0.035	-6.361	-16.815
	(0.028)	(0.033)	(0.027)	(4.413)	(12.609)
Inviter with Random Guest List	-0.021	-0.011	-0.043	6.951	-16.911
	(0.028)	(0.033)	(0.027)	(4.408)	(12.636)
Panel C: Inviter Sub-Group Treatment Effects					
High-SES without Voucher	-0.035	-0.007	-0.008	-4.068	-18.089
	(0.034)	(0.040)	(0.033)	(5.437)	(15.435)
High-SES with Voucher	0.002	-0.014	-0.033	4.537	-5.289
	(0.033)	(0.040)	(0.033)	(5.382)	(15.415)
Low-SES without Voucher	-0.066**	-0.062	-0.045	-4.854	-15.464
	(0.034)	(0.040)	(0.033)	(5.380)	(15.428)
Low-SES with Voucher	-0.016	-0.040	-0.025	-7.861	-18.196
	(0.034)	(0.040)	(0.033)	(5.394)	(15.370)
Random without Voucher	0.019	0.002	-0.047	9.074*	-10.194
	(0.034)	(0.040)	(0.033)	(5.414)	(15.424)
Random with Voucher	-0.061*	-0.024	-0.039	4.700	-23.892
	(0.034)	(0.040)	(0.033)	(5.363)	(15.546)
Observations	1528	1528	1401	1585	1528
Control Mean	0.277	0.599	0.154	43.162	144.202
P-values:					
Pooled: High-SES vs. Low-SES Guest List	0.445	0.213	0.589	0.120	0.687
Pooled: Voucher vs. No Voucher	0.872	0.896	0.979	0.915	0.908
High-SES: Voucher vs. No Voucher	0.344	0.886	0.496	0.168	0.471
Low-SES: Voucher vs. No Voucher	0.190	0.620	0.604	0.626	0.877
Random: Voucher vs. No Voucher	0.040**	0.573	0.828	0.480	0.443

Standard errors in parentheses
All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. Column (1) indicates if the respondent reports using fertilizer on all of her crops that require fertilizer, while column (2) indicates if she reports using fertilizer on at least some of her crops that require fertilizer. Column (3) indicates if the participant reports adopting a new agricultural technology this year, other than fertilizer use or crop diversification. Columns (4)-(5) are the kilograms of maize that the respondent reports having in stores at the time of the survey.
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table D.7: Treatment Effects on Borrowing

	(1)	(2)	(3)	(4)	(5)
	Borrowed Last Month		Borrowed Last Six Months		Amount Borrowed Last Month
	1 Month	1 Year	1 Year	1 Month	1 Year
Panel A: Pooled Inviter Treatment Effects					
All Inviters	-0.039	-0.014	-0.033	1315.360	-2559.965
	(0.030)	(0.028)	(0.024)	(1037.420)	(2689.043)
Panel B: Pooled Inviter by Guest List Treatment Effects					
Inviter with High-SES Guest List	-0.016	-0.014	-0.046	1012.614	-2988.105
	(0.037)	(0.034)	(0.029)	(1271.916)	(3282.652)
Inviter with Low-SES Guest List	-0.048	-0.034	-0.043	885.426	-3137.360
	(0.037)	(0.034)	(0.029)	(1273.645)	(3270.056)
Inviter with Random Guest List	-0.051	0.005	-0.010	2041.766	-1544.803
	(0.037)	(0.034)	(0.029)	(1269.477)	(3258.676)
Panel C: Inviter Sub-Group Treatment Effects					
High-SES without Voucher	-0.060	-0.041	-0.065*	1066.026	-138.262
	(0.046)	(0.042)	(0.036)	(1577.811)	(4040.966)
High-SES with Voucher	0.029	0.007	-0.027	942.177	-5812.438
	(0.045)	(0.042)	(0.035)	(1551.106)	(3988.814)
Low-SES without Voucher	-0.054	-0.088**	-0.095***	92.016	-1126.026
	(0.045)	(0.042)	(0.036)	(1555.056)	(4230.269)
Low-SES with Voucher	-0.044	0.020	0.009	1718.543	-4610.634
	(0.045)	(0.042)	(0.036)	(1565.566)	(3812.399)
Random without Voucher	-0.083*	-0.035	-0.034	3279.427**	-1857.893
	(0.046)	(0.042)	(0.036)	(1563.084)	(4043.063)
Random with Voucher	-0.021	0.044	0.013	846.078	-1376.244
	(0.045)	(0.042)	(0.036)	(1546.537)	(3900.842)
Observations	1365	1528	1528	1284	674
Control Mean	0.490	0.639	0.810	4667.957	20004.878
P-values:					
Pooled: High-SES vs. Low-SES Guest List	0.389	0.559	0.918	0.921	0.963
Pooled: Voucher vs. No Voucher	0.072*	0.006***	0.008***	0.765	0.272
High-SES: Voucher vs. No Voucher	0.090*	0.320	0.354	0.945	0.219
Low-SES: Voucher vs. No Voucher	0.838	0.025**	0.011**	0.366	0.453
Random: Voucher vs. No Voucher	0.233	0.104	0.255	0.175	0.915

Standard errors in parentheses
All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. Column2 (1)-(2) indicates if the respondent reports taking out any loan in the past month. Column (3) indicates if the respondent reports taking out any loan in the past six months. Columns (4)-(5) is the total amount she reports borrowing in the past month.
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table D.8: Treatment Effects on Household Bargaining

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Child Schooling		Child Health		Child Discipline		Fertility			Household Savings
	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year
Panel A: Pooled Inviter Treatment Effects										
All Inviters	-0.027	-0.047*	0.027	-0.025	0.003	-0.038	0.005	-0.021	0.002	-0.066**
	(0.026)	(0.027)	(0.026)	(0.026)	(0.027)	(0.028)	(0.027)	(0.028)	(0.027)	(0.028)
Panel B: Pooled Inviter by Guest List Treatment Effects										
Inviter with High-SES Guest List	-0.042	-0.033	0.026	-0.032	-0.031	-0.043	-0.013	-0.023	-0.017	-0.056*
	(0.032)	(0.032)	(0.032)	(0.031)	(0.033)	(0.034)	(0.033)	(0.034)	(0.032)	(0.034)
Inviter with Low-SES Guest List	-0.035	-0.046	0.016	-0.029	0.010	-0.003	0.004	-0.015	-0.009	-0.044
	(0.032)	(0.033)	(0.032)	(0.031)	(0.033)	(0.034)	(0.033)	(0.034)	(0.032)	(0.034)
Inviter with Random Guest List	-0.003	-0.061*	0.040	-0.013	0.030	-0.068**	0.024	-0.025	0.031	-0.098***
	(0.032)	(0.033)	(0.032)	(0.031)	(0.033)	(0.034)	(0.033)	(0.034)	(0.032)	(0.034)
Panel C: Inviter Sub-Group Treatment Effects										
High-SES without Voucher	-0.010	-0.092**	0.018	-0.051	-0.010	-0.071*	0.018	-0.034	-0.026	-0.070*
	(0.039)	(0.040)	(0.039)	(0.038)	(0.040)	(0.042)	(0.040)	(0.042)	(0.040)	(0.042)
High-SES with Voucher	-0.056	0.022	0.048	-0.012	-0.051	-0.021	-0.035	-0.009	0.008	-0.049
	(0.039)	(0.040)	(0.039)	(0.038)	(0.040)	(0.041)	(0.040)	(0.042)	(0.039)	(0.041)
Low-SES without Voucher	-0.058	-0.050	-0.001	-0.050	-0.006	0.001	0.005	0.002	-0.006	-0.045
	(0.039)	(0.040)	(0.039)	(0.038)	(0.040)	(0.042)	(0.040)	(0.042)	(0.039)	(0.042)
Low-SES with Voucher	-0.015	-0.043	0.031	-0.009	0.026	-0.006	0.001	-0.032	-0.016	-0.043
	(0.039)	(0.040)	(0.039)	(0.038)	(0.040)	(0.041)	(0.040)	(0.042)	(0.040)	(0.041)
Random without Voucher	0.020	-0.102**	0.062	-0.015	0.022	-0.103**	0.001	-0.084**	0.015	-0.129***
	(0.039)	(0.040)	(0.039)	(0.038)	(0.040)	(0.042)	(0.040)	(0.042)	(0.040)	(0.042)
Random with Voucher	-0.021	-0.021	0.020	-0.012	0.038	-0.035	0.049	0.036	0.049	-0.069*
	(0.039)	(0.040)	(0.039)	(0.039)	(0.040)	(0.042)	(0.040)	(0.042)	(0.039)	(0.042)
Observations	1585	1528	1585	1528	1585	1528	1585	1528	1585	1528
Control Mean	0.456	0.644	0.620	0.734	0.509	0.641	0.395	0.570	0.385	0.583
P-values:										
Pooled: High-SES vs. Low-SES Guest List	0.818	0.684	0.767	0.926	0.213	0.233	0.610	0.823	0.809	0.731
Pooled: Voucher vs. No Voucher	0.668	0.012**	0.715	0.276	0.912	0.188	0.952	0.186	0.397	0.328
High-SES: Voucher vs. No Voucher	0.308	0.012**	0.514	0.373	0.376	0.292	0.251	0.595	0.462	0.665
Low-SES: Voucher vs. No Voucher	0.327	0.876	0.471	0.363	0.487	0.889	0.929	0.474	0.825	0.951
Random: Voucher vs. No Voucher	0.359	0.079*	0.353	0.946	0.722	0.162	0.304	0.013**	0.451	0.214

Standard errors in parentheses

All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. Each column indicates if the respondent is herself a primary decision-maker in the household for each respective household issue.

* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table D.9: Treatment Effects on Objective Changes to Relationships

	(1)	(2)	(3)	(4)	(5)	(6)
	Network Degree		New Network Ties		Dropped Network Ties	
	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year
Panel A: Pooled Inviter Treatment Effects						
All Inviters	0.004	-0.006	-0.030	0.177	-0.023	0.256*
	(0.089)	(0.121)	(0.079)	(0.116)	(0.072)	(0.155)
Panel B: Pooled Inviter by Guest List Treatment Effects						
Inviter with High-SES Guest List	-0.096	-0.013	-0.094	0.186	-0.028	0.187
	(0.108)	(0.147)	(0.096)	(0.141)	(0.089)	(0.189)
Inviter with Low-SES Guest List	-0.038	-0.083	-0.091	0.118	0.019	0.287
	(0.109)	(0.148)	(0.096)	(0.142)	(0.089)	(0.190)
Inviter with Random Guest List	0.147	0.080	0.094	0.228	-0.059	0.295
	(0.108)	(0.148)	(0.096)	(0.142)	(0.088)	(0.190)
Panel C: Inviter Sub-Group Treatment Effects						
High-SES without Voucher	-0.108	0.066	-0.120	0.270	0.019	0.142
	(0.133)	(0.181)	(0.118)	(0.174)	(0.109)	(0.232)
High-SES with Voucher	-0.031	-0.141	-0.113	0.078	-0.074	0.199
	(0.132)	(0.180)	(0.117)	(0.173)	(0.108)	(0.230)
Low-SES without Voucher	-0.015	-0.048	-0.044	0.042	-0.017	0.165
	(0.132)	(0.181)	(0.117)	(0.174)	(0.108)	(0.232)
Low-SES with Voucher	-0.083	-0.108	-0.127	0.199	0.056	0.410*
	(0.132)	(0.180)	(0.118)	(0.173)	(0.109)	(0.231)
Random without Voucher	0.242*	0.095	0.125	0.176	-0.085	0.062
	(0.132)	(0.180)	(0.118)	(0.174)	(0.109)	(0.232)
Random with Voucher	0.064	0.053	0.053	0.277	-0.033	0.524**
	(0.132)	(0.182)	(0.117)	(0.175)	(0.108)	(0.233)
Observations	1585	1528	1585	1528	1585	1528
Control Mean	6.096	6.446	1.572	1.953	1.694	3.749
P-values:						
Pooled: High-SES vs. Low-SES Guest List	0.591	0.638	0.974	0.629	0.594	0.597
Pooled: Voucher vs. No Voucher	0.614	0.359	0.499	0.871	0.879	0.105
High-SES: Voucher vs. No Voucher	0.614	0.316	0.954	0.334	0.457	0.830
Low-SES: Voucher vs. No Voucher	0.656	0.770	0.535	0.430	0.553	0.357
Random: Voucher vs. No Voucher	0.241	0.842	0.597	0.616	0.674	0.086*

Standard errors in parentheses

All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. (colums (1)-(2)) is the total number of members in the network. (columns (3)-(4)) is the number of network ties in any given survey who were not listed in the network in the baseline survey. (column (5)-(6)) is the number of network ties who were listed in the baseline survey but who were not listed in the given survey.

* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table D.10: Treatment Effects on Objective Changes to Relationships

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	% Friends Only Sees in Groups		% Friends Only Sees Alone		% Friends Sees in Both Settings		% Friends Sees Weekly	
	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year
Panel A: Pooled Inviter Treatment Effects								
All Inviters	-0.010	0.015	-0.010	-0.000	0.009	-0.013	0.002	0.015**
	(0.016)	(0.013)	(0.014)	(0.012)	(0.015)	(0.010)	(0.018)	(0.008)
Panel B: Pooled Inviter by Guest List Treatment Effects								
Inviter with High-SES Guest List	-0.013	0.001	-0.002	0.005	0.026	-0.002	0.009	0.023**
	(0.019)	(0.016)	(0.017)	(0.014)	(0.018)	(0.013)	(0.022)	(0.009)
Inviter with Low-SES Guest List	0.007	0.037**	-0.012	-0.004	0.002	-0.015	0.010	0.008
	(0.019)	(0.016)	(0.017)	(0.014)	(0.018)	(0.013)	(0.022)	(0.009)
Inviter with Random Guest List	-0.023	0.007	-0.015	-0.002	-0.000	-0.021*	-0.012	0.014
	(0.019)	(0.016)	(0.017)	(0.014)	(0.018)	(0.013)	(0.022)	(0.009)
Panel C: Inviter Sub-Group Treatment Effects								
High-SES without Voucher	-0.025	-0.002	0.004	-0.007	0.025	0.010	0.023	0.015
	(0.023)	(0.019)	(0.021)	(0.017)	(0.023)	(0.016)	(0.027)	(0.011)
High-SES with Voucher	-0.008	0.003	-0.014	0.020	0.020	-0.013	-0.016	0.029***
	(0.023)	(0.019)	(0.021)	(0.017)	(0.022)	(0.015)	(0.027)	(0.011)
Low-SES without Voucher	0.005	0.030	-0.035*	-0.003	0.019	-0.006	0.006	0.012
	(0.023)	(0.019)	(0.021)	(0.018)	(0.022)	(0.016)	(0.027)	(0.011)
Low-SES with Voucher	0.012	0.045**	0.013	-0.005	-0.014	-0.024	0.017	0.005
	(0.023)	(0.019)	(0.021)	(0.018)	(0.023)	(0.015)	(0.027)	(0.011)
Random without Voucher	-0.028	0.005	-0.029	0.007	0.023	-0.021	-0.014	0.015
	(0.023)	(0.019)	(0.021)	(0.017)	(0.023)	(0.016)	(0.027)	(0.011)
Random with Voucher	-0.020	0.009	-0.002	-0.011	-0.025	-0.022	-0.012	0.013
	(0.023)	(0.019)	(0.021)	(0.018)	(0.022)	(0.016)	(0.027)	(0.011)
Observations	1585	1528	1585	1528	1585	1528	1585	1528
Control Mean	0.513	0.439	0.352	0.341	0.420	0.194	1.232	0.904
P-values:								
Pooled: High-SES vs. Low-SES Guest List	0.294	0.021**	0.564	0.527	0.194	0.268	0.967	0.110
Pooled: Voucher vs. No Voucher	0.552	0.540	0.212	0.824	0.045**	0.168	0.561	0.816
High-SES: Voucher vs. No Voucher	0.524	0.806	0.477	0.175	0.841	0.191	0.209	0.274
Low-SES: Voucher vs. No Voucher	0.800	0.508	0.051*	0.902	0.202	0.315	0.712	0.618
Random: Voucher vs. No Voucher	0.766	0.885	0.278	0.371	0.066*	0.947	0.953	0.904

Standard errors in parentheses

All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls.

* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table D.11: Treatment Effects on Subjective Changes to Relationships

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Dropped Links Weak Ties		New Links: Weak Ties	Dropped Links Mid Ties		New Links: Mid Ties	Dropped Links: Strong Ties		New Links: Strong Ties
	1 Month	1 Year	1 Year	1 Month	1 Year	1 Year	1 Month	1 Year	1 Year
Panel A: Pooled Inviter Treatment Effects									
All Inviters	0.033	0.118*	0.100	-0.061	0.120	0.062	-0.022**	0.007	0.035**
	(0.056)	(0.067)	(0.079)	(0.046)	(0.125)	(0.077)	(0.011)	(0.016)	(0.016)
Panel B: Pooled Inviter by Guest List Treatment Effects									
Inviter with High-SES Guest List	0.034	0.119	0.091	-0.073	0.036	0.097	-0.023*	0.003	0.035*
	(0.069)	(0.082)	(0.096)	(0.057)	(0.152)	(0.094)	(0.014)	(0.019)	(0.020)
Inviter with Low-SES Guest List	0.095	0.126	0.173*	-0.053	0.173	-0.061	-0.028**	0.004	0.027
	(0.069)	(0.083)	(0.097)	(0.057)	(0.153)	(0.094)	(0.014)	(0.020)	(0.020)
Inviter with Random Guest List	-0.028	0.110	0.036	-0.056	0.152	0.149	-0.016	0.015	0.045**
	(0.068)	(0.083)	(0.097)	(0.057)	(0.153)	(0.094)	(0.014)	(0.020)	(0.020)
Panel C: Inviter Sub-Group Treatment Effects									
High-SES without Voucher	0.028	0.113	0.180	-0.055	-0.025	0.108	-0.018	0.012	0.036
	(0.085)	(0.101)	(0.118)	(0.069)	(0.187)	(0.115)	(0.017)	(0.024)	(0.025)
High-SES with Voucher	0.040	0.116	-0.034	-0.126*	0.077	0.082	-0.027	-0.003	0.040
	(0.084)	(0.101)	(0.118)	(0.069)	(0.186)	(0.114)	(0.017)	(0.024)	(0.025)
Low-SES without Voucher	0.078	0.108	0.138	-0.074	0.093	-0.103	-0.031*	-0.012	-0.001
	(0.084)	(0.101)	(0.118)	(0.069)	(0.187)	(0.115)	(0.017)	(0.024)	(0.025)
Low-SES with Voucher	0.113	0.143	0.215*	-0.021	0.252	-0.017	-0.025	0.019	0.053**
	(0.084)	(0.101)	(0.118)	(0.069)	(0.186)	(0.115)	(0.017)	(0.024)	(0.025)
Random without Voucher	-0.014	0.045	-0.007	-0.104	-0.006	0.153	-0.015	0.007	0.056**
	(0.084)	(0.101)	(0.118)	(0.069)	(0.186)	(0.115)	(0.017)	(0.024)	(0.025)
Random with Voucher	-0.042	0.173*	0.073	-0.013	0.306	0.143	-0.016	0.024	0.035
	(0.083)	(0.102)	(0.119)	(0.069)	(0.188)	(0.116)	(0.017)	(0.024)	(0.025)
Observations	1585	1528	1528	1585	1528	1528	1585	1528	1528
Control Mean	0.919	1.309	0.931	0.709	2.338	0.966	0.066	0.103	0.055
P-values:									
Pooled: High-SES vs. Low-SES Guest List	0.374	0.936	0.394	0.720	0.370	0.091*	0.712	0.955	0.682
Pooled: Voucher vs. No Voucher	0.916	0.422	0.772	0.688	0.127	0.846	0.917	0.471	0.421
High-SES: Voucher vs. No Voucher	0.900	0.979	0.116	0.372	0.633	0.843	0.659	0.593	0.879
Low-SES: Voucher vs. No Voucher	0.717	0.763	0.572	0.497	0.457	0.513	0.757	0.257	0.057*
Random: Voucher vs. No Voucher	0.769	0.273	0.559	0.250	0.149	0.941	0.930	0.544	0.458

Standard errors in parentheses

All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. Strength-of-ties is evaluated using five variables: the ability to trust the network link with thoughts and feelings (Likert scale), ease of laughing with the network link (Likert scale), if the link is someone with whom the participant shares secrets (binary), degree to which sharing stories in the relationship happens, and to which it is reciprocal (Likert scale), and the Inclusion-of-Self in Others (ISO) scale (1 to 7). I conduct a PCA analysis of these five variables, using the full sample in the Baseline Survey. I then apply the first principal component weights on these five variables to the same variables in all the surveys. This way, I use the levels and correlation structure of these variables from the Baseline Survey to analyze strength of ties in ensuing survey rounds. This also

Table D.12: Treatment Effects on Marital Status

	(1) Still Married	(2) Newly Married	(3) Divorced, Seperated, or Widowed	(4) Husband Tie Strength	(5) Husband Risk-Sharing Discomfort
	1 Year	1 Year	1 Year	1 Year	1 Year
Panel A: Pooled Inviter Treatment Effects					
All Inviters	0.027	0.009	-0.025	-0.052	0.001
	(0.021)	(0.009)	(0.017)	(0.053)	(0.022)
Panel B: Pooled Inviter by Guest List Treatment Effects					
Inviter with High-SES Guest List	0.027	0.013	-0.026	-0.086	0.011
	(0.026)	(0.010)	(0.020)	(0.064)	(0.026)
Inviter with Low-SES Guest List	0.052**	0.010	-0.039*	-0.039	-0.005
	(0.026)	(0.010)	(0.020)	(0.064)	(0.026)
Inviter with Random Guest List	0.001	0.004	-0.010	-0.029	-0.005
	(0.026)	(0.010)	(0.021)	(0.065)	(0.026)
Panel C: Inviter Sub-Group Treatment Effects					
High-SES without Voucher	0.033	0.018	-0.030	-0.094	-0.001
	(0.032)	(0.013)	(0.025)	(0.078)	(0.032)
High-SES with Voucher	0.024	0.007	-0.017	-0.078	0.024
	(0.032)	(0.013)	(0.025)	(0.078)	(0.032)
Low-SES without Voucher	0.066**	-0.001	-0.045*	-0.029	0.015
	(0.032)	(0.013)	(0.025)	(0.078)	(0.032)
Low-SES with Voucher	0.038	0.022*	-0.034	-0.049	-0.025
	(0.032)	(0.013)	(0.025)	(0.077)	(0.032)
Random without Voucher	-0.019	0.010	-0.025	-0.080	-0.004
	(0.032)	(0.013)	(0.025)	(0.079)	(0.033)
Random with Voucher	0.022	-0.001	0.006	0.020	-0.005
	(0.032)	(0.013)	(0.025)	(0.078)	(0.032)
Observations	1528	1528	1528	1212	1212
Control Mean	0.752	0.016	0.145	5.001	0.887
P-values:					
Pooled: High-SES vs. Low-SES Guest List	0.336	0.812	0.516	0.452	0.523
Pooled: Voucher vs. No Voucher	0.940	0.966	0.262	0.535	0.770
High-SES: Voucher vs. No Voucher	0.806	0.456	0.644	0.850	0.502
Low-SES: Voucher vs. No Voucher	0.441	0.113	0.686	0.815	0.268
Random: Voucher vs. No Voucher	0.269	0.454	0.293	0.268	0.976

Standard errors in parentheses

All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls. (column (1)) indicates is a respondent was married at baseline, and is still married to the same persion. (column (2)) indicates if a respondent was single at baseline and is now married, or if the respondent was married at baseline and is now married to a new person. (column (3)) indicates if a respondent is currently divorced, seperated, or widowed, and not remarried (note that there are only 11 people in the sample who have never been married).

* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table D.13: Treatment Effects on Network Churn across Income

	(1) Network Churns Both Roofs 1 Year	(2) Network Only Churns Iron Sheets 1 Year	(3) Network Only Churns Thatched 1 Year	(4) Iron Sheets Replace Thatched 1 Year	(5) Thatched Replace Iron Sheets 1 Year
Panel A: Pooled Inviter Treatment Effects					
All Inviters	0.011	-0.026*	0.033	-0.018	0.001
	(0.026)	(0.015)	(0.023)	(0.014)	(0.007)
Panel B: Pooled Inviter by Guest List Treatment Effects					
Inviter with High-SES Guest List	-0.003	-0.013	0.039	-0.018	0.002
	(0.032)	(0.018)	(0.028)	(0.018)	(0.008)
Inviter with Low-SES Guest List	0.013	-0.036**	0.044	-0.023	-0.001
	(0.032)	(0.018)	(0.028)	(0.018)	(0.008)
Inviter with Random Guest List	0.025	-0.030*	0.016	-0.014	0.002
	(0.032)	(0.018)	(0.028)	(0.018)	(0.008)
Panel C: Inviter Sub-Group Treatment Effects					
High-SES without Voucher	-0.016	0.001	0.048	-0.021	0.008
	(0.039)	(0.022)	(0.034)	(0.022)	(0.010)
High-SES with Voucher	0.008	-0.022	0.031	-0.014	-0.004
	(0.039)	(0.022)	(0.034)	(0.021)	(0.010)
Low-SES without Voucher	0.014	-0.026	0.037	-0.009	0.005
	(0.039)	(0.022)	(0.034)	(0.022)	(0.010)
Low-SES with Voucher	0.011	-0.046**	0.052	-0.037*	-0.007
	(0.039)	(0.022)	(0.034)	(0.022)	(0.010)
Random without Voucher	0.014	-0.040*	0.041	-0.014	-0.000
	(0.039)	(0.022)	(0.034)	(0.022)	(0.010)
Random with Voucher	0.036	-0.018	-0.010	-0.013	0.005
	(0.039)	(0.023)	(0.034)	(0.022)	(0.010)
Observations	1528	1528	1528	1528	1528
Control Mean	0.678	0.084	0.193	0.079	0.013
P-values:					
Pooled: High-SES vs. Low-SES Guest List	0.621	0.207	0.857	0.793	0.737
Pooled: Voucher vs. No Voucher	0.588	0.643	0.449	0.623	0.345
High-SES: Voucher vs. No Voucher	0.602	0.364	0.663	0.805	0.289
Low-SES: Voucher vs. No Voucher	0.952	0.438	0.687	0.259	0.317
Random: Voucher vs. No Voucher	0.624	0.394	0.196	0.976	0.668

Standard errors in parentheses
All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls.
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table D.14: Treatment Effects on Network Churn across Income

	(1) Number of New Friends Iron Sheets 1 Year	(2) Number of New Friends Thatched Roof 1 Year	(3) Number Maintained Iron Sheets 1 Year	(4) Number Maintained Thatched Roof 1 Year	(5) Number Dropped Iron Sheets 1 Year	D Tha
Panel A: Pooled Inviter Treatment Effects						
All Inviters	0.077	0.185*	-0.081	-0.268*	0.081	
	(0.072)	(0.108)	(0.071)	(0.154)	(0.071)	
Panel B: Pooled Inviter by Guest List Treatment Effects						
Inviter with High-SES Guest List	0.117	0.106	-0.025	-0.159	0.025	
	(0.087)	(0.131)	(0.086)	(0.186)	(0.086)	
Inviter with Low-SES Guest List	0.030	0.174	-0.097	-0.295	0.097	
	(0.088)	(0.131)	(0.086)	(0.187)	(0.086)	
Inviter with Random Guest List	0.083	0.286**	-0.127	-0.361*	0.127	
	(0.089)	(0.134)	(0.088)	(0.191)	(0.088)	
Panel C: Inviter Sub-Group Treatment Effects						
High-SES without Voucher	0.150	0.124	-0.040	0.035	0.040	
	(0.106)	(0.159)	(0.104)	(0.225)	(0.104)	
High-SES with Voucher	0.083	0.088	-0.008	-0.359	0.008	
	(0.107)	(0.161)	(0.105)	(0.227)	(0.105)	
Low-SES without Voucher	-0.005	0.134	-0.033	-0.232	0.033	
	(0.105)	(0.158)	(0.103)	(0.224)	(0.103)	
Low-SES with Voucher	0.070	0.216	-0.166	-0.357	0.166	
	(0.108)	(0.162)	(0.106)	(0.230)	(0.106)	
Random without Voucher	0.097	0.211	-0.090	-0.005	0.090	
	(0.110)	(0.165)	(0.108)	(0.234)	(0.108)	
Random with Voucher	0.071	0.362**	-0.165	-0.703***	0.165	0
	(0.109)	(0.165)	(0.107)	(0.232)	(0.107)	
Observations	1116	1116	1116	1116	1116	
Control Mean	0.770	1.168	1.620	1.015	0.909	
P-values:						
Pooled: High-SES vs. Low-SES Guest List	0.315	0.602	0.394	0.458	0.394	
Pooled: Voucher vs. No Voucher	0.954	0.537	0.393	0.009***	0.393	0
High-SES: Voucher vs. No Voucher	0.582	0.847	0.795	0.130	0.795	
Low-SES: Voucher vs. No Voucher	0.534	0.651	0.264	0.628	0.264	
Random: Voucher vs. No Voucher	0.837	0.430	0.551	0.010**	0.551	

Standard errors in parentheses
All specifications include baseline unbalanced control variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected controls.
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table D.15: Occupation

	(1) Business	(2) New Business	(3) Business Copying	(4) Business Capital	(5) Agriculture	(6) Piecework	(7) Piecework: Idle Da
High-SES × No Voucher	0.098***	0.076**	0.039**	0.098	-0.056	-0.065*	-0.572*
	(0.032)	(0.030)	(0.020)	(0.075)	(0.038)	(0.037)	(0.315)
High-SES × Voucher	0.090***	0.060**	0.039**	0.136*	-0.028	-0.021	0.391
	(0.032)	(0.029)	(0.020)	(0.074)	(0.038)	(0.037)	(0.313)
Low-SES × No Voucher	0.011	-0.006	-0.016	0.006	-0.014	0.014	-0.062
	(0.032)	(0.029)	(0.020)	(0.074)	(0.038)	(0.037)	(0.312)
Low-SES × Voucher	0.023	-0.003	-0.005	0.002	-0.021	0.028	0.143
	(0.032)	(0.030)	(0.020)	(0.075)	(0.038)	(0.037)	(0.315)
Random × No Voucher	0.052*	0.042	0.038*	0.026	-0.010	-0.017	-0.221
	(0.032)	(0.030)	(0.020)	(0.074)	(0.038)	(0.037)	(0.314)
Random × Voucher	0.030	0.036	-0.003	-0.034	-0.014	0.028	0.036
	(0.032)	(0.029)	(0.020)	(0.074)	(0.038)	(0.036)	(0.311)
Observations	1586	1586	1586	1587	1587	1587	1586
Control Mean	0.179	0.129	0.048	-0.011	0.516	0.335	1.808
P-values:							
High-SES: V=NV	0.820	0.636	0.979	0.659	0.527	0.302	0.008
Low-SES: V=NV	0.727	0.919	0.635	0.964	0.876	0.733	0.569
Random: V=NV	0.531	0.858	0.074	0.484	0.942	0.284	0.476

Standard errors in parentheses
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Appendix E Heterogeneity

The model predicts that people with a high marginal *instrumental* utility of social relationships should have the largest increases in investment in social interaction with non-homophilic links, relative to their investment in social interaction with homophilic links, as the value of social actions increase. In other words, they should be the most sensitive to the voucher in shifting away from Low-SES Guests and towards High-SES Guests. Because these model predictions concern the *relative* preferences for more and less-homophilic links at different margins of effort, the following analysis is conducted only in the Inviter group with the Random Guest List, which is the only group trading off between investing in social interaction with high-SES and low-SES links.

Table E.1: Heterogeneity by $\bar{y}_i(n_i)$: (Random Guest List)

	(1) Number of Invitations to Any SES Guests		(2) Number of Invitations to High-SES Guests		(3) Number of Invitations to Low-SES Guests	
Less Credit Available	0.241	(0.165)	0.011	(0.126)	0.230*	(0.120)
Voucher	0.081	(0.118)	0.009	(0.090)	0.072	(0.086)
Less Credit × Voucher	-0.103	(0.217)	0.299*	(0.165)	-0.402**	(0.157)
Observations	400		400		400	
No Voucher Mean	1.485		0.769		0.716	
P-values:						
Voucher + Less Credit × Voucher =0	0.901		0.018		0.008	

Standard errors in parentheses
All specifications control for baseline unbalanced variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected baseline variables.
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

As a proxy for having a high marginal instrumental utility of social relationships, I create a variable indicating people with few borrowing opportunities at baseline: people with no more than one person who they borrowed from in the past year who are also not a part of VSLA (32% of the sample).[32] Consistent with Model Prediction 1, I find that Inviters with few borrowing opportunities invite fewer low-SES and more high-SES women women when they have the voucher (Table E.1). Among women with more sources of credit available at baseline, the voucher does not change the propensity to invite High-SES Guests or Low-SES Guests.

Conversely, the model predicts that people with high marginal *intrinsic* utility of socialization will have the largest increase to their investment in social interaction with *homophilic* links, relative to their investment in social interaction with non-homophilic links, as the value of social actions increase. Among this group, we would expect individuals to more likely to engage in highly-valuable social interactions with *homophilic* links, relative to non-homophilic links. I use women with who are at risk of loneliness or depression at baseline as a proxy for having a

[32] I pre-registered a heterogeneity analysis by having few borrowing social network links at baseline. I did not pre-register heterogeneity analysis by baseline VSLA participation. However 42% of people with few borrowing social network links are VSLA members. These people may even have the *easiest* time accessing credit, if the adequacy of their VSLA membership is precisely why they do not demand informal credit. Consequently, the pre-registered measure of people with few borrowing network links, including VSLA members, is in practice not a good measure for people with high marginal instrumental utility.

Table E.2: Heterogeneity by $\bar{v}_i(n_i)$: (Random Guest List)

	(1) Number of Invitations to Any SES Guests		(2) Number of Invitations to High-SES Guests		(3) Number of Invitations to Low-SES Guests	
Loneliness or Depression Risk	-0.189	(0.150)	-0.074	(0.116)	-0.116	(0.110)
Voucher	-0.072	(0.122)	0.099	(0.095)	-0.171*	(0.090)
At Risk × Voucher	0.215	(0.200)	-0.036	(0.155)	0.252*	(0.147)
Observations	400		400		400	
No Voucher Mean	1.543		0.784		0.759	
P-values:						
Voucher + At Risk × Voucher =0	0.342		0.592		0.467	

Standard errors in parentheses
All specifications control for baseline unbalanced variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected baseline variables.
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

high marginal intrinsic utility of social relationships. For Inviters who are lonely or depressed, the voucher does not change the number of invitations they send to High-SES Guests (column (2) of Table E.2). Conversely, the voucher leads lonely and depressed women to *increase* the number of invitations they send to to Low-SES Guests relative to Inviters without any risk of loneliness or depression at baseline (column (3) of Table E.2).

Patterns of heterogeneity largely follow invitation-sending. Inviters with the Random Guest List who were credit-constrained at baseline were more likely to share meals with High-SES Guests when they had the voucher, but it did not affect their propensity to share meals with Low-SES Guests (Table E.3). Interestingly, the voucher increases the number of shared meals with Low-SES Guests among women with more credit available at baseline, despite no differences in invitation-sending. Inviters with the Random Guest List who are lonely or depressed at baseline are more likely to share meals with Low-SES Guests when they have the voucher, but they are also more likely to share meals with *High-SES* Guests when they have the voucher (Table E.4). In other words, the voucher has a positive effect in converting invitations to shared meals among Inviters with the Random Guest List who are lonely or depressed at baseline generally speaking.

Table E.3: Heterogeneity by $\bar{y}_i(n_i)$: (Random Guest List)

	(1) Number of Meals Shared with Any SES Guests		(2) Number of Meals Shared with High-SES Guests		(3) Number of Meals Shared with Low-SES Guests	
Less Credit Available	-0.240	(0.261)	-0.144*	(0.077)	0.050	(0.077)
Voucher	0.300	(0.185)	0.077	(0.055)	0.134**	(0.055)
Less Credit × Voucher	0.274	(0.342)	0.118	(0.101)	-0.141	(0.101)
Observations	397		400		400	
No Voucher Mean	0.895		0.261		0.201	
P-values:						
Voucher + Less Credit × Voucher =0	0.034		0.014		0.927	

Standard errors in parentheses
All specifications control for baseline unbalanced variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected baseline variables.
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Table E.4: Heterogeneity by $\bar{v}_i(n_i)$: (Random Guest List)

	(1) Number of Meals Shared with Any SES Guests		(2) Number of Meals Shared with High-SES Guests		(3) Number of Meals Shared with Low-SES Guests	
Loneliness or Depression Risk	-0.410*	(0.236)	0.002	(0.070)	-0.139**	(0.071)
Voucher	0.090	(0.192)	0.038	(0.057)	0.015	(0.058)
At Risk × Voucher	0.666**	(0.315)	0.163*	(0.093)	0.172*	(0.094)
Observations	397		400		400	
No Voucher Mean	0.887		0.207		0.216	
P-values:						
Voucher + At Risk × Voucher =0	0.002		0.004		0.009	

Standard errors in parentheses
All specifications control for baseline unbalanced variables (moved to the village for marriage), geographic cluster fixed effects, cluster-specific wealth quintile fixed effects, and lasso-selected baseline variables.
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

Appendix F Model Appendix

F.1 More Set-up

I follow Banerjee et al. (2024b) in several conceptual components and much of the notation in the definitions below. I extend Banerjee et al. (2024b) to (1) allow social interactions to also have a financial return, (2) allow returns to social interaction to depend on intensive margin investments, and (3) be characterized by within-type, but not cross-type, diminishing marginal returns.

Following Banerjee et al. (2024b), each social interaction has a base intrinsic utility function v_{θ_j}, which determines the utility that i gets from a social interaction with a θ_j person. I also allow each social interaction with a θ_j person to yield a base financial return, determined by y_{θ_j}.

Let $\mathbf{S}_{i,\theta} = (S_{ij})_{j\in J_\theta}$ and $\mathbf{I}_{i,\theta} = (I_{ij})_{j\in J_\theta}$ denote the vectors of all initiation and investment decisions of agent i with partners $j \in J_\theta$. Let total financial returns from social interactions be given by

$$y_{i,\theta}(\mathbf{S}_{i,\theta}, \mathbf{I}_{i,\theta}) := y_\theta\left(\sum_{j\in J_\theta} w^S S_{ij}, \sum_{j\in J_\theta} w^I S_{ij} I_{ij}\right),$$

and the total intrinsic utility returns from social interactions be given by

$$v_{i,\theta}(\mathbf{S}_{i,\theta}, \mathbf{I}_{i,\theta}) := v_\theta\left(\sum_{j\in J_\theta} w^S S_{ij}, \sum_{j\in J_\theta} w^I S_{ij} I_{ij}\right).$$

Define the marginal contributions of link ij as:

$$\Delta_{ij} y_{i,\theta} := y_{i,\theta}(\mathbf{S}_{i,\theta}, \mathbf{I}_{i,\theta}) - y_{i,\theta}(\mathbf{S}^{-j}_{i,\theta}, \mathbf{I}^{-j}_{i,\theta})$$

$$\Delta_{ij} v_{i,\theta} := v_{i,\theta}(\mathbf{S}_{i,\theta}, \mathbf{I}_{i,\theta}) - v_{i,\theta}(\mathbf{S}^{-j}_{i,\theta}, \mathbf{I}^{-j}_{i,\theta})$$

Note that $y_{i,\theta}(\cdot)$ is the return to agent i's portfolio of relationships with type-θ individuals. The function $y_\theta(,)$ maps aggregate initiation and investment effort into returns. Let ϵ^v_{ij} and ϵ^y_{ij} be idiosyncratic shocks distributed according to atomless distributions F_v and F_y. Then the expected marginal financial and intrinsic utility returns from link ij, conditional on formation and investment, are:

$$E^+[y_{ij}] := E\left[\Delta_{ij} y_{i,\theta} + \epsilon^y_{ij} \mid \epsilon^y_{ij} \geq -\Delta_{ij} y_{i,\theta}\right]$$

$$E^+[v_{ij}] := E\left[\Delta_{ij} v_{i,\theta} + \epsilon^v_{ij} \mid \epsilon^v_{ij} \geq -\Delta_{ij} v_{i,\theta}\right]$$

P_{ij} is the probability of "mutual consent" to the social interactions S_{ij} and I_{ij}. Specifically, let P_{ij} be the probability that neither party i nor j will lose intrinsic utility or income from social interactions S_{ij} and I_{ij}:

$$P_{ij} := (1 - F_v(-\Delta_{ij} v_{i,\theta}))(1 - F_y(-\Delta_{ij} y_{i,\theta}))(1 - F_v(-\Delta_{ji} v_{j,\theta_i}))(1 - F_y(-\Delta_{ji} y_{j,\theta_i}))$$

Then the total expected financial returns from potential social investments is:

$$\mathbb{E}^{\text{net}}[y_{i,\theta}] = \sum_{j \in J_\theta} P_{ij} \cdot E^+[y_{ij}]$$

and the total expected intrinsic utility from potential social investments is:

$$\mathbb{E}^{\text{net}}[v_{i,\theta}] = \sum_{j \in J_\theta} P_{ij} \cdot E^+[v_{ij}]$$

F.2 Proofs

Proof of Lemma 1. Let $(\bar{S}_{i,\theta}, \bar{I}_{i,\theta}, \bar{S}_{i,\theta'}, \bar{I}_{i,\theta'})$ denote a globally optimal and feasible portfolio, where type-θ initiations strictly dominate type-θ' initiations: $\bar{S}_{i,\theta} > \bar{S}_{i,\theta'}$ and $\bar{I}_{i,\theta} \geq \bar{I}_{i,\theta'}$.

The total marginal utility of initiating a type-θ relationship is:

$$\frac{dU_i}{dS_{i,\theta}} = \lambda_Z \cdot \frac{\partial \mathbb{Y}}{\partial \mathbb{E}_y^\theta} \cdot \frac{\partial \mathbb{E}_y^\theta}{\partial S_{i,\theta}} + \lambda_V \cdot \frac{\partial \mathbb{V}}{\partial \mathbb{E}_v^\theta} \cdot \frac{\partial \mathbb{E}_v^\theta}{\partial S_{i,\theta}} - c_{i\theta}.$$

Because the functions are monotonically increasing (Assumption 1), there exists $(S^\dagger_{i,\theta}, I^\dagger_{i,\theta})$ with $S^\dagger_{i,\theta} > \bar{S}_{i,\theta}$ and $I^\dagger_{i,\theta} \geq \bar{I}_{i,\theta}$ such that:

$$\lambda_Z \cdot \mathbb{E}_y^\theta(S^\dagger_{i,\theta}, I^\dagger_{i,\theta}) + \lambda_V \cdot \mathbb{E}_v^\theta(S^\dagger_{i,\theta}, I^\dagger_{i,\theta}) \geq \Delta.$$

We take $I^\dagger_{i,\theta}$ (and later $I^*_{i,\theta}$) to denote the investment portfolios that are optimal given $S^\dagger_{i,\theta}$ (respectively $S^*_{i,\theta}$) and the price vector p^I. Then, by Assumption 1, it follows that:

$$\left.\frac{d^2 U_i}{d(S_{i,\theta})^2}\right|_{(S^\dagger_{i,\theta}, I^\dagger_{i,\theta})} < \left.\frac{d^2 U_i}{d(S_{i,\theta'})^2}\right|_{(\bar{S}_{i,\theta'}, \bar{I}_{i,\theta'})}. \tag{1}$$

Define the function:

$$g(S_{i,\theta}) = \left.\frac{dU_i}{dS_{i,\theta}}\right|_{(S_{i,\theta}, I_{i,\theta}, \bar{S}_{i,\theta'}, \bar{I}_{i,\theta'})} - \left.\frac{dU_i}{dS_{i,\theta'}}\right|_{(S_{i,\theta}, I_{i,\theta}, \bar{S}_{i,\theta'}, \bar{I}_{i,\theta'})}.$$

Since the initial portfolio is globally optimal, we must have:

$$\left.\frac{dU_i}{dS_{i,\theta}}\right|_{(\bar{S}_{i,\theta}, \bar{I}_{i,\theta}, \bar{S}_{i,\theta'}, \bar{I}_{i,\theta'})} \geq \left.\frac{dU_i}{dS_{i,\theta'}}\right|_{(\bar{S}_{i,\theta}, \bar{I}_{i,\theta}, \bar{S}_{i,\theta'}, \bar{I}_{i,\theta'})}, \quad \text{i.e.,} \quad g(\bar{S}_{i,\theta}) \geq 0.$$

By continuity and differentiability of g, and by inequality (1), the function $g(S_{i,\theta})$ is strictly decreasing in $S_{i,\theta}$ beyond $S^{\dagger}_{i,\theta}$. Hence, by the Intermediate Value Theorem, there exists $(S^*_{i,\theta}, I^*_{i,\theta})$ with $S^*_{i,\theta} > S^{\dagger}_{i,\theta}$ and $I^*_{i,\theta} \geq I^{\dagger}_{i,\theta}$ such that:

$$\left.\frac{dU_i}{dS_{i,\theta}}\right|_{(S^*_{i,\theta}, I^*_{i,\theta}, \bar{S}_{i,\theta'}, \bar{I}_{i,\theta'})} < \left.\frac{dU_i}{dS_{i,\theta'}}\right|_{(S^*_{i,\theta}, I^*_{i,\theta}, \bar{S}_{i,\theta'}, \bar{I}_{i,\theta'})}.$$

□

Proof of Proposition 1. Let $S^*_{i,\theta}(\tau)$ and $I^*_{i,\theta}(\tau)$ denote the agent's optimal number of type-θ initiations and total investment in type-θ relationships under subsidy level $\tau \geq 0$. In particular, $S^*_{i,\theta}(0)$ and $I^*_{i,\theta}(0)$ are the optimal values under no subsidy.

Let $(S^*_{i,\theta'}(0), I^*_{i,\theta'}(0))$ denote the baseline type-θ' portfolio, with $S^*_{i,\theta}(0) > S^*_{i,\theta'}(0)$ and $I^*_{i,\theta}(0) \geq I^*_{i,\theta'}(0)$. By Lemma 1, there exists a feasible portfolio $(\bar{S}_{i,\theta}, \bar{I}_{i,\theta})$ such that $\bar{S}_{i,\theta} > S^*_{i,\theta}(0)$ and $\bar{I}_{i,\theta} \geq I^*_{i,\theta}(0)$ and:

$$\left.\frac{dU_i}{dS_{i,\theta'}}\right|_{(\bar{S}_{i,\theta}, \bar{I}_{i,\theta}, S^*_{i,\theta'}(0), I^*_{i,\theta'}(0))} > \left.\frac{dU_i}{dS_{i,\theta}}\right|_{(\bar{S}_{i,\theta}, \bar{I}_{i,\theta}, S^*_{i,\theta'}(0), I^*_{i,\theta'}(0))}. \tag{1}$$

We now construct a subsidy $\tilde{\tau}$ such that the agent optimally selects $(\bar{S}_{i,\theta}, \bar{I}_{i,\theta})$ as her type-θ portfolio under $\tilde{\tau}$. Specifically, define:

$$\tilde{\tau} := p^I - w^I \cdot \left\{ \frac{1}{w^I} \cdot \left(\frac{c_{i,\theta}}{\lambda_Z} - \frac{\partial \mathbb{V}}{\partial \mathbb{E}^{\theta}_v} \cdot \frac{\partial \mathbb{E}^{\theta}_v}{\partial S_{i,\theta}} \right) \Big/ \left.\frac{\partial \mathbb{Y}}{\partial \mathbb{E}^{\theta}_y} \cdot \frac{\partial \mathbb{E}^{\theta}_y}{\partial S_{i,\theta}} \right|_{(\bar{S}_{i,\theta}, \bar{I}_{i,\theta})} \right\}.$$

The constructed portfolio $(\bar{S}_{i,\theta}, \bar{I}_{i,\theta})$ is feasible under the agent's budget constraint at the subsidized price $p^I(\tilde{\tau})$, the budget constraint is locally slack or non-binding, and $\tilde{\tau} > 0$. These conditions follow from the concavity and monotonicity assumptions in Lemma 1 and from our construction of $(\bar{S}_{i,\theta}, \bar{I}_{i,\theta})$ as a weakly larger portfolio than the baseline optimum. By construction, this ensures that the agent's first-order condition for $S_{i,\theta}$ is satisfied at $(\bar{S}_{i,\theta}, \bar{I}_{i,\theta})$ when the per-unit investment price is $p^I(\tilde{\tau}) = p^I - \tilde{\tau}$. Since utility is strictly concave in $(S_{i,\theta}, I_{i,\theta})$ and the budget constraint is slack or non-binding, satisfaction of the FOC for $S_{i,\theta}$ implies that $(\bar{S}_{i,\theta}, \bar{I}_{i,\theta})$ is optimal for type-θ under $\tilde{\tau}$.

Hence,

$$(S^*_{i,\theta}(\tilde{\tau}), I^*_{i,\theta}(\tilde{\tau})) = (\bar{S}_{i,\theta}, \bar{I}_{i,\theta}).$$

Now suppose, for contradiction, that the agent does not adjust her type-θ' portfolio under $\tilde{\tau}$:

$$(S^*_{i,\theta'}(\tilde{\tau}), I^*_{i,\theta'}(\tilde{\tau})) = (S^*_{i,\theta'}(0), I^*_{i,\theta'}(0)).$$

Then the agent's full portfolio under $\tilde{\tau}$ is:

$$(\bar{S}_{i,\theta}, \bar{I}_{i,\theta}, S^*_{i,\theta'}(0), I^*_{i,\theta'}(0)).$$

At this portfolio, by inequality (1), we have:

$$\left.\frac{dU_i}{dS_{i,\theta'}}\right|_{(\bar{S}_{i,\theta},\bar{I}_{i,\theta},S^*_{i,\theta'}(0),I^*_{i,\theta'}(0))} > \left.\frac{dU_i}{dS_{i,\theta}}\right|_{(\bar{S}_{i,\theta},\bar{I}_{i,\theta},S^*_{i,\theta'}(0),I^*_{i,\theta'}(0))}.$$

But by construction of $\tilde{\tau}$, the FOC for $S_{i,\theta}$ is satisfied at this portfolio, i.e.,

$$\left.\frac{dU_i}{dS_{i,\theta}}\right|_{(\bar{S}_{i,\theta},\bar{I}_{i,\theta},S^*_{i,\theta'}(0),I^*_{i,\theta'}(0))} = 0.$$

Hence,

$$\left.\frac{dU_i}{dS_{i,\theta'}}\right|_{(\bar{S}_{i,\theta},\bar{I}_{i,\theta},S^*_{i,\theta'}(0),I^*_{i,\theta'}(0))} > 0,$$

which contradicts the assumption that $S^*_{i,\theta'}(\tilde{\tau})$ is optimal. Therefore:

$$S^*_{i,\theta'}(\tilde{\tau}) > S^*_{i,\theta'}(0).$$

$\square$

Proof of Proposition 2(a). We aim to show that if the marginal return to investment is higher for type θ' (Condition 2), then a lower subsidy is needed to induce an increase in initiations with type θ' than with type θ. That is:

$$\tau^{\min}_{\theta'} := \tilde{\tau}_{\theta'} \leq \tilde{\tau}_{\theta} := \tau^{\min}_{\theta}.$$

Condition 2 states:

$$\frac{dU_i}{dI_{i,\theta'}} > \frac{dU_i}{dI_{i,\theta}}.$$

By Lemma 1, Because Assumption 2 implies that

$$\frac{dS^*_{i,\theta}}{d\left(\frac{dU_i}{dI_{i,\theta}}\right)} \geq 0,$$

it must be that $S^*_{i,\theta'} \geq S^*_{i,\theta}$ when $I_{i,\theta'}$ and $I_{i,\theta}$ are feasibly greater than zero (budgets do not always inhibit investment). Furthermore,

$$\left.\frac{dU_i}{dS_{i,\theta'}}\right|_{(S^*_{i,\theta'}+1,I^*_{i,\theta'}(S^*_{i,\theta'}+1))} \geq \left.\frac{dU_i}{dS_{i,\theta}}\right|_{(S^*_{i,\theta}+1,I^*_{i,\theta}(S^*_{i,\theta}+1))}$$

Define:

$$\tilde{\tau}_\theta := p^I - w^I \cdot \left\{ \frac{1}{w^I} \cdot \left(\frac{c_{i,\theta}}{\lambda_Z} - \frac{\partial \mathbb{V}}{\partial \mathbb{E}_v^\theta} \cdot \frac{\partial \mathbb{E}_v^\theta}{\partial S_{i,\theta}} \right) \Big/ \frac{\partial \mathbb{Y}}{\partial \mathbb{E}_y^\theta} \cdot \frac{\partial \mathbb{E}_y^\theta}{\partial S_{i,\theta}} \bigg|_{(S_{i,\theta}^*+1, I_{i,\theta}^*(S_{i,\theta}^*+1))} \right\}$$

and define $\tilde{\tau}_{\theta'}$ analogously, replacing θ with θ'. Note that $\tilde{\tau}_\theta$ and $\tilde{\tau}_{\theta'}$ are the minimal subsidies required to make adding one initiation with θ- and θ'-type individuals optimal, respectively. In other words:

$$\frac{dU_i}{dS_{i,\theta}}\bigg|_{(S_{i,\theta}^*+1, I_{i,\theta}^*(S_{i,\theta}^*+1))} = 0 \quad \text{when} \quad \tau = \tilde{\tau}_\theta$$

Thus,

$$\frac{dU_i}{dS_{i,\theta'}}\bigg|_{(S_{i,\theta'}^*+1, I_{i,\theta'}^*(S_{i,\theta'}^*+1))} \geq 0 \quad \text{when} \quad \tau = \tilde{\tau}_\theta$$

Step 2: Show that $\epsilon_\theta - \epsilon_{\theta'} < \tilde{\tau}_\theta - \tilde{\tau}_{\theta'}$.

Step 3: Comparative probability statement.

Because the return and aggregator functions are strictly increasing, concave, and smooth (Assumption 1), the mapping from model primitives to $\tau_\theta^{\min}$ and $\tau_{\theta'}^{\min}$ is continuous and strictly monotonic, so

$$\tau_{\theta'}^{\min} < \tau_\theta^{\min} \quad \Longrightarrow \quad \Pr[\bar{\tau} > \tau_{\theta'}^{\min}] > \Pr[\bar{\tau} > \tau_\theta^{\min}].$$

By construction, $\tau_\theta^{\min}$ and $\tau_{\theta'}^{\min}$ are the minimum subsidies needed to induce strict increases in initiations. Therefore, for any $\bar{\tau} > 0$,

$$\Pr[S_{i,\theta'}^*(\bar{\tau}) > S_{i,\theta'}^*(0)] > \Pr[S_{i,\theta}^*(\bar{\tau}) > S_{i,\theta}^*(0)].$$

□

Proof of Weak Inequality in Proposition 2(a). Consider the total derivative of the marginal utility of initiating a type-θ link with respect to the subsidy τ:

$$\begin{aligned}\frac{\partial}{\partial \tau}\left(\frac{dU_i}{dS_{i,\theta}}\right) = \lambda_Z \cdot \left(\frac{\partial^2 \mathbb{Y}}{\partial (\mathbb{E}_y^\theta)^2} \cdot \frac{\partial \mathbb{E}_y^\theta}{\partial I_{i,\theta}} \cdot \frac{\partial I_{i,\theta}}{\partial \tau} \cdot \frac{\partial \mathbb{E}_y^\theta}{\partial S_{i,\theta}} + \frac{\partial \mathbb{Y}}{\partial \mathbb{E}_y^\theta} \cdot \frac{\partial^2 \mathbb{E}_y^\theta}{\partial I_{i,\theta} \partial S_{i,\theta}} \cdot \frac{\partial I_{i,\theta}}{\partial \tau} \right) \\ + \lambda_V \cdot \left(\frac{\partial^2 \mathbb{V}}{\partial (\mathbb{E}_v^\theta)^2} \cdot \frac{\partial \mathbb{E}_v^\theta}{\partial I_{i,\theta}} \cdot \frac{\partial I_{i,\theta}}{\partial \tau} \cdot \frac{\partial \mathbb{E}_v^\theta}{\partial S_{i,\theta}} + \frac{\partial \mathbb{V}}{\partial \mathbb{E}_v^\theta} \cdot \frac{\partial^2 \mathbb{E}_v^\theta}{\partial I_{i,\theta} \partial S_{i,\theta}} \cdot \frac{\partial I_{i,\theta}}{\partial \tau} \right). \qquad (3)\end{aligned}$$

Since $p^I(\tau)$ decreases in τ, the agent invests more as τ increases, so:

$$\frac{\partial I_{i,\theta}}{\partial \tau} > 0.$$

Assume the aggregator functions $\mathbb{E}_y^\theta$, $\mathbb{E}_v^\theta$ are concave and increasing in both $S_{i,\theta}$ and $I_{i,\theta}$, with non-negative cross-partials:

$$\frac{\partial^2 \mathbb{E}_y^\theta}{\partial I_{i,\theta} \partial S_{i,\theta}} \geq 0, \quad \frac{\partial^2 \mathbb{E}_v^\theta}{\partial I_{i,\theta} \partial S_{i,\theta}} \geq 0.$$

Then each term in (**??**) is weakly positive, and strictly positive for types with more investment-sensitive returns. So:

$$\frac{\partial}{\partial \tau}\left(\frac{dU_i}{dS_{i,\theta'}}\right) > \frac{\partial}{\partial \tau}\left(\frac{dU_i}{dS_{i,\theta}}\right) \quad \text{if} \quad \frac{dU_i}{dI_{i,\theta'}} > \frac{dU_i}{dI_{i,\theta}}. \tag{4}$$

Now suppose, for contradiction, that $\tilde{\tau}_{\theta'}^{\min} > \tilde{\tau}_\theta^{\min}$. Then:

$$\left.\frac{dU_i}{dS_{i,\theta}}\right|_{\tau=\tilde{\tau}_\theta^{\min}} = 0, \quad \text{and} \quad \left.\frac{dU_i}{dS_{i,\theta'}}\right|_{\tau=\tilde{\tau}_\theta^{\min}} < 0.$$

But since $\frac{dU_i}{dS_{i,\theta'}}$ is increasing in τ **faster** than $\frac{dU_i}{dS_{i,\theta}}$, the marginal utility for θ' must cross zero **before** that for θ. This contradicts the assumption that $\tilde{\tau}_{\theta'}^{\min} > \tilde{\tau}_\theta^{\min}$.

Therefore,

$$\tilde{\tau}_{\theta'}^{\min} \leq \tilde{\tau}_\theta^{\min}. \quad \blacksquare$$

□

Proof of Proposition 2(b). Let

$$\Delta := \Pr\left[S_{i,\theta'}^*(\bar{\tau}) > S_{i,\theta'}^*(0) \mid S_{i,\theta}^*(0) = 0\right] - \Pr\left[S_{i,\theta}^*(\bar{\tau}) > S_{i,\theta}^*(0) \mid S_{i,\theta'}^*(0) = 0\right].$$

Let $MU_{i,\theta}(\tau) := \frac{dU_i}{dS_{i,\theta}}$ and $MU_{i,\theta'}(\tau)$ similarly, evaluated at τ.

What matters is whether the marginal utility increase from $\tau = 0$ to $\tau = \bar{\tau}$ is enough to cross the threshold λ_Z and induce a new initiation. We consider three cases.

(i) $MU_{i,\theta'}(0) \leq \lambda_Z < MU_{i,\theta'}(\bar{\tau})$, while $MU_{i,\theta}(\bar{\tau}) \leq \lambda_Z$. Then $\Delta > 0$.

(ii) $MU_{i,\theta}(0) \leq \lambda_Z < MU_{i,\theta}(\bar{\tau})$, while $MU_{i,\theta'}(\bar{\tau}) \leq \lambda_Z$. Then $\Delta < 0$.

(iii) $MU_{i,\theta}(\bar{\tau}) \leq \lambda_Z$ and $MU_{i,\theta'}(\bar{\tau}) \leq \lambda_Z$. Then $\Delta = 0$.

This confirms that Δ can be positive, negative, or zero depending on the relationship between marginal utility changes and the marginal value of consumption. The comparative static is therefore ambiguous under corner solutions.

□