Economic and Psychological Returns to Social Relationships: Alleviating Constraints to Network Formation in Malawi*

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Abstract

I measure exogenous impacts of social linking among a sample that is socially isolated and economically vulnerable. I experimentally induce social interactions between female rural migrants in Malawi by facilitating poorer women in inviting other poor women, wealthier women, 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 earn income from self-employment relative to control. One year later, they experience a 0.13 SD increase in food security and a 0.16 SD (22%) reduction in depression. Women who invite wealthier guests drive the results on self-employment and food security, while women who invite other poor guests drive the results on depression reductions. Reducing the effort and uncertainty associated with initiating relationships alone leads 81% of women to send an invitation, while subsidizing the price of serving meat encourages cross-social-class linking. I draw three conclusions: (1) all social relationships yield large benefits, but effort costs and information asymmetries inhibit them from forming, (2) different types of relationships are more impactful across different domains, underscoring the value of economically diverse networks, and (3) social connection has a financial cost that reinforces 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 informal risk-sharing provides 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). However, social structures are characterized by heterogeneous members and relationships (Granovetter, 1973; Putnam, 2000), which can create opportunities for exclusion (Becker, 1971; Tilly, 1998; Portes, 1998), reinforce existing inequities (Bourdieu and Passeron, 1977; Lin, 2001), and present theoretical trade-offs between ties and network structures (Coleman, 1988; Blau, 1977; McPherson et al., 2001; Becker, 1973).

In an environment where social networks fill the role of the social safety net, this paper asks: what happens to socially marginalized people? I interrogate the constraints marginalized community members face to social connection, the economic and psychological effects of network linking, and the trade-offs people face in determining with whom to create social ties. Despite the view that social interactions matter for markets and well-being, endogenous link formation makes the causal effects of social connection—namely, just how valuable they are or not—difficult to study. There is even less economics research identifying what encourages or constrains social connections from arising, or characterizing trade-offs between social ties.

This study engages a sample of women who have moved across rural villages in Malawi, usually for marriage. Having been uprooted from their families and existing social networks, these women are in a specific circumstance that creates the conditions for social isolation, loneliness, and economic vulnerability. Given that 73% of societies worldwide are traditionally patrilocal (women move to their husband's villages), and there is evidence that patrilocality is becoming increasingly common, this likely reflects a common experience for women (Murdock, 1967; Shenk et al., 2019). I conduct a randomized controlled trial that exogenously provides these women with opportunities to link with each other. The study is designed to facilitate and measure the impact of and barriers to forming social linkages within and across class.

In the experiment, I help 1,200 young low-income female migrants initiate meal-sharing with other female migrants, a popular 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 from zero to five invitations delivered through an 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 their self-reported baseline networks. One year later, the Inviter treatment leads to a 0.13 standard deviation increase in an index of food security and a 0.16 SD (22%) reduction in mild, moderate, or severe depression. 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 earn income through self-employment (i.e., selling prepared foods or vegetables to other villagers) within just one month of the 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 given the setting. Due to a combination of persistent drought and macroeconomic instability, Malawi was in a food crisis throughout the study period where an estimated 28% of the population suffered acute food insecurity, and the majority of the population considered food shortages to be the country's greatest problem (Afrobarometer, 2024; UNICEF, 2025). Notably, this is the fifth severe food shortage that Malawi has experienced throughout the twenty-first century, and so, while extreme, the circumstance does not represent a rare event. Inviters were 7% less likely to eat one meal per day during this time period than Control, and 18% less likely to report eating no animal proteins throughout the entire lean season. The Control rate of depression rose by 32% over this time period (which cannot be attributed to negative spillovers from the experiment), 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 surprising 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 are significant barriers to social interaction within and across socio-economic status (SES). 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—for example, through social norms or expectations—to interact only with other people within their own social class. At the same time, I do find that interaction with low-SES and high-SES women yield meaningfully different outcomes. The treatment effects on self-employment, cash crop cultivation, and food security are significantly higher among Inviters with the High-SES Guest List compared to Inviters with the Low-SES Guest List (for food security, a 0.210 SD treatment effect versus 0.074 SD, $p = 0.037$). 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 (a 10.9 percentage point reduction versus a 4.8 percentage point reduction, $p = 0.036$).

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. Meat is a well-liked yet expensive and rarely consumed good in this setting, so the voucher effectively reduces the price of a nicer meal with meat to the same price as an everyday 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-only 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 any type of woman, receipt of the voucher significantly increases the likelihood of inviting high-SES women. This increase in invitations to high-SES women is driven by women who also invite a low-SES woman. 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, or the cost of improving the quality of the social interaction, is high. When they can afford to serve a nice meal, low-SES women *do* want to connect across SES more than they do in status quo, but 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.

I interpret these findings through the lens of a conceptual model of social network formation under budget constraints. 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. I make two key assumptions: first, that low- and high-SES relationships are each better at producing one type of benefit, and second, that the benefits of relationships are sensitive to financial investments in social interaction. The first assumption implies that agents who value both instrumental and intrinsic utility benefit from economic diversity in their networks. This assumption is motivated by the notion that different types of relationships produce different returns, and that individuals will benefit from a variety of friendships that fill social needs across different domains—for example, having both work friends and friends from childhood—rather than a large number of friends who occupy a similar social space. Furthermore, if agents do not initiate relationships with the type whose returns are more sensitive to financial investments in the zero-subsidy counterfactual, the subsidy will be more likely to induce invitations to both types. 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 initiating an economically diverse set of interactions with both high- and low-SES women, versus initiating a homophilic set of interactions with only other low-SES women, changes with the price of a nice meal.

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.

This paper contributes to two bodies of work in development economics, and two bodies of work in the economics of social networks and social capital. First, I contribute to a large and classic literature in development economics on informal risk-sharing by providing causal evidence that social ties are substantively important for risk- and consumption-smoothing. A large literature evaluates the presence and efficiency of risk-smoothing—across people, time, plots, and places—within villages in low-income countries (Townsend, 1994; Mobarak and Rosenzweig, 2013; Beaman et al., 2014; Rozensweig and Stark, 1989). This literature is predicated on the idea that social ties are an important mechanism through which people manage shocks in an environment without complete market or governmental social safety nets, but it is rare to find and evaluate exogenous network shocks. While there is a literature evaluating how risk-sharing improves after the entry of digital financial services that allow people to risk-share across space (Jack and Suri, 2014; Riley, 2018), this paper provides evidence that an exogenous shock to network links has large impacts on consumption smoothing. The intervention helps women turn acquaintances with neighbors into friendships that afford large consumption-smoothing benefits, implying that status quo risk-smoothing is inefficient but can become more efficient with a simple and cheap experiment that encourages acquaintances to engage in meaningful social connection.

The second primary impact of the experiment speaks to the growing literature in development economics on the two-way causal relationship between mental health disorders and poverty. 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 remains a great need to find novel cost-effective mitigation strategies.[1] This study provides evidence that the social interaction can break the

[1]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;

link between poverty and poor mental health, suggesting that the social isolation accompanying low-income status may be an important underlying mechanism, a pathway that has not received much empirical attention to date.[2] I document novel patterns in the prevalence and correlates of loneliness among a young population, while the existing evidence on the prevalence of loneliness in low- and middle-income countries to date focuses on elderly populations (Banerjee et al., 2023; Surkalim et al., 2022). I causally identify social isolation as a direct contributor to mental health disorders, and provide a practicable intervention that reduces long-term mild-to-severe depressive symptoms among low-income and marginalized women by 22%.

Second, I contribute to a broad economics literature documenting the importance of social capital for economic outcomes. I find causal evidence that 'bridging' and 'bonding' capital—or, relationships with people who are both different and similar to oneself—each 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 peers' economic outcomes and one's own economic outcomes (Cannon et al., 2024; Chetty et al., 2022a; Patel and Wolfe, 2024; Linde and Egede, 2023; Sacerdote, 2011; Mallah, 2025; Laschever, 2013; Bergman et al., 2024a; Chetty et al., 2016; Ludwig et al., 2013). This paper significantly expands the external validity of the existing body of evidence, providing, to my knowledge, the first causal evidence of the impact of high-SES social ties outside of an educational context, the first evidence in a low- or middle-income country, and the first experimental evidence.[3] 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.[4]

Lastly, I contribute to the social networks literature. While a nascent body of evidence in economics shows that network externalities can causally limit social network formation (Anders and Pallais, 2025; Banerjee et al., 2024b), my experiment elucidates how dyad-level constraints to meaningful social interactions can inhibit social linking even when meeting opportunities are available are people want to link, with large economic consequences. Furthermore, I show how

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).

[2]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.

[3]Mechanisms at play in an education context, such as classroom conditions, may not replicate to other settings. 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). The causal evidence of economic connectedness to date either bundles economic connectedness with other associated goods (such as neighborhoods or classrooms), or analyzes the impacts of economic connectedness that happens through the randomization of peer groups.

[4]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).

these individual constraints can then contribute to the persistence of income-based homophily. Homophily is descriptively documented across many settings and characteristics, including income, has important implications for the persistence of differences in economic outcomes across groups (Verbrugge, 1977; McPherson et al., 2001; Jackson, Forthcoming), and may limit social and cultural cohesion (Allport, 1954; Rao, 2019).[5] Despite the widespread prevalence of homophily and its economic relevance, we know very little about *why* social networks become and remain homophilic. My experiment presents causal evidence identifying a driver of homophily in choice over with whom to interact. Specifically, I show that the financial cost of valuable social interaction inhibits lower-income women from initiating relationships with higher-income women, thereby acting as a mechanism underlying income-based homophily and making it self-reinforcing.[6]

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

2 Context

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, making this a convenient sample among whom to study social exclusion and remedies to it. 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

[5]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).

[6]Identifying a causal link between meat consumption and strategic social network investments 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. Much of the literature in development economics has viewed cheap calories (usually staple grains) as an input into health and labor productivity, and expensive calories (usually meat) as a luxury consumption good. A wide body of evidence finds that individuals consistently choose to spend excess income on foods that are 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). 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.

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.[7] 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. Overall, this sample is triply disadvantaged with regards to social inclusion on the basis of their gender, migrant status, and income status.

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 3.1.1). Importantly, the women who I code as 'high-SES' are poor on a global scale. On average, only 20% of them have 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 (network degree), and the probability she belongs to a women's church group increases (Figures A.2 and A.3).[8] However, network degree increases with time in the village very slowly—women who have been in the village for twenty years have, on average, only one more friend than women who arrived this year—suggesting that the frictions to social network linking do not resolve with time. 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).

[7] While the Chewa tribe, a predominant tribe in my sample, is traditionally matrilocal, traditional kinship norms have been largely disrupted and patrilocality is common among traditionally matrilocal tribes.

[8] 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.

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).

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 one 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 one would expect if they linked with people within the village at random.

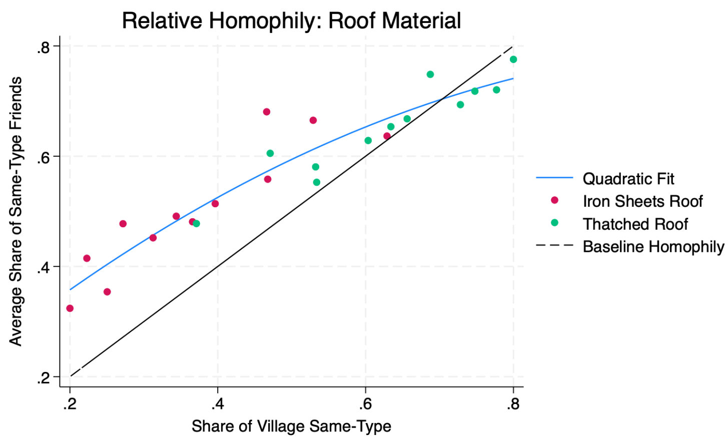


Figure 1: Income-Based Homophily

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 my 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). I measure depression using the CESDR-10 (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. 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 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.[9]

Why is meal-sharing such a common activity? While *food*-sharing is a common method of risk-

[9] 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.

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, 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).[10]

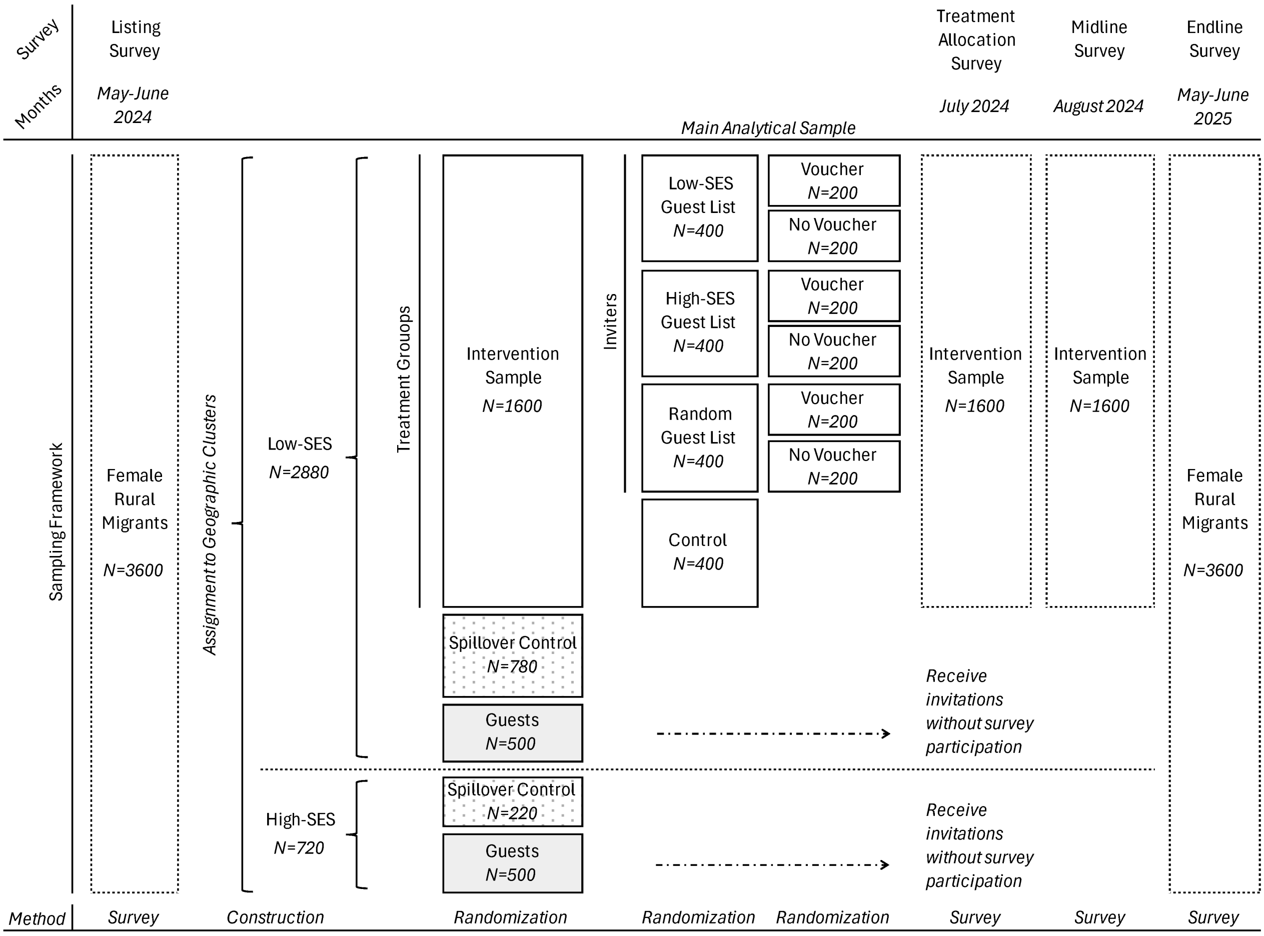
3 Experimental Design and Empirical Specifications

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 believed probability of rejection, the emotional cost of face-to-face rejection if it is to happen, and the hassle cost of finding other women in the village to invite. 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. I use my listing sample data to construct geographic clusters and a continuous SES index, draw quintiles of the index within geographic clusters, and then assign women to high- or low-SES using these geographic-cluster-specific SES quintiles (SES index construction is described in Section 3.1.1). 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

[10] 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).

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.

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 design is summarized in Figure 2. The Intervention Sample is randomized into three groups:[11]

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

[11]I do not have a Voucher-only treatment arm in my study because, while it is possible that reducing the price of meat alone encourages social interaction, that is not the model of social network formation that my experiment seeks to test. Instead, I ask if, conditional on the access to initiate relationships with different sets of individuals, the price of meat serves as a barrier to social interaction. Although, without a Voucher-only arm, I cannot rule out that the price of meat alone inhibits relationship initiation, my results suggest that fixed effort costs of social interaction are the primary constraint that inhibits women from initiating social relationships.

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). There are 200 participants within each of the smallest subgroups (Figure 2).

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;[12] 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 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.

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. Women are informed during the Listing Survey that signing up for the list does not guarantee that they will receive an invitation or appear on a list, which, importantly, ensures that Guests who do not receive an invitation are unaware that they ever appeared on any Sharing List. Since almost half of the women who

[12] 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.

sign up for the Sharing List do not participate in meal-sharing through the experiment, it is unlikely that women attribute non-participation to being excluded by Inviters, rather than by the experimenter. Indeed, qualitatively, women who do not participate in meal-sharing through the trial attribute this exclusion to random group assignment rather than to exclusion by the community.

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.[13]

3.1 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).

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

[13]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 Spillover Control group—those who originally are not selected for the Intervention Sample or to be Guests—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 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.

difference) (Table B.1). Thus, in all specifications, I control for an indicator variable denoting if the participant moved to the village for marriage.

3.1.1 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 whether the respondent lives in her own home,[14] acres of farmland owned, number of garden plots owned, and an index of business capital.[15] 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 self-employment that each woman's household engages in.[16]

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. Roof material is an observable household feature, and a salient proxy for income. Thus, I ask participants to report the roof material for each of their network links, and use the composition of the roof material of network ties as a proxy for network economic connectedness. 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).

3.1.2 Main Outcomes

I analyze three primary downstream outcomes: a food security index, total farm yields in USD value, and an indicator for mild-to-severe depression.

Food Security Index: The food security index is a PCA index of measures of the typical number of meals participants eat per day and the frequency with which they consume animal proteins. Food and protein consumption are both particularly consequential in this sample, 50% of whom

[14] 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.

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

[16] 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.

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, excluding meat consumption (which is mechanically affected by the Voucher treatment). 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"—the annual period of lowest consumption, which falls between the midline and endline surveys—is potentially more welfare-enhancing because it has implications for consumption-smoothing. Bearing in mind the value of food security in the population broadly, and the augmented importance of food security in the lean season, the one-year food security index incorporates measures of the frequency of daily meals and the frequency of consuming animal proteins (including meat), both in the past month and during the lean season (more details about variable definitions are in Appendix Section A.3).

Farm Yields in USD Value: I conduct the endline survey in May-June 2025, towards the end of the harvest season. Respondents self-report their yields for each crop, estimating their expected yields if they have not finished harvesting all of their crops. Participants record their yields in the unit of measurement that they harvest their crop, and I convert their total yields into kilograms. Then, for the most frequently cultivated crops—maize, beans, groundnuts, soybeans, sunflower seeds, tobacco, sugarcane, pumpkin, and sweet potatoes—I multiply their total harvest by the market rate per kilogram in USD, as reported by local news articles.

Mild-to-Severe Depression: 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. Consistent with convention, "Mild depression" is a score from 10-15; "Moderate depression" is a score from 16-21; and "Severe depression" is a score of at least 22.

3.1.3 Network Elicitation

I elicit networks by asking participants to report the names of each person with whom they engage in a series of economic and social activities. Then, for each network link, I ask respondents details about their relationship. I ask a series of objective questions about each link that are likely to remain dynamically stable on the first time that they report that network tie in the network: their ethnicity, religion, household roof material, marital status, and proximity in walking time. In each survey round where a respondent names someone in the network, I ask her to report two objective facts about the relationship—how often they see each other, and if they most typically see each other in groups or alone—and five subjective questions, which I use to define "strength of ties".

Strength of Ties: For each network link that I elicit, I collect data about the respondent's subjective experience in that relationship. I use these variables to measure "strength of ties". There are five variables that enter the "strength of ties" index, capturing trust, humor, closeness, and reciprocity (questions described in Appendix Section A.3).

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 to analyze strength of ties in following 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.

In order to identify the ties that are the strongest, and most clearly represent something like a "best friend", 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." Thus, we can conceptualize weak ties and mid-strength ties as relative objects (to one another and to the networks of other women in the village), and strong ties as absolute objects.

3.2 Estimating Equations

3.2.1 First Stage

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

$$I_i = \beta_0 + \beta_1 T_i^{R,V} + \beta_2 T^{H,NV} + \beta_3 T^{H,V} + \beta_4 T^{L,NV} + \beta_5 T^{L,V} + X_i + \delta_i + \gamma_i + \epsilon_i \tag{1}$$

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 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), where the Random Guest List without Voucher is the omitted group; X_i is a vector of unbalanced baseline controls and lasso-selected controls, δ_i are wealth-quintile fixed effects, and γ_i are geographic cluster fixed effects (my two randomization strata). I use heteroskedasticity-robust standard errors. 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:

$$N_i^H = \beta_0^H + \beta_1^H T_i^{R,V} + \beta_2^H T^{H,NV} + \beta_3^H T^{H,V} + X_i + \delta_i + \gamma_i + \epsilon_i \tag{2}$$

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

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 2 to Inviters with the High-SES Guest List or the Random Guest List, and restrict the analysis of Equation 3 to Inviters with the Low-SES Guest List or the Random Guest List.

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

$$I_i^{H\&L} = \beta_0^{H\&L} + \beta_1^{H\&L} T_i^{R,V} + X_i + \delta_i + \gamma_i + \epsilon_i \quad (4)$$

$$I_i^{H\text{-}only} = \beta_0^{H\text{-}only} + \beta_1^{H\text{-}only} T_i^{R,V} + X_i + \delta_i + \gamma_i + \epsilon_i \quad (5)$$

$$I_i^{L\text{-}only} = \beta_0^{L\text{-}only} + \beta_1^{L\text{-}only} T_i^{R,V} + X_i + \delta_i + \gamma_i + \epsilon_i \quad (6)$$

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

3.2.2 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:

$$Y_i = \beta_0 + \beta_1 T_i^{R,NV} + \beta_2 T_i^{R,V} + \beta_3 T_i^{H,NV} + \beta_4 T_i^{H,V} + \beta_5 T^{L,NV} + \beta_6 T^{L,V} + Y_{BL,i} + X_i + \bar{S}_i + \delta_i + \gamma_i + \epsilon_i \quad (7)$$

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.

There is the potential for SUTVA concerns with this experiment. When an Inviter shares a meal with a Guest, the Inviter or Guest might reduce meal-sharing with their other neighbors, including Control participants, which would bias Control means downwards and treatment effects upwards. Conversely, when an Inviter shares a meal with a Guest, Control participants who are friends with either the Guest or the Inviter might be included in these shared meals and new friendships, biasing Control means upwards and biasing treatment effects downwards. $\bar{S}_i$ is a vector of four spillover variables that control for exposure to spillovers from the experiment. 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. I include each of these measures since the direction of potential bias on the treatment effects depends on the nature of the relationship between Control participants and their neighboring Guests or Inviters. For each spillover measure, I estimate $\bar{S}_i$ by counting the

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

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).

4 Results: First Stage

4.1 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 not different across treatment arms (column (1) of Table 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). The vast majority of these invitations are to women who are not in participants' baseline networks, indicating that effort costs of social

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

linking are prohibitively high, yet easy to overcome with a simple intervention. Furthermore, I cannot rule 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 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, implying that the value social interaction is higher than personal consumption for the majority of women, 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, "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 (Table 2). In this group, mixed bundles are 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) (Appendix Table C.1). This already is highly suggestive that women value economic diversity among the people with whom they interact.

I find that the Voucher induces a 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 reveals 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 higher 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.

4.2 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 60% shared a meal with a Guest within one year. Meal-sharing rates are statistically indistinguishable across Inviter groups with High-SES and Low-SES Guests (Table 3), suggesting that the effort costs of meal-sharing itself, like the effort costs of sending an invitation, are not systematically higher for cross-SES matches.

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.

4.3 Long-Term Relationships

While the extent of the intervention is to directly encourage women to send invitations for a shared meal, it is crucial to understand the implications of these invitations beyond the first shared meal to understand and interpret the effects of the intervention. In the endline survey, enumerators ask Inviters and Guests about their most recent interaction with each person that they invited (or were invited by). The majority of Inviters report that they saw at least one Guest in the past month, and for a non-trivial portion, these are intentional interactions rather than chance encounters. Sixteen percent of Inviters report that the last time they saw a Guest

Table 3: 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).
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

was at a planned activity in the past month, such as working together, going to the market together, or sharing a meal. Another 39% report that they saw at least one Guest in the past month for a chat, and 9% spoke with a Guest at a village or church function in the past month.

In the endline survey, enumerators ask every participant to describe any thoughts or feelings they have about each particular invitation they sent or received through the program, and their experiences and opinions with the program generally, in an open-ended text response. Using a word search for topical key phrases in these text responses, 20% of Inviters report that they have a strong or deep relationship with at least one Guest. This is corroborated by the Guests, 16% of whom report a strong or deep relationship with at least one Inviter.[17] I also conduct keyword searches over a number of themes that women discuss when describing the intervention: "Positive Emotions", "Information Diffusion", "Mutual Support", and "Sharing." Sixty-five percent of Inviters and 65% of Guests mention a keyword falling into at least one of these themes. If I remove the keywords "share" and "sharing", a conservative measure since

[17] I list the key phrases in Appendix Section A.4. A few representative phrases that indicate strong relationships include "we talk often", "relationship improved", "we are still friends", "support each other", and "keep meeting."

Table 4: Text Response Analysis: Keyword Counts

Theme	Keywords	N: Inviters	N: Guests
Positive Emotions	trust, happy, love, warm, welcome, respect	253 (22%)	187 (19%)
Information Diffusion	info, learn, idea, teach, taught	299 (26%)	207 (21%)
Mutual Support	encourage, support, lend, borrow, help	279 (24%)	235 (24%)
Share	share, sharing	501 (44%)	450 (47%)

women may mention these word just to describe meal-sharing, these numbers remain high at 52% and 47%. The intervention creates positive interpersonal experiences, where women share information and express happiness to spend time with each other. Furthermore, a non-trivial portion of these experiences lead to persistent and mutually meaningful friendships.

Are these relationships marginal, or do they crowd out other relationships that would have formed without the intervention? 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 (Appendix Table D.9).

There is network churn specifically among ties with whom respondents report sharing meals, both as a host and as a visitor (Appendix Tables D.12 and D.13). In other words, Control group members are more likely to report sharing meals with the same people they shared meals with one year ago, while the Inviter treatment leads to an increase in the number of people who are new to the network with whom they share meals. This is offset by a reduction in meal-sharing with baseline meal-sharing ties—some of whom Inviters no longer list in the network altogether, and some of whom Inviters still list in the network but not as a link with whom they share meals. Reassuringly, this churn in the network is driven by weak ties: links who Inviters report weak connections with at baseline are less likely to appear in the endline network, and they are replaced with other weak ties (Appendix Table D.10). There is a modest but precise increase in new strong ties, without any change in the probability of dropping baseline strong ties.

5 Results: Second Stage Outcomes

I evaluate the effect of the intervention on three main outcomes: food security, farm yields, and depression. These outcomes represent both the instrumental return that relationships can provide (i.e. increased income or consumption), and the intrinsic benefits of companionship (i.e. improved mental health).

Pooling all Inviters, the Inviter treatment leads to a 0.132 standard deviation increase in food security ($p < 0.05$); a 0.078 percentage point reduction in depression (22%, $p < 0.01$); and no distinguishable impact on farm yields (Table 5). 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 most important income-earning opportunity in the year, while other income-earning opportunities (self-employment and informal piecework) primarily serve as a means to liquidity outside of the harvest season and protection from shocks.[18]

The effects on food security 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 assumption in how I conceptualize relationships: within-SES relationships and cross-SES relationships produce distinct benefits from each other, and thus agents face a trade-off in the types of benefits that they would like to gain from a relationship when deciding with whom to interact. This is further validated by the treatment effect estimates among Inviters with the Random Guest List, which lie between the other two groups on both outcomes.

The impacts on food security show that social ties are substantively important for seasonal resilience in agricultural societies. Many agricultural economies experience seasonal variation in food supply and prices, creating a phenomenon where agents consume less food during the high-price "lean season". The risk to food security posed by seasonal and weather fluctuations are heightened and growing due to climate change (Walawala et al., 2016; Omotoso et al., 2023; Thompson et al., 2010). Most of the literature has focused on analyzing heavy-handed financial interventions, such as optimally-timed credit programs, as tools to assist agents in smoothing consumption across the year (Dillon, 2021; Stephens and Barrett, 2011; Fink et al., 2020; Basu and Wong, 2015; Burke et al., 2019). Consistent with Augenblick et al. (2024), which finds that a simple psychological budgeting exercise can increase post-harvest saving so that farmers are more liquid during the lean season, I provide evidence that such costly programs may be unnecessary. In my experiment, a simple intervention that generates peer-to-peer information-sharing and relationship-building leads women to find new lean-season income streams and increase their food security.

While the depression reductions may be related to food security increases, it is unlikely that food security 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 food security gains, and vice versa. Furthermore, benchmarking the magnitudes of the effects on depression against cash transfers, which intervene on income rather than on social connection, my depression impacts are twice as large. I compare my estimates with the effect of

[18] Among Control participants who cultivate crops, the value of their harvest yields are more than four times the self-employment profits in the past year that the women who earn income from self-employment report. Furthermore, 80% of participants in the sample report cultivating agriculture, whereas only 25% report earning income through self-employment.

Table 5: Treatment Effects on Main Outcomes

	(1)	(2)	(3)	(4)	(5)
	Food Security Index		Farm Yields USD Value	Mild-to-Severe Depression	
	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***
	(0.053)	(0.053)	(25.480)	(0.025)	(0.026)
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
	(0.066)	(0.066)	(32.338)	(0.030)	(0.032)
Inviter with Low-SES Guest List	-0.090	0.074	-10.508	0.014	-0.109***
	(0.064)	(0.062)	(31.119)	(0.031)	(0.031)
Inviter with Random Guest List	0.083	0.109	6.196	0.024	-0.078**
	(0.067)	(0.067)	(29.998)	(0.030)	(0.032)
Panel C: Inviter Sub-Group Treatment Effects					
High-SES without Voucher	0.045	0.201**	-6.928	-0.061*	-0.059
	(0.080)	(0.087)	(40.375)	(0.035)	(0.038)
High-SES with Voucher	0.075	0.216***	30.172	0.030	-0.045
	(0.083)	(0.079)	(40.354)	(0.038)	(0.038)
Low-SES without Voucher	-0.072	0.021	-33.911	0.036	-0.106***
	(0.076)	(0.070)	(34.687)	(0.037)	(0.036)
Low-SES with Voucher	-0.109	0.128	12.941	-0.003	-0.112***
	(0.081)	(0.079)	(41.034)	(0.037)	(0.037)
Random without Voucher	0.048	0.102	35.129	-0.011	-0.071*
	(0.082)	(0.081)	(37.538)	(0.038)	(0.039)
Random with Voucher	0.119	0.113	-24.488	0.053	-0.087**
	(0.085)	(0.087)	(35.760)	(0.036)	(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	0.023**	0.037**	0.477	0.539	0.036**
Pooled: Voucher vs. No Voucher	0.685	0.419	0.745	0.160	0.864
High-SES: Voucher vs. No Voucher	0.753	0.872	0.431	0.031**	0.750
Low-SES: Voucher vs. No Voucher	0.682	0.205	0.283	0.362	0.881
Random: Voucher vs. No Voucher	0.477	0.913	0.154	0.138	0.699

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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 Food Security Index (columns 1 and 2) is a PCA index in standard deviations from the Control mean. The Food Security 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 Food Security 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.

cash transfers estimated in Haushofer and Shapiro (2016), a randomized controlled trial of cash transfers in Kenya where depression is measured comparably. 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 version of the CESD depression scale.

5.1 Instrumental Utility

The endline increase in food security 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 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 and reduced lending increase liquidity, and risk mitigation increases the option value of consumption during the lean season. 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).

5.1.1 Improved Productive Time Use

Aside from agriculture, households earn income through self-employment and piecework. Self-employment constitutes selling goods and services, usually around the village or in the market. Piecework constitutes providing farm labor for farmers with larger 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 food security 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 security, 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 earn income through self-employment 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). Self-employment provides an alternate stream of liquidity, has the potential for much higher earnings than piecework, requires less physical exertion, and search frictions with customers may be lower than search frictions with employers.[19]

Inviters with the High-SES Guest List enter self-employment 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 earning income through self-employment than Control participants. Combined with modest increases in the other groups, particularly Inviters with the Random Guest List (commensurate with smaller but still positive food security effects), Inviters as a pooled group are 4.5 percentage points more likely to be earning income through self-employment than Control participants at the midline survey (25%, $p < 0.05$).

These effects are largely driven by women entering self-employment for the first time, and many of them directly copy the self-employment activities of a high-SES Guest (Table D.29).[20] Next, I investigate potential explanations for how an intervention that induces one shared meal leads women to diversify their income streams within just one month. I argue that the most likely explanation is information diffusion from higher- to lower-SES women.

<u>Information</u>

The first possible explanation I evaluate is that high-SES women share valuable information in these meals, consistent with a large and rapidly growing literature in development economics that finds social networks can play an important role in information and technological diffusion (Foster and Rosenzweig, 1995; Conley and Udry, 2010; Beaman et al., 2021; Banerjee et al., 2013, 2019).[21] Most of the self-employment activities that participants engage in involve in-

[19]The most common self-employment activities involve selling simple consumables (most frequently, "selling prepared foods"), and the vast majority of participants report that their point of sale is to customers around the village. Seventy percent of self-employed women 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.

[20]I define copying self-employment activities 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 self-employment activity 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 "self-employment activity copying" in the Control group to be the base expected rate given normal self-employment activity switching in the absence of an intervention.

[21]There is a large literature in development economics that takes the social network as a fixed object through

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
	(0.265)	(0.251)	(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
	(0.314)	(0.316)	(0.032)	(0.028)	(0.031)
Inviter with Low-SES Guest List	-0.299	-0.777***	-0.005	0.012	-0.007
	(0.326)	(0.287)	(0.031)	(0.026)	(0.029)
Inviter with Random Guest List	-0.172	-0.682**	0.014	0.035	0.007
	(0.325)	(0.293)	(0.032)	(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
	(0.389)	(0.371)	(0.038)	(0.035)	(0.036)
High-SES with Voucher	-0.904**	-0.235	0.090**	0.087**	0.067*
	(0.364)	(0.400)	(0.040)	(0.034)	(0.039)
Low-SES without Voucher	-0.367	-0.715**	-0.017	0.007	-0.025
	(0.384)	(0.341)	(0.037)	(0.031)	(0.036)
Low-SES with Voucher	-0.211	-0.826**	0.006	0.015	0.010
	(0.414)	(0.343)	(0.037)	(0.032)	(0.036)
Random without Voucher	-0.290	-0.660*	-0.007	0.045	-0.008
	(0.384)	(0.337)	(0.038)	(0.034)	(0.036)
Random with Voucher	-0.067	-0.719**	0.036	0.027	0.022
	(0.414)	(0.356)	(0.040)	(0.032)	(0.038)
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	0.668	0.078*	0.056*	0.006***	0.059*
Pooled: Voucher vs. No Voucher	0.514	0.917	0.079*	0.828	0.186
High-SES: Voucher vs. No Voucher	0.043**	0.784	0.131	0.813	0.461
Low-SES: Voucher vs. No Voucher	0.735	0.766	0.585	0.810	0.391
Random: Voucher vs. No Voucher	0.629	0.873	0.344	0.652	0.474

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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.

formal 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 entering self-employment are low, and information may be enough to help women overcome barriers to entry. 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 (Appendix 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.

For participants whose household enter into a new self-employment activity for the first time in the past month by midline—meaning they previously did not earn from self-employment at all, or they started selling a new good or service—I ask them why they entered into this activity. While the differences in reported conversation topics are small in magnitude relative to the increase in self-employment, new information emerges as a key reason for why women report that they engage in new self-employment activities. The most common reason respondents give for earning from a new self-employment activity is that "somebody told me this is profitable" (45%), and five percent of women who begin a new self-employment activity say that they did so because they received training.

When I elicit women's networks, I ask respondents to list the names of each person who they go to for advice about issues such as income-earning activities, childcare, or health. I find that Inviters with the High-SES Guest List seek advice from *fewer* people by the endline survey, but that these people are more likely to be strong ties (these effects are statistically distinguishable from the Control group and from the effect among Inviters with the Low-SES Guest List) (Appendix Table D.15).

Borrowing

Another possibility is that women borrow to pay the fixed costs of entering new self-employment activities. Twenty-one percent of respondents report that they enter into a new self-employment activity because somebody helped them to find capital, suggesting that loans are important. However, borrowing rates are non-differentiable from Control. Taken together, these results imply that, while capital inputs matter for starting new self-employment activities, information is the more binding constraint that high-SES network ties effectively resolve.

Market Linkages

Finally, the Inviter treatment might lead to effects on self-employment by creating market link-

which information, technologies, or norms diffuse (Breza et al., 2024; Beaman and Magruder, 2012; Beaman, 2012; Banerjee et al., 2024a; Akram et al., 2025; Beaman et al., 2021; Duflo et al., 2023; Kondylis et al., 2023; Chandrasekhar et al., 2022; Breza and Chandrasekhar, 2019; Iacobelli and Singh, 2020). A newer literature evaluates shocks to network structure, such as introducing people through group-based programs (Schechter and Vasudevan, 2024; Asiedu et al., 2025; Feigenberg et al., 2013), or asks how interventions lead to social network changes (Derksen and Souza, 2024; Banerjee et al., 2024b).

ages. By directly putting individuals in contact with one another, they could have referred each other to customers, suppliers, or other valuable connections. Indeed, 18% of respondents say in the midline survey that they entered into a new self-employment activity because they found customers they did not have before. However, it is important to note that this mechanism likely cannot fully account for the large increase in self-employment activity that I observe. Only 8% of participants who ever engage in self-employment report having any business relationships—including profit-sharing business partners, regular customers, or business collaborators such as regular suppliers or people with whom they make joint orders—and the probability of having a business relationship is not different between Inviters and Control.

5.1.2 Reduced Lending

Inviters across all sub-treatments report lending money or goods to fewer people in the past year than Control participants, which may be in part responsible for providing households the liquidity to consume more food during the lean season (Appendix Table D.16). This is driven entirely by a reduction in lending to baseline network members—Inviters lend less to the same people who they lent to the previous year, and are less likely to give loans for the first time to members of the baseline network. There is actually an *increase* in the number of borrowers who are new to the network, but this is more than offset by the reduction in the number of baseline network-members to whom they lend, leading to an overall decrease in the number of borrowers.

Inviters report that they have more network members who they would feel very comfortable to lend to, indicating that the reduction in borrowing is not driven by a decrease in willingness to lend broadly speaking (Appendix Table D.5). The reduction in borrowers is explained entirely by weak- and medium-strength ties, while the number of strong ties to whom Inviters give loans is unaffected (Appendix Table D.15). This supports the possibility that Inviters become more confident refusing to lend to people who they are less connected with, and therefore less comfortable lending to. Another possible explanation is that Inviters' network links might be less likely to need loans. Consistent with a reshaping of their risk-sharing networks, Inviters experience churn in the ties from whom *they* borrow, even though the total number of people or amount of borrowing does not change—Inviters borrow from more people who are new to the network, and borrow from fewer people who they listed in their baseline networks. This is especially true among any Inviter with the Voucher (Appendix Table D.17).

5.1.3 Increased Option Value of Lean Season Consumption

Two forces reduce the risk of consumption relative to saving for Inviters, particularly during the lean season. 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.

<u>Crop Diversification</u>

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.[22] 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 (Appendix 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 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 the potential for risk-sharing in the network. 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 Potential for Risk-Sharing 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 Potential for Risk-Sharing 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 heterogeneity. The index increases among 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 say they would be very comfortable borrowing

[22] 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
	(0.057)	(0.016)	(8.096)	(22.615)
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)	(0.021)	(11.805)	(27.312)
Inviter with Low-SES Guest List	0.021	0.029	11.700	-38.793
	(0.072)	(0.020)	(10.927)	(26.100)
Inviter with Random Guest List	0.136*	0.055***	-4.143	-0.509
	(0.071)	(0.021)	(8.723)	(27.436)
Panel C: Inviter Sub-Group Treatment Effects				
High-SES without Voucher	0.117	0.056**	25.717*	-50.376
	(0.092)	(0.027)	(14.559)	(31.779)
High-SES with Voucher	0.025	0.054**	32.217*	-8.932
	(0.097)	(0.027)	(16.535)	(34.346)
Low-SES without Voucher	0.070	0.038	1.550	-42.882
	(0.098)	(0.026)	(11.902)	(30.231)
Low-SES with Voucher	-0.024	0.020	21.640	-34.512
	(0.082)	(0.023)	(16.106)	(31.354)
Random without Voucher	0.172*	0.054**	-12.394	31.517
	(0.089)	(0.027)	(9.119)	(33.918)
Random with Voucher	0.096	0.057**	4.056	-33.936
	(0.088)	(0.027)	(12.012)	(32.894)
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	0.477	0.229	0.190	0.709
Pooled: Voucher vs. No Voucher	0.153	0.727	0.161	0.805
High-SES: Voucher vs. No Voucher	0.424	0.935	0.747	0.255
Low-SES: Voucher vs. No Voucher	0.384	0.536	0.265	0.798
Random: Voucher vs. No Voucher	0.471	0.931	0.176	0.085*

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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)).

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.[23] 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 5.1.4).

5.1.4 Other Plausible Mediators for Increased Food Security

There are several mediators for increased food security 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 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 and, since Inviters do not experience a reduction in total farm yields, that they may use farm inputs more efficiently.

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

[23]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 Potential for Risk-Sharing in the Network

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Potential for Risk-Sharing 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
	(0.040)	(0.050)	(0.094)	(0.114)	(0.019)	(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
	(0.049)	(0.063)	(0.115)	(0.143)	(0.024)	(0.026)	(0.030)
Inviter with Low-SES Guest List	0.012	-0.031	0.029	-0.090	0.014	-0.019	-0.015
	(0.048)	(0.060)	(0.112)	(0.139)	(0.023)	(0.028)	(0.030)
Inviter with Random Guest List	0.054	0.096	0.109	0.177	0.050**	0.006	-0.003
	(0.048)	(0.062)	(0.113)	(0.142)	(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
	(0.061)	(0.081)	(0.141)	(0.184)	(0.030)	(0.033)	(0.037)
High-SES with Voucher	0.029	0.148*	0.018	0.324*	0.032	0.059*	0.024
	(0.059)	(0.076)	(0.138)	(0.170)	(0.031)	(0.031)	(0.038)
Low-SES without Voucher	0.054	-0.044	0.134	-0.118	0.024	-0.001	0.008
	(0.058)	(0.077)	(0.133)	(0.178)	(0.029)	(0.035)	(0.036)
Low-SES with Voucher	-0.035	-0.020	-0.072	-0.064	0.005	-0.037	-0.037
	(0.059)	(0.072)	(0.138)	(0.162)	(0.028)	(0.034)	(0.038)
Random without Voucher	0.118**	0.007	0.264*	0.006	0.017	0.001	-0.012
	(0.059)	(0.070)	(0.138)	(0.161)	(0.030)	(0.035)	(0.038)
Random with Voucher	-0.004	0.184**	-0.037	0.343*	0.083***	0.008	0.006
	(0.057)	(0.082)	(0.133)	(0.187)	(0.031)	(0.032)	(0.037)
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	0.394	0.035**	0.433	0.028**	0.404	0.065*	0.105
Pooled: Voucher vs. No Voucher	0.020**	0.065*	0.008***	0.095*	0.515	0.691	0.504
High-SES: Voucher vs. No Voucher	0.350	0.285	0.207	0.274	0.909	0.119	0.632
Low-SES: Voucher vs. No Voucher	0.178	0.781	0.174	0.782	0.575	0.374	0.284
Random: Voucher vs. No Voucher	0.060*	0.048**	0.047**	0.099*	0.071*	0.859	0.677

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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.

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)).

5.2 Intrinsic Utility

I find that the Inviter treatment leads to very large reductions in mild-to-severe depression. The decrease in depression is driven by a reduction in mild depression, which is significantly more common than moderate or severe depression. While still clinically relevant, less severe forms of depression may be less likely to require professional intervention, and are plausibly treatable with social support. Treatment effects on every question in the CESDR-10 questionnaire move in the direction of "less depression", and the changes are almost always largest among Inviters with the Low-SES Guest List (Table D.2).[24]

Literature in psychology, sociology and anthropology hypothesizes that interactions with similar-type people are more effective at providing emotional and psychological support (Jacobson, 1987; Lomnitz, 1988; Umberson and Montez, 2010; Steffens et al., 2019). My experimental results, which show that exogenous interactions within-SES lead to larger improvements in psychological well-being than exogenous cross-SES interactions, are consistent with this hypothesis. Evaluating the treatment effects on depression heterogeneously by baseline income *within* low-SES women, I find further evidence that proximity in social-class is a key feature of these relationships that leads to a reduction in depression. I evaluate effects heterogeneously by the SES index, considering women in the first two quintiles as "poorest of the poor" and women in the third and fourth quintiles as "richest of the poor" (recall that I code women in the fifth quintile of the SES index as high-SES). Among Inviters with the Low-SES Guest List, who have the choice to interact with women in the bottom four quintiles of the SES index, the poorest and richest of the poor all experience large reductions in depression (Table 9). Among Inviters with the High-SES Guest List, who only have the choice to interact with women in the top quintile of the SES index, the richest of the poor experience depression reduction that are not different from the reductions among Inviters with the Low-SES Guest List, while the poorest of the poor experience *no* depression reduction.

What specifically is it about social interaction within-SES that improves mental health, where

[24]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.

Table 9: Treatment Effects on Mild-to-Severe Depression: by Baseline SES Index

	(1)	(2)	(3)	(4)
	Mild-to-Severe Depression: Poorest of the Poor		Mild-to-Severe Depression: Richest of the Poor	
	1 Month	1 Year	1 Month	1 Year
Panel A: Pooled Inviter Treatment Effects				
All Inviters	-0.024	-0.073**	0.028	-0.073*
	(0.038)	(0.037)	(0.040)	(0.043)
Panel B: Pooled Inviter by Guest List Treatment Effects				
Inviter with High-SES Guest List	-0.033	-0.007	-0.008	-0.067
	(0.046)	(0.045)	(0.046)	(0.050)
Inviter with Low-SES Guest List	-0.024	-0.118***	0.067	-0.084*
	(0.046)	(0.044)	(0.049)	(0.050)
Inviter with Random Guest List	-0.014	-0.096**	0.024	-0.066
	(0.047)	(0.045)	(0.049)	(0.051)
Panel C: Inviter Sub-Group Treatment Effects				
High-SES without Voucher	-0.092*	0.004	-0.016	-0.083
	(0.053)	(0.056)	(0.057)	(0.059)
High-SES with Voucher	0.025	-0.019	0.002	-0.051
	(0.058)	(0.054)	(0.055)	(0.062)
Low-SES without Voucher	-0.020	-0.116**	0.090	-0.076
	(0.055)	(0.053)	(0.060)	(0.060)
Low-SES with Voucher	-0.030	-0.120**	0.041	-0.093
	(0.056)	(0.052)	(0.060)	(0.061)
Random without Voucher	-0.010	-0.096*	-0.028	-0.056
	(0.059)	(0.057)	(0.058)	(0.062)
Random with Voucher	-0.021	-0.095*	0.077	-0.078
	(0.057)	(0.053)	(0.060)	(0.060)
Observations	764	768	755	757
Control Mean	0.314	0.359	0.279	0.364
P-values:				
Pooled: High-SES vs. Low-SES Guest List	0.841	0.011**	0.106	0.711
Pooled: Voucher vs. No Voucher	0.386	0.761	0.517	0.947
High-SES: Voucher vs. No Voucher	0.064*	0.715	0.770	0.618
Low-SES: Voucher vs. No Voucher	0.873	0.953	0.472	0.797
Random: Voucher vs. No Voucher	0.869	0.987	0.121	0.740

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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 is the aggregate of these scores across all ten questions. is a score ¿=10. The regressions in columns (1)-(2) limit the sample to women in the first and second quintiles of the baseline SES index. The regressions in columns (3)-(4) limit the sample to women in the third and fourth quintiles of the baseline SES index. Low-SES women are in the first four quintiles of the SES index, and High-SES women are all in the top quintile of the SES index.

social interactions across-SES are less effective? Across several outcomes and margins of heterogeneity, I find suggestive evidence that one channel may be improved integration with the extended family. Within-SES linking lead to changes to ties with extended family members in a way that cross-SES linking does not, especially among women with the least agency.

Inviters with the Low-SES Guest List have far higher levels of churn among their husband's relatives in their network (Table 10). While the overall composition of network members does not change in economically meaningful ways—whether network ties are blood relatives, relatives from the husband's side, friends that respondents made themselves, or friends they met through their husbands (Appendix Table D.18)—Inviters with the Low-SES Guest List are less likely to list in their networks the same relatives from their husband's side at endline who they listed at baseline, and instead list new relatives from their husband's side as the people who they interact with. These relatives who are new to the network are more likely to be married women who respondents engage with across a variety of activities, including meal-sharing, risk-sharing, sharing secrets and exchanging stories (Appendix Tables D.19 and D.20).

Furthermore, it is the women with the least household decision-making power at baseline who experience the greatest depression reductions with the Inviter treatment—a 59% reduction in depression (Appendix Table D.21)—and, across all Inviter groups, these women experience significantly higher rates of network churn among their husband's family members (Appendix Table D.22).

One channel through which integration into the extended family could lead to improved mental health is by leading to better marriages. 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). There is suggestive evidence that these changes in integration with the extended family perpetuate onto improved spousal relationships. 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, separated, or widowed (27%, $p < 0.10$) (Table D.23). While these are large effects, I view them as suggestive, since they are not different from the effects among Inviters with the High-SES Guest List, and the pooled effects are not statistically different from the Control group. I investigate the strength of spousal relationships among married women using the same method that I analyze the strength of other network ties and, reassuringly, find that there are no differences in the strength of relationships with husbands in any group. I also find no differences in comfort lending to or borrowing from husbands, suggesting that the treatment likely does not induce low-agency women to stay in financially or psychologically harmful marriages.

Another channel through which improved integration into extended families could improve mental health is through more child-caregiving support. Fifty percent of participants ever report pregnancy or infant-caregiving at any point during the trial, and receiving help during this sensitive time period could be an important source of psychological support (Tripathy et

Table 10: Treatment Effects on Husband's Relatives within the Network

	(1)	(2)	(3)	(4)
	Husbands Relatives Total	Husbands Relatives Churn	Husbands Relatives New	Husbands Relatives Dropped
	1 Year	1 Year	1 Year	1 Year
Panel A: Pooled Inviter Treatment Effects				
All Inviters	-0.053	0.179**	0.086*	0.098
	(0.082)	(0.083)	(0.051)	(0.060)
Panel B: Pooled Inviter by Guest List Treatment Effects				
Inviter with High-SES Guest List	-0.038	0.071	0.044	0.030
	(0.099)	(0.098)	(0.061)	(0.072)
Inviter with Low-SES Guest List	-0.012	0.326***	0.171**	0.158**
	(0.103)	(0.109)	(0.068)	(0.075)
Inviter with Random Guest List	-0.111	0.141	0.045	0.109
	(0.103)	(0.097)	(0.062)	(0.071)
Panel C: Inviter Sub-Group Treatment Effects				
High-SES without Voucher	-0.045	0.148	0.080	0.066
	(0.129)	(0.118)	(0.079)	(0.087)
High-SES with Voucher	-0.069	-0.017	-0.012	-0.001
	(0.113)	(0.119)	(0.071)	(0.086)
Low-SES without Voucher	-0.002	0.298**	0.163*	0.145*
	(0.127)	(0.132)	(0.088)	(0.083)
Low-SES with Voucher	-0.016	0.358**	0.182**	0.170*
	(0.125)	(0.140)	(0.083)	(0.098)
Random without Voucher	-0.096	0.184	0.086	0.116
	(0.127)	(0.117)	(0.076)	(0.086)
Random with Voucher	-0.138	0.096	-0.002	0.103
	(0.126)	(0.117)	(0.075)	(0.086)
Observations	1528	1528	1528	1528
Control Mean	2.317	1.277	0.367	0.910
P-values:				
Pooled: High-SES vs. Low-SES Guest List	0.795	0.016**	0.063*	0.075*
Pooled: Voucher vs. No Voucher	0.720	0.446	0.314	0.775
High-SES: Voucher vs. No Voucher	0.869	0.220	0.286	0.498
Low-SES: Voucher vs. No Voucher	0.925	0.712	0.854	0.805
Random: Voucher vs. No Voucher	0.776	0.501	0.307	0.898

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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 link, in the first survey where respondents list each link in their network, respondents report if they are related to the network link or not, and if they came to know the link through their husbands or met them on their own. Links who they are related to through their husbands are coded as '. The outcome of column (1) reports the total number of husband's relatives in the network. The outcome of column (3) reports the total number of husband's relatives in the endline network that were not listed in the baseline network. The outcome of column (4) lists the total number of husband's relatives in the baseline network that were not listed in the endline network. The outcome of column (2) reports the churn in husband's relatives in the network, which is the sum of the outcomes of columns (3) and (4).

al., 2010; Dennis et al., 2009; Jester et al., 2023). I find that, while the treatment leads to reduced depression across women in all stages of child-caregiving, the effects are largest among women who at some point during the trial report breast-feeding or having an infant child (less than one year old), but do not report pregnancy during the trial (Appendix Table D.27). While the effects on women who report pregnancy at some point during the trial are also large, the results suggest that the support that social relationships can provide for childcare may be more important for reducing depression than the care they can provide related to pregnancy itself, such as reducing the instance of post-partum depression. The treatment leads to much more churn in husband's relatives in the network among all Inviters who ever report pregnancy or childbirth during the trial (Appendix Table D.26). Among *only* Inviters with the Low-SES Guest List, this treatment effect on network churn is also present among women who report caregiving for infants but do not report pregnancy or childbirth.

Taken together, these results suggest that women experience mental health improvements by engaging with women in similar social positions as themselves, which helps them to integrate more with their extended families. Familial integration may lead to more support for child-rearing, and potentially perpetuates onto marital stability.

5.3 Discussion of Results

5.3.1 What Barrier Does the Inviter Treatment Resolve?

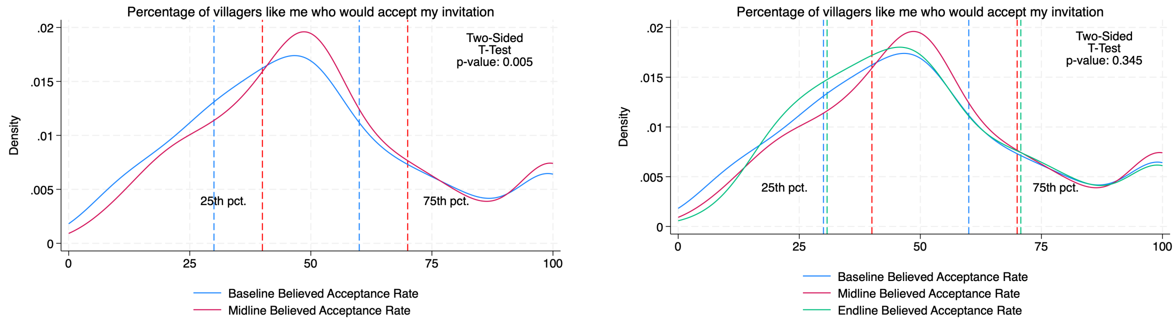
If the Inviter treatment, which is little more than a nudge, leads to such high take-up of invitation-sending, and meal-sharing has such large benefits even without the voucher, what prevents these women from sharing more meals with each other in the absence of the intervention? I propose two primary contributors: high costs of initiating social relationships, and information asymmetries about others' willingness to interact. I find no evidence that others' lack of willingness to interact or reciprocate are relevant barriers in reality. Furthermore, I find no evidence that the social norms leading to low levels of relationship initiations among low-SES women exist to benefit high-SES women, or the collective, in the society.

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. Seventy-five percent of respondents say 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, and fear of not having the monetary resources to reciprocate a shared meal. When discussing what barriers a woman might face when sending an invitation to a neighbor herself, respondents also believe that financial constraints exist, such as not having enough food to share with the neighbor (26%), but also cite emotional and social barriers, such as worry that the neighbor does not like her (28%).

Seventy-five percent of respondents report that they believe that these hypothetical women's

Figure 3: Belief Updating



concerns about meal-sharing are 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.

The high costs of face-to-face interaction is validated by revealed preference through the experiment. Only 34% of Inviters—less than half of the women who sent any invitation—accompanied the enumerator to deliver the invitation to any of the Guests. A natural question is if Inviters' concerns are true, or if this is a society in a state of pluralistic ignorance, which I examine next.

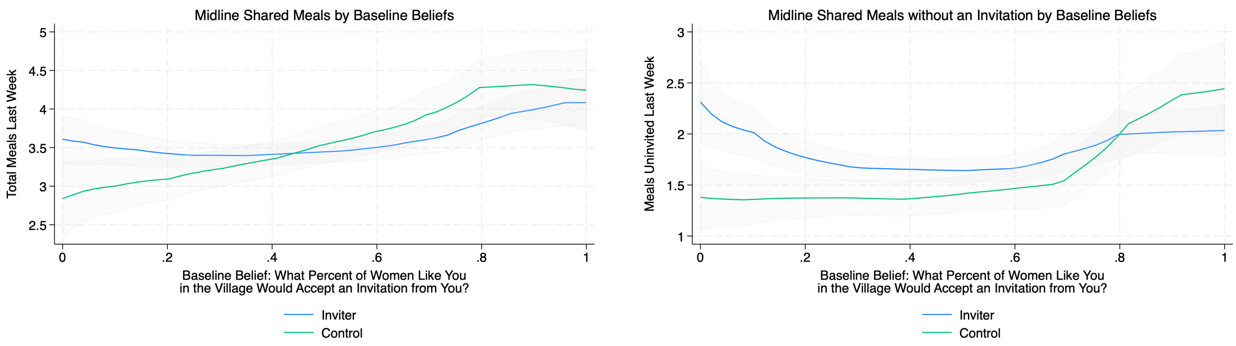
Information Asymmetries

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 50% of women similar to her in the village would accept an invitation from her (Figure A.6). 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, 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 26% higher than the mean baseline believed acceptance rate, and outside the interquartile range of the baseline believed acceptance rate. This evidence indicates that there is a significant information asymmetry whereby women systematically and pluralistically underestimate others' willingness to share meals.

At the midline survey, I ask this question again, and find that Inviters report more-positive beliefs than they did at baseline (Figure 3). By endline, the baseline and endline distributions are no longer statistically different, and the 25th percentile of beliefs has reverted to its pessimistic baseline value. However, the 75th percentile remains fixed at the higher level from the midline survey. While the intervention is not enough to change long-run beliefs among the most

Figure 4: Baseline Beliefs and Midline Meal-Sharing



pessimistic women, it does lead to long-run belief updating among individuals at the margin between optimistic and pessimistic beliefs.

One month after the intervention, when Inviters have just experienced an information shock and are most likely to update their beliefs about others' willingness to interact, meal-sharing behavior changes alongside. I ask participants how many meals they shared with people who are not household members in the past week. I find that, among participants whose baseline beliefs about others' willingness to share meals are the *most* pessimistic, Inviters share more meals in the past week than Control (Figure 4). In fact, among participants who thought at baseline 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), meaning that Inviters and their friends are more comfortable showing up at each other's houses to see if they can join a meal without first being asked over.

Lack of Mutual Consent and Reciprocation

Conditional on sending an invitation, meal-sharing is very high and is not different across almost all of the treatment arms, indicating that, in reality, Guests are not hesitant to engage in meal-sharing and lack of mutual consent is not a constraint. In the endline survey, enumerators ask Guests to recall their reaction to receiving an invitation from each Inviter. Sixty-four percent of Guests who receive an invitation report unambiguously positive feelings, such as happiness or excitement; 11% report mixed feelings, such as nervousness or surprise; while only 4% report any unambiguously negative feelings, such as discomfort or feeling obligated (the remaining Guests mostly report no reaction or that they don't remember). Furthermore, meal-sharing reciprocation—Guests also hosting Inviters for a shared meal—is very high, with almost all Guests with whom Inviters actually share a meal reciprocating in return (Figure C.3).

Existing Social Norms Benefit Other Members of Society

It is unlikely that the social norms leading to the baseline misperceptions serve an efficient purpose that the experiment dismantled, such as maintaining an optimal allocation of friendship collectively for the society. While I cannot comment on men or on non-migrant women (both groups are outside my sample), 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 11).

Table 11: Treatment Effects Among Guests

	(1)	(2)	(3)	(4)	(5)
	Food Security Index		Farm Yields USD Value	Mild-to-Severe Depression	
	1 Month	1 Year	1 Year	1 Month	1 Year
Inviter	0.018	0.135***	0.046	0.011	-0.070***
	(0.053)	(0.052)	(26.090)	(0.025)	(0.025)
Guest		-0.017	0.164		-0.003
		(0.053)	(30.268)		(0.020)
Observations	1585	3437	3437	1585	3437
Low-SES Control Mean					
Spillover Estimates in Control Group					
All Inviters and Guests		0.061	27.583		-0.012
P-value		0.104	0.219		0.483
Within-SES Inviters and Guests		0.154***	46.079		-0.025
P-value		0.009	0.164		0.318
Inviters with High-SES Guests		0.101	49.455		-0.022
P-value		0.235	0.168		0.510
High-SES Guests		-0.113	-10.479		0.017
P-value		0.246	0.863		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 Food Security Index (columns 1 and 2) is a PCA index in standard deviations from the Control mean. The Food Security 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 Food Security 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.

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

5.3.2 The Price of Social Activities and Income-Based Homophily

In Section 4, I find evidence that the price of meat constrains low-SES women from engaging in social interaction with high-SES women. Do these shared meals have bearing on long-term networks, and to what extend can these patterns explain income-based homophily in durable social networks? In two exercises—a "Meeting Bias" and "Friending Bias" accounting exercise, and by evaluating treatment effects on economic-diversity-weighted network churn—I show that the price of meat is relevant for measures of income-based homophily in the network outside of my experiment, but that the matching friction that the Inviter treatment alleviates is the first-order constraint to social network formation.

Meeting and Friending Bias Accounting

While I cannot measure differential rates of the opportunities to meet, since I do not collect data on meeting opportunities outside of my experiment, I *can* use invitation-sending by Inviters as a measure of selection into meetings when given the opportunity. 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 (the full analysis of meeting bias and friending bias is 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.

Economic Diversity-weighted Network Churn

I use network connections' roof material as a proxy for income. I find that there are no detectable impacts of any Inviter arm on the percent of the network that has a more durable (iron-sheets) roof (Table D.28). 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 cross-SES economic connectedness, even among Inviters with the High-SES Guest List.

There are no large differences in network churn among lower- or higher-income ties on the extensive margin, but there could be intensive margin differences.[25] 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 economic diversity-weighted network churn (details in Appendix Section C.2).

For almost every group, the treatment effects on economic diversity-weighted network churn are maximized when I place *no* weight on economic diversity, indicating that the intervention induces a larger volume of network churn within the same groups who would enter and exist 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, where placing some weight on economic diversity maximizes treatment effects on economic diversity-weighted network churn. While this result

[25]Network churn increases among ties with iron sheets roofs and ties with thatched roofs (Table D.25). 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.

provides evidence that patterns in invitation-sending carry through to actual changes in the network, the difference between the magnitude of the maximum treatment effect on economic diversity-weighted network churn, and network churn with no weight placed on economic diversity, is minute. 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.

6 Conceptual Model of Social Network Formation

What set of preferences and constraints that women might face can explain the patterns that I observe in the experiment, and what do they imply about social network formation more broadly? I present a model of social network formation that both serves as a lens with which to interpret the experimental results. My innovation is, first, to consider relationships with different types of people as different goods with different benefits, implying that the trade-off across types is a central tension in network formation, and that there can be significant benefits to network diversity. Second, I conceptualize relationships as goods whose benefits respond positively to financial investment. When relationships with higher- and lower-SES people benefit from financial investment at different rates, the model generates predictions for how the price of high-value social activities can act as a determinant of income-based homophily.

I consider two ways in which individuals obtain utility from social relationships. First, individuals get utility from social interaction itself—the non-market value of being in the company of others—which I refer to as "intrinsic utility". Secondly, there is a financial return on social interactions, which allows people to consume other utility-generating goods. 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. This formulation of social capital parallels the Grossman (1972) theoretical formulation of health capital.

6.1 Model Set-up

Low-SES women decide if they want to initiate relationships with low-SES or high-SES women by sending invitations for a shared meal, and then choose if they will invest financially in these social engagements. First, they select across a set of relationship-initiation bundles $(S_L, S_H) \in \{(0,0); (1,0); (0,1); (2,0); (0,2); (1,1)\}$, choosing to invite low-SES women, high-SES women, none, or both, where they can initiate a maximum of two relationships.[26] Sending an invitation to a low-SES woman bears a fixed effort cost c_L, and sending an invitation to a high-SES woman bears a fixed effort cost c_H. Next, conditional on inviting at least one woman, agents

[26] I limit women to initiating two relationships for simplicity and clarity. In the experiment, women can send up to five invitations total.

choose $I \in [0,1]$, a continuous level of financial investment to improve the social experience, which costs p^I per unit. Agents spend their remaining income on consumption Z.

Women select S_L, S_H, and I to maximize:

$$\max_{S_L,S_H,I} U\big(Z, V(S_L,S_H,I)\big) \quad \text{s.t.} \quad \begin{aligned} Y(S_L,S_H,I) &= Z + p^I \cdot I \cdot (S_L + S_H) \\ Y(S_L,S_H,I) &= \bar{y} + \mathbb{Y}(S_L,S_H,I) \\ V(S_L,S_H,I) &= \bar{v} + \mathbb{V}(S_L,S_H,I) - S_H \cdot c_H - S_L \cdot c_L \\ I > 0 \quad &\Rightarrow \quad S_L + S_H > 0 \end{aligned}$$

where $\mathbb{Y}(S_L,S_H,I)$ is the financial return function for these social interactions, and $\mathbb{V}(S_L,S_H,I)$ is the intrinsic utility return function for these social interactions; $\bar{y}$ is the existing income, and $\bar{v}$ is the intrinsic utility the agent gets from her pre-existing network. Both return functions are increasing in S_L and S_H, and are continuous and weakly increasing in I. U is concave and additively separable in Z and V.

Assumption 6.1 (Each type has an absolute advantage in producing one type of utility)**.** *Without loss of generality, denote types H and L with θ and θ'. Let θ be the type that is more productive in generating a financial return, and let θ' be the type that is more productive in generating intrinsic utility, in isolation and in sets with others (mathematical statement in Appendix Section F.2).*

Assumption 6.1 differentiates each type by their productivity across different domains. Relationships with the θ-type are better at producing a financial return, and relationships with the θ'-type are better at producing an intrinsic utility return.

Let λ_Y and λ_V be the marginal weights on instrumental versus intrinsic utility in the total utility function. By Assumption 6.1, there exists a region of the preference space, denoted $P \subset \mathbb{R}^+$ (defined formally in Appendix F.2) such that when $\lambda_Y/\lambda_V \in P$ the choice set $(S_L, S_H) = (1,1)$ generates more utility than the choice sets $(S_L, S_H) \in \{(2,0),(0,2)\}$. If an agent values both financial return and intrinsic utility, and if the slopes of the production functions are not too different, then a diverse set of initiations will generate more utility for agents than any concentrated two-invitation set of initiations.

6.2 Investment Price Subsidy

Let τ be a subsidy to the price of I, so that $p(\tau) = p^I - \tau$. $S_H^*(0)$ and $S_L^*(0)$ denote the optimal number of high- and low-SES initiations that the agent chooses without the subsidy, and $S_H^*(\tau)$ and $S_L^*(\tau)$ denote the optimal number of high- and low-SES initiations that the agent chooses under subsidy τ.

Lemma 6.1 (Subsidies induce diversification.)**.** *Assume that $\lambda_Y/\lambda_V \in P$ for all I. Assume* *that the difference between c_θ and $c_{\theta'}$ is bounded so that*

$$c_\theta - c_{\theta'} \in \Big(\max_{I\in[0,1]} -\frac{\lambda_Y}{\lambda_V}\big(\mathbb{Y}(1,1,I)-\mathbb{Y}(2,0,I)\big) - \big(\mathbb{V}(1,1,I)-\mathbb{V}(2,0,I)\big)\,,$$
$$\min_{I\in[0,1]} \frac{\lambda_Y}{\lambda_V}\big(\mathbb{Y}(1,1,I)-\mathbb{Y}(0,2,I)\big) + \big(\mathbb{V}(1,1,I)-\mathbb{V}(0,2,I)\big)\Big) \tag{8}$$

Define τ^+ as the minimal subsidy large enough to induce an increase in initiations. This τ^+ exists if $S^*_\theta(0) + S^*_{\theta'}(0) < 2$. Then, for any $\tau > \tau^+$:

$$S^*_\theta(\tau) < 2 \qquad \text{and} \qquad S^*_{\theta'}(\tau) < 2$$

When $\lambda_Y/\lambda_V \in P$ (the preference space where diverse invitation sets generate a larger return than concentrated invitation sets), and when the difference between the fixed effort costs is bound, a subsidy large enough to induce an increase in initiations will induce more diversity in the set of initiations.

6.2.1 Preference Heterogeneity

Now I introduce two groups of agents $g \in \{g_1, g_2\}$, each with a different set of preferences. Let the first group have the zero-subsidy optimum $(S^*_\theta(0), S^*_{\theta'}(0)) = (0,1)$ with investment $I^*_{g_1}(0) \in [0,1]$, and multipliers $(\lambda^{g_1}_Y, \lambda^{g_1}_V)$. Let the second group have the zero-subsidy optimum $(S^*_\theta(0), S^*_{\theta'}(0)) = (1,0)$ with investment $I^*_{g_2}(0) \in [0,1]$, and multipliers $(\lambda^{g_2}_Y, \lambda^{g_2}_V)$. I assume that return functions and effort costs are not different across groups, so that heterogeneous preferences over financial return and intrinsic utility is the only difference driving different zero-subsidy optimal choice sets.

I define $\tau^+_{g_1}$ as the subsidy required to induce an addition of a θ-type in the first groups, whose zero-subsidy optimal counterfactual choice is an invitation to one θ'-type; and $\tau^+_{g_2}$ as the subsidy required to induce an addition of a θ'-type in the second group, whose zero-subsidy optimal counterfactual choice is an invitation to one θ-type. Note that $\tau^+_{g_1}$ and $\tau^+_{g_2}$ represent the τ^+ described in Lemma 6.1, conditional on two different preference sets.

6.2.2 Comparative Statics

Assumption 6.2 (One type is more responsive to investment)**.** *Without loss of generality, assume that returns to interaction with the θ-type benefit relatively more from investment than the θ'-type, at all feasible bundles. Furthermore, there exists a feasible level of investment at which the incremental benefit of adding a θ-type to a θ'-type exceeds the incremental benefit of adding a θ'-type to a θ-type (mathematical statement in Appendix Section F.2).*

Now I evaluate which group—the group with a preference for θ-type in the zero-subsidy counterfactual, versus the group with a preference for the θ'-type in the zero-subsidy counterfactual—is more likely to diversify their invitation set with a positive subsidy. Then I contrast this "trade-off regime", where individuals are evaluating the relative benefits between the two types when making their initiation decisions, with a "corner-solution regime", where initiating relationships with one type is infeasible.

Proposition 6.1 (Diversification conditional on the zero-subsidy counterfactual)**.** *Assume that $I^*_{g_1}(0) = I^*_{g_2}(0)$, and that the set of feasible investment levels representing an increase in investment is non-empty.*[27] *Let Assumptions 6.1 and 6.2 hold and assume that $\lambda^g_Y/\lambda^g_V \in P$, for all feasible investment levels I, for all $g \in \{g_1, g_2\}$.*

(a) ***(Interior Solution: Comparative Statics with Substitution)*** *Assume the difference between costs are bounded so that Condition (8) holds for each group $g \in \{g_1, g_2\}$. Then $\tau^+_{g_1} < \tau^+_{g_2}$ and, whenever the subsidy $\tau \in (\tau^+_{g_1}, \tau^+_{g_2})$:*

- *Individuals will diversify in response to the subsidy iff they select θ' in the zero-subsidy counterfactual*
- *Across all agents, the number of θ-type initiations increases in response to the subsidy*
- *Across all agents, there is no change to the number of θ'-type initiations in response to the subsidy*

(b) ***(Corner Solution: Comparative Statics without Substitution)*** *Define $\bar{c_\theta}$ as the level of c_θ such that $S_\theta = 0$ across all levels of $S_{\theta'}$, τ, and I. Define $\bar{c_{\theta'}}$ analogously.*[28]

Fix baseline costs $c^0 = (c^0_\theta, c^0_{\theta'})$ and define the reference thresholds $\tau^+_{g_1}(c^0)$, $\tau^+_{g_2}(c^0)$ as in part (a). Choose and hold fixed a subsidy $\tau^\star \in \big(\tau^+_{g_1}(c^0),\, \tau^+_{g_2}(c^0)\big)$.

Each agent experiences a shock to the effort costs of initiating a relationship with one type. For each agent k, the post-shock cost pair is $(c^k_\theta, c^k_{\theta'}) \in \{(c^1_\theta, c^0_{\theta'}),\ (c^0_\theta, c^1_{\theta'})\}$, with $c^1_\theta > \bar{c}_\theta$ and $c^1_{\theta'} > \bar{c}_{\theta'}$. That is, the effort cost to initiate a relationship with one type remains fixed, while the effort cost to initiate with the other type is now prohibitive (the type of shock that the agent experiences may vary within and across (g_1, g_2)). Now we analyze behavior at the same *$\tau = \tau^\star$; we do not recompute τ^+_g under c^1.*

Then, even if the shares of agents experiencing the two cost shocks are equivalent, and even if $S^*_\theta(0) = S^*_{\theta'}(0)$ and $I^*_{g_1}(0) = I^*_{g_2}(0)$:

- *Across all agents, it is possible that there is no difference in the relative aggregate change in initiations with the θ-types and θ'-types*

All model proofs are in Appendix Section F.2.

By assumption, a sufficiently large subsidy induces diversity in initiations as long as both types are sufficiently productive in the domains in which they have an advantage, and as long as

[27] i.e., there exists a space $D = \{I \in [0,1] : 2I > I^*(0)\} \neq \emptyset$.

[28] Let $\mathscr{T} \subset \mathbb{R}$ denote the support of the subsidy τ, and define $p_{\min} := \inf_{\tau \in \mathscr{T}} \big(p^I - \tau\big)$. Then:

$$\bar{c_\theta} = \sup_{g \in \{g_1, g_2\}} \sup_{s' \in \{0,1\}} \sup_{I \in [0,1]} \big[\lambda^g_Y/\lambda^g_V \big(\mathbb{Y}(1, s', I) - \mathbb{Y}(0, s', I)\big) \ +\ \big(\mathbb{V}(1, s', I) - \mathbb{V}(0, s', I)\big) - (\lambda^g_Y/\lambda^g_V) p_{\min} I\big].$$

women value both types of returns. Proposition 6.1(a) shows that the type whose returns are more sensitive to financial investment requires a lower subsidy to induce new initiations. Thus, a fixed 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.

This insight enables me to use the experiment to ask if the the returns to social interaction with high-SES or low-SES women are more sensitive to financial investment, and what this implies about network formation patterns within and outside of the experiment. Recall that, in the model, the returns to interacting with θ-type women are more sensitive to financial investment. Then, if:

1. $\theta = H$ and $\theta' = L$: high prices of social interaction constrain cross-SES linking and contribute to income-based homophily
2. $\theta = L$ and $\theta' = H$: high prices of social interaction constrain within-SES linking and enable more economic connectedness
3. Neither type are sensitive to financial investment: high prices of social interaction do not contribute to the economic composition of networks

Proposition 6.1(b) highlights an important counterfactual: even if marginal returns to investment are higher with one type, a subsidy may fail to shift behavior when the margin of substitution is shut down. This arises because, if agents are trading off initiating relationships with anyone versus no one, *all* relationships may be beneficial even without investment. Evaluating this counterfactual can reveal if prices are a *feasibility* constraint, or if, as the model proposes, the trade-off between initiating relationships with high-SES and low-SES links changes across the price domain, driving differences in network composition across prices.

6.2.3 Mapping Results to the Model

Table 12 presents the first-stage results as a set of empirical tests of the model predictions (Appendix Section F.1 outlines the relationship between the model predictions and empirical tests in more detail). The invitation response patterns provide evidence that high- and low-SES relationships are distinct goods, where each type provides unique benefits that are both valuable, 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 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.

Table 12: Model Tests

Returns to Economic Diversity			
Test	**Coefs.**	**Interpretation**	**Table**
✓ (1)$\beta_1^{H\&L} > \beta_1^{L\text{-}only}$, and	0.202***	✓ Agents value the benefits of both types	Table 2, Col. 2
✓ (2) $\beta_1^{H\&L} > \beta_1^{H\text{-}only}$	0.128**	✓ Subsidies induce diversification	Table 2, Col. 3

Understanding Homophily			
Test	**Coefs.**	**Interpretation**	**Table**
× $\beta_2 > \beta_4$	−0.052	× Effort costs constrain cross-SES linking	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[29]	Table 1, Col. 2/3

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 vary by the nature of the tie. In my setting, within-SES links yield large mental health benefits, while cross-SES links yield large benefits for food security. If people value both food security and mental health, this implies that people also value economic *diversity* in 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, without any evidence of displacing the returns to social relationships from anyone else in the sample.

Third, I show 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 ways that can even reinforce existing inequities. This insight into social network formation has important implications for development policy. While evidence shows that group-based development programs—a common tool to execute development policy—have important exogenous economic impacts (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. A promising avenue for future research is to test, when introducing interventions in which women form groups themselves, if providing lower-income women with the financial means to engage in valuable social activities can help them to be included.

Furthermore, 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). My experiment, which generates large positive treatment effects by helping loose acquaintances spend time together in a meaningful way, suggests that the absence of social interaction effects in many group-based interventions may not be surprising since these interventions often do little more socially than bring people to the same place. Without understanding and removing specific barriers to *meaningful* social interaction, group-based interventions may be ineffective at generating social connection, especially for the most vulnerable people who are systematically left out.[30] These results suggest that, without measuring the distributional impacts of group-based interventions and without being deliberately inclusive, development programs may ignore or deepen social and economic vulnerability of the most marginalized populations. Furthermore, including the most marginalized groups is a virtuous cycle: social connection alone generates large positive treatment effects on economic and psychological well-being, which, when paired with other development initiatives, has theoretical grounds to significantly improve their efficiency. *Inclusive* development policy may require specific efforts to help marginalized community members build and access social capital.

[30] The nature of my experiment may also explain why my results are inconsistent with the "rotten kin" theorem. Several papers show that social pressure to share income can distort investment and labor supply decisions (Jakiela and Ozier, 2016; Carranza et al., 2022; Dillon et al., 2021; Swanson, 2025). Contrarily, in my setting, social relationships that are built specifically by sharing resources (food in shared meals) improve investment, savings, and business decisions. This may be because I select a sample of women with sparse and weak ties, for whom the marginal network interaction may be supportive rather than extractive. Alternatively, it may be because the specific types of social interactions that my experiment encourages enforce reciprocal, mutually-beneficial relationships, which is evidenced by high rates of meal-sharing reciprocation in the experiment.

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Online Supplementary Material

Appendix A Background and Cultural Context

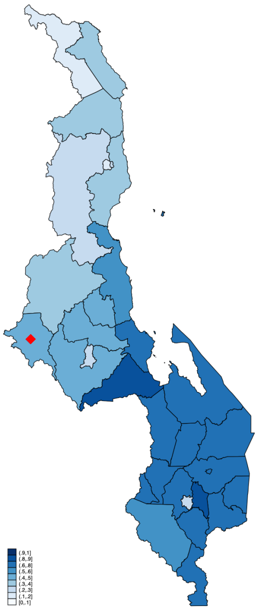


Figure A.1: Percent of Women Who Never Left Their Home Village (Malawi DHS, 2015)

	(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

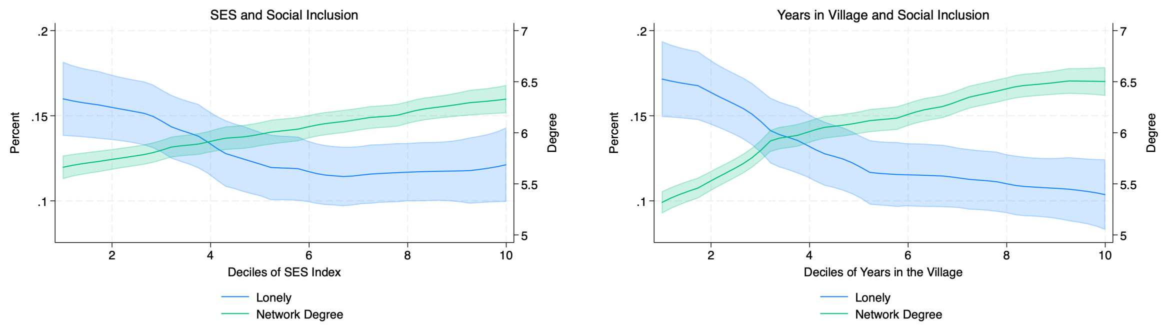


Figure A.2: Social Inclusion – by SES and Years in the Village

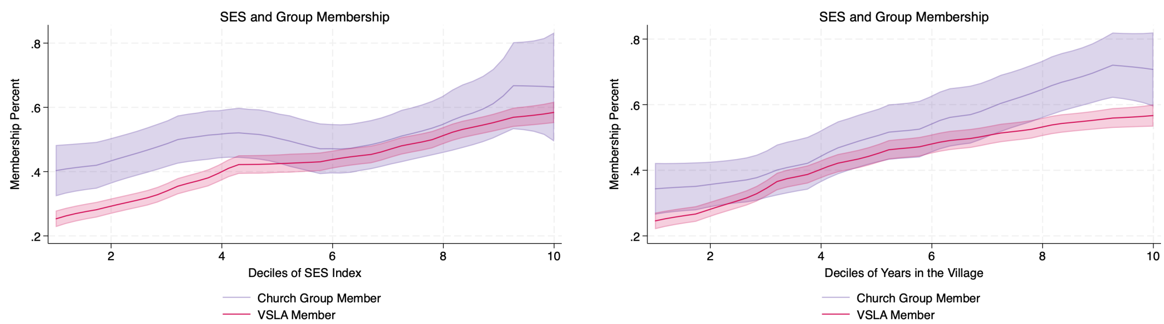
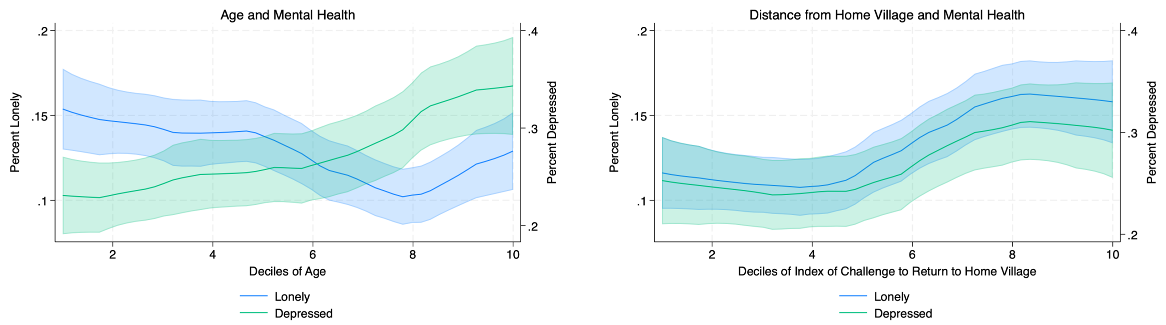


Figure A.3: Group Membership – by SES and Years in the Village

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

Table A.3: Closeness of a Conversation Across Settings

	(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.

* $p < 0.10$, ** $p < 0.05$, *** $p < .01$

Figure A.5: Preferred versus Actual Meal-Sharing

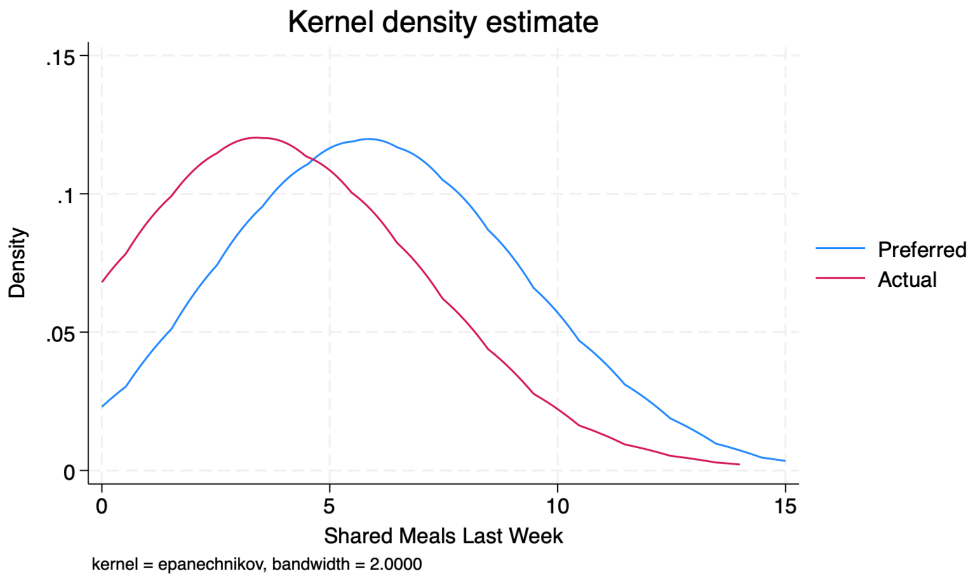


Figure A.6: Pluralistic Ignorance

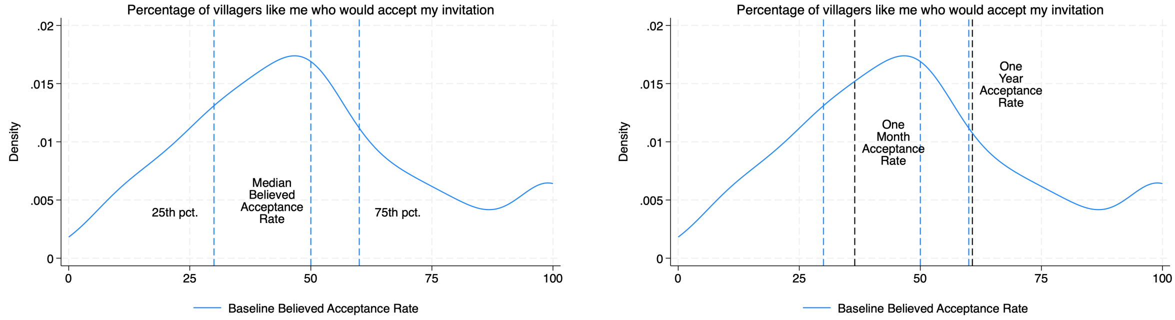


Figure A.7: Religion-Based Village-Level Homophily

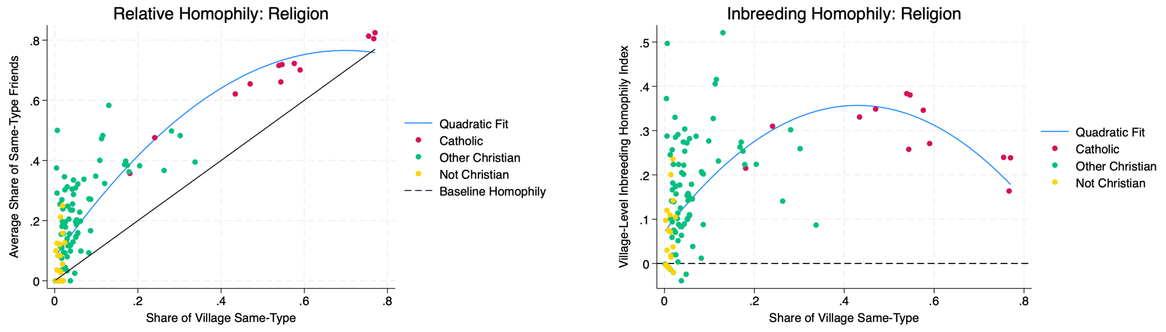


Figure A.8: Asset-Based Village-Level Homophily

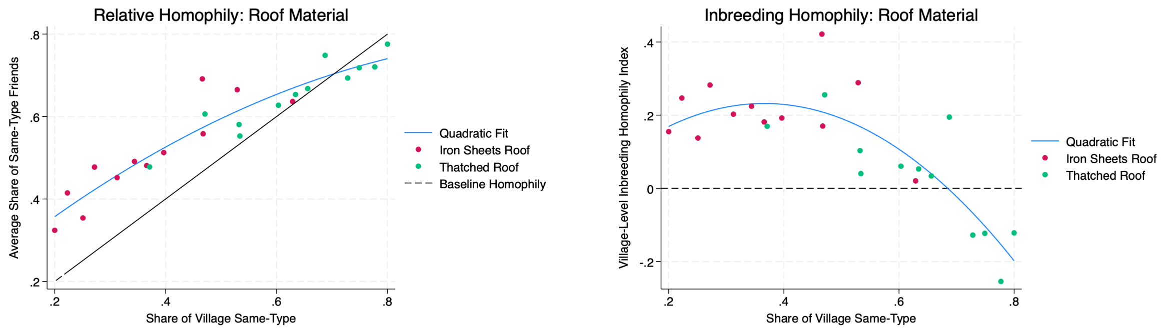


Figure A.9: Education-Based Village-Level Homophily

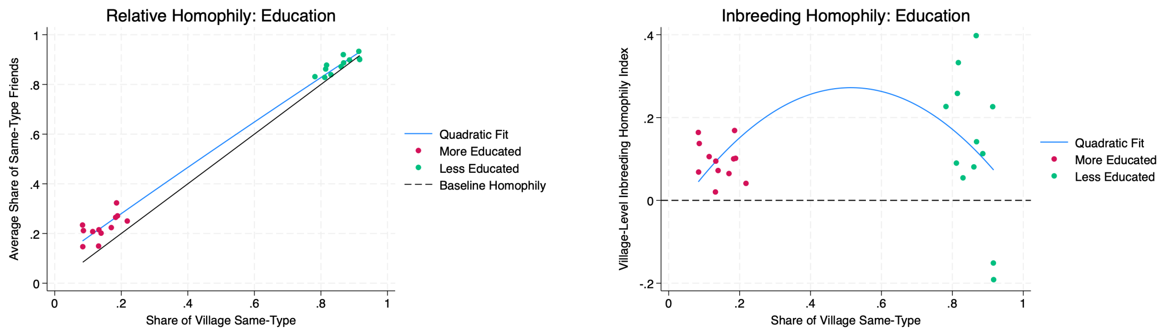
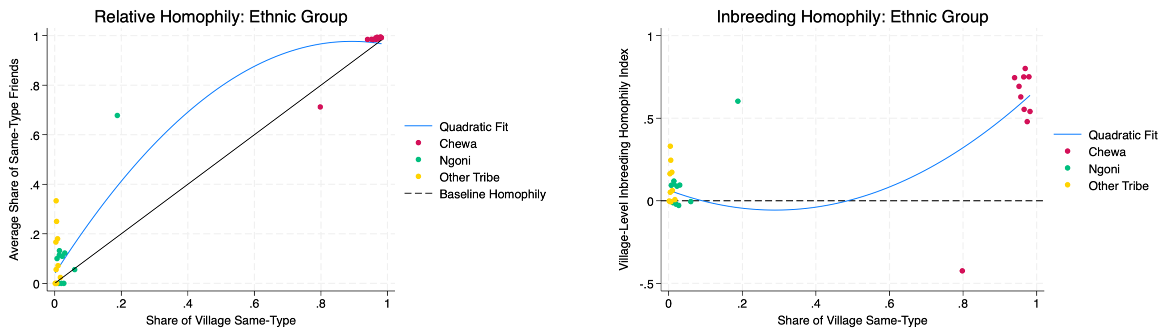


Figure A.10: Ethnicity-Based Village-Level Homophily



A.1 Business Capital Index Construction

I create a proxy for business capital in the following way: each enumerator estimates the fixed costs of establishing each business type. I regress the within-enumerator rank of fixed costs on an indicator for the business type, and use the coefficient as a measure of business capital, controlling for the enumerators' stated confidence in their response. Enumerators come from within these communities, and several have family members or friends engaged in these types of businesses. Furthermore, they have a fairly high degree of agreement about the relative rankings of different business types.

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

A.3 Variables Construction Details

Food Security Index

For each index, I take the first component of the PCA of the variables entering the index. Each index is then normalized into standard deviation units from the Control mean.

Midline Food Security Index Variables:

1. How many days in the past month did you eat fish? + How many days in the past month did you eat eggs?
2. On a typical day in the past month, how many meals did you eat?

Endline Food Security Index Variables:

1. How many days in the past month did you eat fish? + How many days in the past month did you eat eggs? + How many days in hte past month did you eat meat?
2. On a typical day in the past month, how many meals did you eat?
3. How many days during the most challenging period this past growing season did you eat fish? + How many days during the most challenging period this past growing season did you eat eggs? + How many days during the most challenging period this past growing season did you eat meat?
4. On a typical day during the most challenging period this past growing season, how many meals did you eat?

I define the lean season as the time during the past growing season where participants report facing 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. The endline survey is conducted right after the harvest, so food security measured over the past month represents the theoretical best time for food security. 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.

Strength of Ties

These five variables entering the strength of ties measure are the following:

1. How comfortable would you feel to trust [NAME] with your thoughts and feelings? *(Five-point Likert scale).*
2. How easy is it for you to laugh with [NAME] when you are together? *(Five-point Likert scale).*
3. "Who do you share secrets with?" *(Binary, =1 if selects name of given tie).*

4. Inclusion-of-Self in Others Score *(Visual measure of relationship "closeness" on a 7 point scale).*
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 is certainly reciprocated).*

A.4 Text Analysis

In the endline survey, enumerators ask Inviters about their experience with each Guest who they sent an invitation to; and ask Guests about their experience with each Inviter who they received an invitation from. Enumerators also ask all respondents about their overall opinions of the program. I conduct a text analysis from these text responses. Across all of the possible text response variables, I compute the cosine similarity of the text response to a set of key-words. I code each row as falling within a category if the cosine similarly is ≥ 0.6.

If text is similar to multiple key phrases, they are assigned a category based on the following priority ordering: (1) strong relationships, (2) any other relationships, (3) no relationship, (4) other.

The breakdown of text analysis categorizations is the following:

Table A.6: Text Analysis

	Strong Relationship	Any Relationship	No Contact	Other
Inviters	229	308	265	125
Guests	153	251	275	73

Phrases indicating "strengthened relationships":

"closer now", "grew closer", "became close", "we talk often", "grew close", "closer together", "we are close now", "stronger friendship", "stronger relationship", "closer than before", "friendship grew", "our bond", "bond grew", "bond stronger", "love", "relationship improved", "friendship improved", "we are still friends", "we are good friends", "we continue", "we keep", "we still", "persist", "more open", "united", "support each other", "encourage each other", "help each other", "sharing continues", "sharing food regularly", "continued sharing", "always together", "keep meeting", "continue sharing" , "we still see each other", "we still meet", "we visit each other", "we visit often", "we still visit", "we are in touch", "we keep in touch", "we remain friends", "we are friends", "we are close", "we became closer", "our relationship is good", "relationship continues", "she helps me", "he helps me", "we help one another", "we support one another", "she encourages me", "he encourages me", "we encourage one another", "we are still together", "always together", "still together", "friendship continues", "friendship persists", "we remain close", "we became united", "we are still united", "relationship is strong", "friendship is strong", "friendship remains", "relationship remains", "bonds much stronger", "encouraging each other", "increases our relationship", "we are friends", "strengthen our relationship", "friendship very strong", "share meals sometimes"

Phrases indicating "any relationship":

"became friends", "made a friend", "started talking", "she visits", "he visits", "now friends", "friends now", "our bond", "we get along", "invited to my home", "we met and chat", "visited me", "went to her house", "we know each other now", "we chat", "we chatted", "chatting",

”talked”, ”discussed”, ”greeted each other”, ”we still chat”, ”conversation”, ”just chatted”, ”just chatting”, ”chat here and there”, ”i forgot what we discussed”, ”share food”, ”share meals”, ”first time we met”, ”she came for the first time”, ”she introduced herself”, ”he introduced himself”, ”introduced me”, ”we started as friends”, ”began visiting”, ”share things”, ”shared with me”, ”sharing my meal”, ”we talked about”, ”we ate together”, ”discussing about”, ”we do share meals”, ”it has made them to know each other”, ”we talked more”, ”we really talked”

Phrases indicating “nothing happened”:

”nothing happened”, ”nothing”, ”didn’t happen”, ”did not happen”, ”she never came”, ”he never came”, ”we didn’t meet”, ”we did not meet”, ”didn’t share”, ”did not share”, ”never visited”, ”no friendship”, ”didn’t invite”, ”not invited”, ”never invited”, ”did not receive invitation”, ”she refused”, ”he refused”, ”we haven’t met”, ”never met”, ”don’t know her”, ”don’t know him”, ”don’t know her”, ”don’t know him”, ”moved away”, ”she moved”, ”he moved”, ”we have never meet”, ”can’t recall being invited”, ”can’t remember being invited”, ”i wasn’t invited”, ”no invitation”, ”invited but didn’t go”, ”couldn’t make it”, ”wasn’t available”, ”missed the meeting”, ”can’t recall being invited”, ”did hear I was invited”, ”don’t remember the person”, ”name is new”, ”moved to another village”, ”moved away”, ”at a funeral”, ”did not manage to go”, ”wasn’t invited by her”, ”never received any invitation”, ”did not receive invitation”, ”never discussed anything concerning this program”, ”never turned up”, ”never showed up”, ”didn’t show up”, ”she refused to come”, ”he refused to come”, ”she denied”, ”he denied”, ”she ignored” , ”he ignored” , ”not available” , ”we never interacted”, ”we never connected”, ”did not show up”, ”we have never eaten”, ”we did not talk”,”meeting was canceled”, ”never met”, ”she didnt find her”, ”did not invite me”, ”never invites me”, ”never invited me”

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 (0.062)	-0.094 (0.060)	-0.048 (0.066)	0.072	0.026	-0.046
Years in Village	-0.054 (0.045)	-0.075 (0.055)	-0.115 (0.061)	0.021	0.061	0.040
Chewa	-0.085 (0.094)	0.049 (0.066)	-0.034 (0.077)	-0.134	-0.051	0.083
Number of Children	0.005 (0.048)	-0.077 (0.063)	-0.115 (0.058)	0.082	0.120	0.038
SES Index (Z-Score)	-0.320 (0.041)	-0.339 (0.037)	-0.333 (0.036)	0.019	0.013	-0.006
Consuming Own Maize	-0.112 (0.076)	-0.031 (0.065)	-0.126 (0.068)	-0.081	0.013	0.095
VSLA	-0.125 (0.058)	0.060 (0.069)	0.045 (0.072)	-0.185	-0.170*	0.015
Rented Acres of Farmland	-0.150 (0.054)	0.007 (0.064)	-0.076 (0.052)	-0.156	-0.073	0.083
Rented Gardens	-0.011 (0.060)	-0.063 (0.054)	0.136 (0.067)	0.051	-0.147	-0.198**
Yearly Home Visits	-0.002 (0.059)	0.118 (0.071)	-0.074 (0.053)	-0.121	0.071	0.192
Social Network Size	-0.020 (0.054)	-0.027 (0.068)	0.045 (0.063)	0.008	-0.064	-0.072*
Husband in Social Network Size	-0.011 (0.063)	0.044 (0.057)	-0.034 (0.057)	-0.055	0.023	0.078
Listed in Others' Networks	-0.057 (0.063)	-0.057 (0.059)	0.027 (0.067)	0.000	-0.083	-0.083
% Network High-SES	-0.053 (0.071)	0.038 (0.080)	-0.088 (0.088)	-0.092	0.035	0.126
% Network Same Roof Material	0.025 (0.060)	0.076 (0.056)	0.082 (0.059)	-0.051	-0.057	-0.006
UCLA-3 Score	0.124 (0.064)	0.124 (0.068)	0.051 (0.058)	0.001	0.073	0.072
Average Strength of Network Links	-0.024 (0.069)	0.020 (0.053)	-0.016 (0.062)	-0.044	-0.008	0.036
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	-0.042	0.013
	(0.068)	(0.041)	
Years in Village	-0.197	-0.099	-0.097
	(0.044)	(0.029)	
Chewa	0.047	-0.026	0.073
	(0.059)	(0.065)	
Number of Children	-0.108	-0.057	-0.051
	(0.054)	(0.033)	
SES Index (Z-Score)	-0.372	-0.359	-0.014
	(0.039)	(0.027)	
Consuming Own Maize	-0.020	-0.085	0.065
	(0.072)	(0.048)	
VSLA	-0.053	-0.053	0.000
	(0.064)	(0.047)	
Rented Acres of Farmland	-0.093	-0.079	-0.014
	(0.042)	(0.038)	
Rented Gardens	-0.009	0.024	-0.033
	(0.058)	(0.038)	
Moved for Marriage	-0.063	-0.089	0.026
	(0.069)	(0.055)	
Yearly Home Visits	0.016	-0.003	0.019
	(0.050)	(0.035)	
Social Network Size	0.008	-0.033	0.041
	(0.064)	(0.040)	
Husband in Social Network Size	0.055	0.037	0.018
	(0.054)	(0.038)	
Listed in Others' Networks	-0.044	-0.015	-0.029
	(0.055)	(0.045)	
% Network High-SES	-0.050	-0.012	-0.038
	(0.084)	(0.070)	
% Network Same Roof Material	0.082	0.079	0.003
	(0.057)	(0.034)	
UCLA-3 Score	0.031	0.071	-0.040
	(0.042)	(0.041)	
Average Strength of Network Links	-0.069	-0.014	-0.054
	(0.056)	(0.041)	
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) Mixed Bundle		(2) 1 Low-SES Only		(3) >= 2 Low-SES Only		(4) 1 High-SES Only		(5) >= 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).
* $p < .1$, ** $p < 0.05$, *** $p < 0.01$

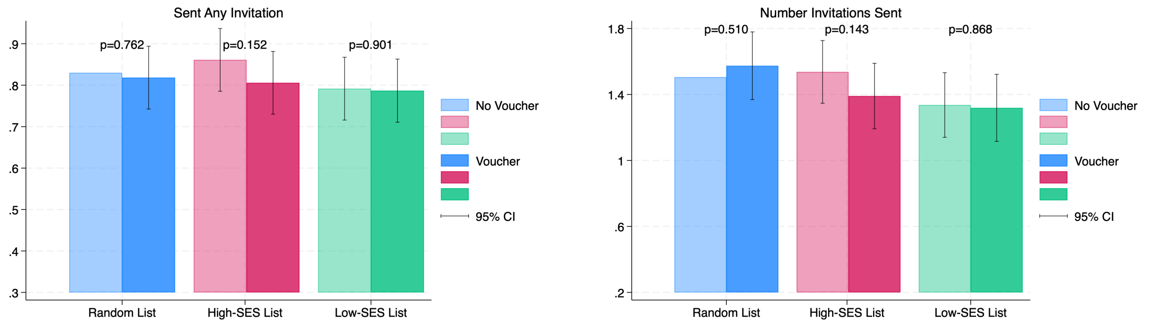


Figure C.1: First Stage Invitation Sending

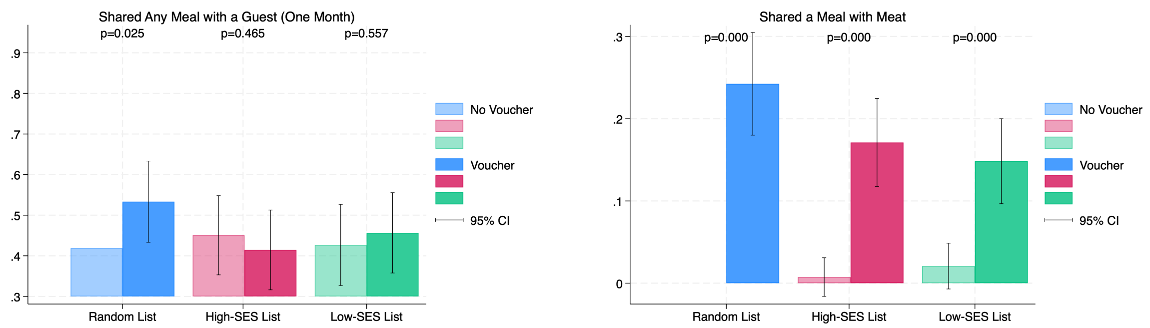


Figure C.2: First-Stage Meal Sharing

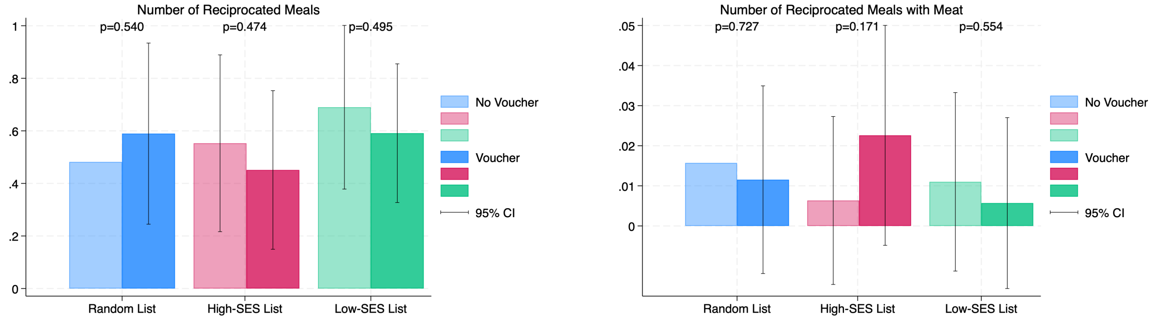


Figure C.3: First-Stage Meal Sharing Reciprocation

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	(1)-(2)	T-test Difference (1)-(3)	(2)-(3)
Discussed with an Invitee: Marriage/Romance	0.134 (0.020)	0.137 (0.020)	0.145 (0.020)	-0.004	-0.012**	-0.008
Discussed with an Invitee: Childcare	0.108 (0.017)	0.109 (0.017)	0.095 (0.017)	-0.001	0.013	0.014
Discussed with an Invitee: Other Family	0.101 (0.016)	0.099 (0.016)	0.080 (0.015)	0.002	0.021	0.019
Discussed with an Invitee: Social Relationships	0.134 (0.017)	0.096 (0.015)	0.133 (0.017)	0.037*	0.001	-0.036
Discussed with an Invitee: Professional Relationship	0.028 (0.010)	0.046 (0.011)	0.015 (0.006)	-0.018	0.013	0.031
Discussed with an Invitee: Business Resources	0.043 (0.011)	0.033 (0.008)	0.008 (0.004)	0.010	0.035	0.025**
Discussed with an Invitee: Finding Piecework	0.033 (0.009)	0.046 (0.011)	0.070 (0.012)	-0.013	-0.037**	-0.024
Discussed with an Invitee: Growing Businesses	0.040 (0.009)	0.036 (0.010)	0.025 (0.008)	0.005	0.015	0.010
Discussed with an Invitee: Finding Loans	0.015 (0.006)	0.008 (0.004)	0.018 (0.006)	0.007	-0.002	-0.010
Discussed with an Invitee: Agriculture	0.116 (0.016)	0.086 (0.013)	0.080 (0.016)	0.030	0.036	0.006
Discussed with an Invitee: Stories from our Past	0.038 (0.012)	0.033 (0.009)	0.023 (0.008)	0.005	0.015	0.010
Discussed with an Invitee: Stories from the Village	0.058 (0.013)	0.048 (0.012)	0.055 (0.013)	0.010	0.003	-0.007
Discussed with an Invitee: Discussions about Norms	0.030 (0.008)	0.020 (0.007)	0.028 (0.008)	0.010	0.003	-0.007
Discussed with an Invitee: Health	0.045 (0.012)	0.018 (0.007)	0.020 (0.007)	0.028	0.025	-0.002
Discussed with an Invitee: Religion	0.020 (0.007)	0.008 (0.004)	0.023 (0.008)	0.013	-0.002	-0.015
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.[31] 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:

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

[31] 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.[32] 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,

[32] 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.

C.2 Economic Diversity-Weighted Network Churn

My measure of economic diversity-weighted network churn is:

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

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 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 values for 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 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.

Table C.9: $\alpha^* := \alpha$ 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.

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. 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.

Appendix D Second Stage Results: Additional Figures and Tables

Table D.1: Treatment Effects on Food Security Index Components

	(1)	(2)	(3)	(4)	(5)	(6)
	Lean Season Protein Consumption	Last Month Protein Consumption		Lean Season Daily Meals	Last Month Daily Meals	
	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
	(0.278)	(0.171)	(0.281)	(0.030)	(0.031)	(0.094)
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
	(0.335)	(0.216)	(0.355)	(0.037)	(0.037)	(0.238)
Inviter with Low-SES Guest List	0.387	-0.182	0.305	0.079**	-0.039	-0.049
	(0.320)	(0.200)	(0.338)	(0.039)	(0.038)	(0.074)
Inviter with Random Guest List	0.698**	0.414*	0.248	0.035	0.005	-0.019
	(0.348)	(0.223)	(0.365)	(0.037)	(0.036)	(0.065)
Panel C: Inviter Sub-Group Treatment Effects						
High-SES without Voucher	0.718*	0.139	0.938**	0.111**	0.033	0.465
	(0.403)	(0.264)	(0.458)	(0.047)	(0.046)	(0.451)
High-SES with Voucher	0.943**	0.265	1.014**	0.080*	0.031	0.074
	(0.412)	(0.272)	(0.432)	(0.046)	(0.046)	(0.074)
Low-SES without Voucher	0.366	-0.158	-0.135	0.094**	-0.027	-0.051
	(0.349)	(0.240)	(0.396)	(0.047)	(0.045)	(0.095)
Low-SES with Voucher	0.406	-0.210	0.745*	0.064	-0.050	-0.047
	(0.408)	(0.248)	(0.434)	(0.050)	(0.047)	(0.119)
Random without Voucher	0.734*	0.422	0.083	0.047	-0.021	-0.001
	(0.418)	(0.271)	(0.463)	(0.046)	(0.045)	(0.077)
Random with Voucher	0.657	0.407	0.403	0.024	0.029	-0.028
	(0.450)	(0.293)	(0.458)	(0.046)	(0.044)	(0.080)
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	0.154	0.072*	0.056*	0.703	0.059*	0.219
Pooled: Voucher vs. No Voucher	0.819	0.895	0.166	0.382	0.801	0.488
High-SES: Voucher vs. No Voucher	0.621	0.689	0.886	0.566	0.965	0.359
Low-SES: Voucher vs. No Voucher	0.921	0.851	0.069*	0.590	0.652	0.979
Random: Voucher vs. No Voucher	0.880	0.966	0.569	0.677	0.325	0.751

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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.

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)	(0.047)	(0.048)	(0.051)	(0.048)	(0.040)	(0.045)	(0.053)	(0.051)	(0.044)	(0.045)	(0.047)	(0.048)	(0.047)	(0.046)	(0.037)	(0.042)	(0.045)	(0.051)
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)	(0.056)	(0.057)	(0.059)	(0.061)	(0.059)	(0.049)	(0.057)	(0.063)	(0.063)	(0.053)	(0.055)	(0.057)	(0.059)	(0.056)	(0.055)	(0.046)	(0.053)	(0.054)	(0.062)
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
	(0.062)	(0.057)	(0.058)	(0.057)	(0.062)	(0.059)	(0.052)	(0.054)	(0.065)	(0.064)	(0.055)	(0.054)	(0.059)	(0.057)	(0.057)	(0.057)	(0.046)	(0.050)	(0.055)	(0.060)
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)	(0.060)	(0.058)	(0.060)	(0.061)	(0.051)	(0.054)	(0.064)	(0.063)	(0.053)	(0.055)	(0.057)	(0.060)	(0.057)	(0.056)	(0.047)	(0.050)	(0.054)	(0.063)
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	0.231	0.445	0.189	0.837	0.012**	0.957	0.025**	0.902	0.957	0.049**	0.108	0.495	0.268	0.316	0.916	0.569	0.013**	0.120	0.069*
Pooled: Voucher vs. No Voucher	0.622	0.481	0.366	0.991	0.804	0.727	0.535	0.553	0.506	0.765	0.338	0.486	0.089*	0.643	0.478	0.694	0.563	0.481	0.555	0.444

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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.

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)	(0.286)	(0.025)	(0.025)	(0.023)	(0.026)	(0.015)	(0.017)	(0.009)	(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
	(0.340)	(0.354)	(0.030)	(0.031)	(0.028)	(0.031)	(0.018)	(0.020)	(0.010)	(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
	(0.352)	(0.344)	(0.031)	(0.030)	(0.028)	(0.030)	(0.019)	(0.020)	(0.011)	(0.005)
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
	(0.352)	(0.348)	(0.030)	(0.031)	(0.028)	(0.031)	(0.019)	(0.019)	(0.010)	(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	0.056*	0.539	0.028**	0.949	0.126	0.285	0.789	0.599	0.225
Pooled: Voucher vs. No Voucher	0.664	0.977	0.160	0.807	0.197	0.125	0.618	0.147	0.842	0.858

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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.

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	0.010	0.017	0.016***	0.020
	(0.020)	(0.015)	(0.027)	(0.006)	(0.017)
Panel B: Pooled Inviter by Guest List Treatment Effects					
Inviter with High-SES Guest List	-0.016	0.012	0.014	0.014*	0.051**
	(0.024)	(0.019)	(0.033)	(0.008)	(0.022)
Inviter with Low-SES Guest List	0.004	0.006	-0.028	0.015**	0.005
	(0.024)	(0.018)	(0.033)	(0.007)	(0.021)
Inviter with Random Guest List	0.003	0.011	0.066**	0.019**	0.001
	(0.024)	(0.019)	(0.033)	(0.008)	(0.021)
Panel C: Inviter Sub-Group Treatment Effects					
High-SES without Voucher	-0.015	-0.013	0.012	0.021**	0.075**
	(0.030)	(0.022)	(0.040)	(0.010)	(0.030)
High-SES with Voucher	-0.024	0.034	0.007	0.005	0.025
	(0.030)	(0.025)	(0.042)	(0.010)	(0.027)
Low-SES without Voucher	0.010	0.008	-0.020	0.019**	0.008
	(0.030)	(0.023)	(0.042)	(0.010)	(0.027)
Low-SES with Voucher	-0.001	0.004	-0.034	0.012*	0.002
	(0.030)	(0.022)	(0.040)	(0.007)	(0.025)
Random without Voucher	0.019	0.010	0.078**	0.025**	-0.017
	(0.029)	(0.024)	(0.039)	(0.011)	(0.025)
Random with Voucher	-0.014	0.011	0.051	0.012	0.020
	(0.029)	(0.023)	(0.041)	(0.009)	(0.027)
Observations	1528	1528	1528	1528	1528
Control Mean	0.776	0.084	0.478	0.011	0.103
P-values:					
Pooled: High-SES vs. Low-SES Guest List	0.406	0.747	0.220	0.873	0.041**
Pooled: Voucher vs. No Voucher	0.365	0.342	0.547	0.081*	0.681
High-SES: Voucher vs. No Voucher	0.789	0.092*	0.920	0.163	0.146
Low-SES: Voucher vs. No Voucher	0.762	0.874	0.777	0.460	0.821
Random: Voucher vs. No Voucher	0.320	0.951	0.556	0.347	0.216

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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.

Table D.5: Treatment Effects on Potential for Risk-Sharing in the Network

	(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
	(0.096)	(0.114)	(0.095)	(0.113)	(0.020)	(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
	(0.118)	(0.143)	(0.118)	(0.143)	(0.024)	(0.017)
Inviter with Low-SES Guest List	0.054	-0.109	-0.008	-0.075	-0.010	0.019
	(0.116)	(0.139)	(0.114)	(0.139)	(0.024)	(0.019)
Inviter with Random Guest List	0.144	0.203	0.049	0.199	-0.027	-0.000
	(0.114)	(0.142)	(0.113)	(0.142)	(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
	(0.142)	(0.184)	(0.147)	(0.185)	(0.029)	(0.022)
High-SES with Voucher	0.056	0.291*	0.009	0.315*	-0.004	-0.016
	(0.143)	(0.170)	(0.139)	(0.172)	(0.028)	(0.020)
Low-SES without Voucher	0.146	-0.137	0.078	-0.088	-0.030	0.023
	(0.139)	(0.177)	(0.136)	(0.176)	(0.028)	(0.024)
Low-SES with Voucher	-0.035	-0.082	-0.115	-0.063	0.012	0.014
	(0.142)	(0.166)	(0.141)	(0.168)	(0.030)	(0.023)
Random without Voucher	0.281**	0.050	0.181	0.016	-0.058**	0.008
	(0.142)	(0.162)	(0.139)	(0.163)	(0.027)	(0.023)
Random with Voucher	0.014	0.351*	-0.070	0.379**	0.003	-0.008
	(0.133)	(0.187)	(0.135)	(0.190)	(0.029)	(0.020)
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	0.471	0.028**	0.506	0.036**	0.905	0.078*
Pooled: Voucher vs. No Voucher	0.025**	0.141	0.034**	0.134	0.043**	0.450
High-SES: Voucher vs. No Voucher	0.304	0.348	0.316	0.389	0.689	0.721
Low-SES: Voucher vs. No Voucher	0.249	0.780	0.213	0.903	0.203	0.733
Random: Voucher vs. No Voucher	0.080*	0.143	0.106	0.085*	0.049**	0.490

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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.

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)
	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)	(0.026)	(0.024)	(3.557)	(10.582)
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
	(0.028)	(0.032)	(0.028)	(4.594)	(13.432)
Inviter with Low-SES Guest List	-0.041	-0.051	-0.035	-6.361	-16.815
	(0.027)	(0.033)	(0.029)	(4.167)	(12.334)
Inviter with Random Guest List	-0.021	-0.011	-0.043	6.951	-16.911
	(0.028)	(0.032)	(0.026)	(4.263)	(12.484)
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)	(0.035)	(5.302)	(15.059)
High-SES with Voucher	0.002	-0.014	-0.033	4.537	-5.289
	(0.036)	(0.038)	(0.033)	(6.045)	(17.842)
Low-SES without Voucher	-0.066**	-0.062	-0.045	-4.854	-15.464
	(0.033)	(0.041)	(0.033)	(5.035)	(15.015)
Low-SES with Voucher	-0.016	-0.040	-0.025	-7.861	-18.196
	(0.032)	(0.040)	(0.039)	(4.952)	(14.336)
Random without Voucher	0.019	0.002	-0.047	9.074*	-10.194
	(0.034)	(0.039)	(0.030)	(5.127)	(14.108)
Random with Voucher	-0.061*	-0.024	-0.039	4.700	-23.892
	(0.033)	(0.039)	(0.031)	(5.414)	(16.281)
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	0.450	0.222	0.590	0.114	0.695
Pooled: Voucher vs. No Voucher	0.871	0.898	0.979	0.915	0.906
High-SES: Voucher vs. No Voucher	0.375	0.884	0.494	0.206	0.502
Low-SES: Voucher vs. No Voucher	0.160	0.638	0.642	0.583	0.863
Random: Voucher vs. No Voucher	0.037**	0.570	0.786	0.482	0.429

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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.

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	1.225	-1.235
	(0.030)	(0.028)	(0.023)	(0.944)	(1.663)
Panel B: Pooled Inviter by Guest List Treatment Effects					
Inviter with High-SES Guest List	-0.016	-0.014	-0.046	0.943	-2.043
	(0.037)	(0.034)	(0.028)	(1.165)	(1.831)
Inviter with Low-SES Guest List	-0.048	-0.034	-0.043	0.824	-1.640
	(0.037)	(0.034)	(0.028)	(1.068)	(2.139)
Inviter with Random Guest List	-0.051	0.005	-0.010	1.901	-0.051
	(0.037)	(0.034)	(0.029)	(1.328)	(1.775)
Panel C: Inviter Sub-Group Treatment Effects					
High-SES without Voucher	-0.060	-0.041	-0.065*	0.993	-0.765
	(0.045)	(0.043)	(0.036)	(1.379)	(2.264)
High-SES with Voucher	0.029	0.007	-0.027	0.877	-3.590*
	(0.045)	(0.041)	(0.035)	(1.542)	(2.163)
Low-SES without Voucher	-0.054	-0.088**	-0.095***	0.086	-3.039
	(0.045)	(0.042)	(0.036)	(1.066)	(2.279)
Low-SES with Voucher	-0.044	0.020	0.009	1.600	-0.319
	(0.046)	(0.041)	(0.034)	(1.496)	(2.677)
Random without Voucher	-0.083*	-0.035	-0.034	3.053	-1.782
	(0.045)	(0.042)	(0.037)	(1.986)	(1.887)
Random with Voucher	-0.021	0.044	0.013	0.788	1.787
	(0.047)	(0.042)	(0.035)	(1.148)	(2.363)
Observations	1365	1528	1528	1284	1244
Control Mean	0.490	0.639	0.810	4.346	10.149
P-values:					
Pooled: High-SES vs. Low-SES Guest List	0.387	0.561	0.919	0.924	0.811
Pooled: Voucher vs. No Voucher	0.071*	0.006***	0.010**	0.768	0.407
High-SES: Voucher vs. No Voucher	0.082*	0.326	0.365	0.947	0.259
Low-SES: Voucher vs. No Voucher	0.840	0.023**	0.013**	0.303	0.289
Random: Voucher vs. No Voucher	0.238	0.107	0.270	0.219	0.132

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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.

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**
	(0.027)	(0.027)	(0.027)	(0.025)	(0.026)	(0.028)	(0.027)	(0.028)	(0.026)	(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*
	(0.033)	(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)	(0.032)	(0.032)	(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)	(0.032)	(0.034)	(0.033)	(0.034)	(0.033)	(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
	(0.040)	(0.040)	(0.040)	(0.040)	(0.041)	(0.042)	(0.042)	(0.042)	(0.039)	(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
	(0.040)	(0.038)	(0.038)	(0.037)	(0.041)	(0.040)	(0.039)	(0.041)	(0.040)	(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
	(0.038)	(0.040)	(0.039)	(0.038)	(0.039)	(0.041)	(0.040)	(0.041)	(0.038)	(0.040)
Low-SES with Voucher	-0.015	-0.043	0.031	-0.009	0.026	-0.006	0.001	-0.032	-0.016	-0.043
	(0.038)	(0.040)	(0.040)	(0.039)	(0.041)	(0.042)	(0.040)	(0.042)	(0.039)	(0.042)
Random without Voucher	0.020	-0.102**	0.062	-0.015	0.022	-0.103**	0.001	-0.084**	0.015	-0.129***
	(0.038)	(0.041)	(0.039)	(0.037)	(0.040)	(0.042)	(0.040)	(0.042)	(0.041)	(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)	(0.041)	(0.038)	(0.039)	(0.039)	(0.042)	(0.040)	(0.042)	(0.040)	(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	0.816	0.682	0.768	0.928	0.223	0.227	0.613	0.822	0.808	0.730
Pooled: Voucher vs. No Voucher	0.664	0.012**	0.713	0.277	0.912	0.189	0.951	0.188	0.400	0.330
High-SES: Voucher vs. No Voucher	0.316	0.010**	0.511	0.385	0.392	0.286	0.256	0.596	0.461	0.669
Low-SES: Voucher vs. No Voucher	0.301	0.878	0.471	0.370	0.485	0.889	0.928	0.473	0.822	0.950
Random: Voucher vs. No Voucher	0.349	0.085*	0.339	0.944	0.718	0.168	0.297	0.015**	0.465	0.218

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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.

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 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*
	(0.058)	(0.117)	(0.104)	(0.154)	(0.013)	(0.023)
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
	(0.071)	(0.138)	(0.125)	(0.193)	(0.015)	(0.029)
Inviter with Low-SES Guest List	0.095	0.287**	-0.080	0.111	-0.028*	0.030
	(0.072)	(0.144)	(0.126)	(0.190)	(0.014)	(0.029)
Inviter with Random Guest List	-0.028	0.154	0.032	0.321*	-0.016	0.059**
	(0.068)	(0.145)	(0.125)	(0.195)	(0.015)	(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
	(0.088)	(0.166)	(0.151)	(0.246)	(0.018)	(0.037)
High-SES with Voucher	0.040	0.096	-0.169	0.217	-0.027	0.038
	(0.084)	(0.169)	(0.148)	(0.235)	(0.017)	(0.035)
Low-SES without Voucher	0.078	0.226	-0.094	0.010	-0.031*	-0.010
	(0.088)	(0.169)	(0.152)	(0.235)	(0.017)	(0.033)
Low-SES with Voucher	0.113	0.356*	-0.048	0.212	-0.025	0.069*
	(0.086)	(0.182)	(0.153)	(0.235)	(0.017)	(0.038)
Random without Voucher	-0.014	0.062	0.021	0.161	-0.015	0.069*
	(0.082)	(0.176)	(0.149)	(0.235)	(0.018)	(0.037)
Random with Voucher	-0.042	0.235	0.031	0.476*	-0.016	0.051
	(0.081)	(0.182)	(0.153)	(0.249)	(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	0.382	0.611	0.696	0.780	0.687	0.747
Pooled: Voucher vs. No Voucher	0.915	0.782	0.968	0.195	0.909	0.494
High-SES: Voucher vs. No Voucher	0.901	0.321	0.905	0.645	0.638	0.722
Low-SES: Voucher vs. No Voucher	0.727	0.521	0.786	0.466	0.732	0.059*
Random: Voucher vs. No Voucher	0.749	0.404	0.953	0.275	0.926	0.687

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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.

Table D.11: 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)	(0.011)	(0.014)	(0.011)	(0.019)	(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)	(0.018)	(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
	(0.020)	(0.016)	(0.018)	(0.014)	(0.018)	(0.013)	(0.023)	(0.010)
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)	(0.017)	(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
	(0.024)	(0.019)	(0.022)	(0.018)	(0.021)	(0.017)	(0.026)	(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)	(0.022)	(0.018)	(0.023)	(0.014)	(0.026)	(0.010)
Low-SES without Voucher	0.005	0.030	-0.035*	-0.003	0.019	-0.006	0.006	0.012
	(0.025)	(0.020)	(0.021)	(0.018)	(0.023)	(0.016)	(0.028)	(0.011)
Low-SES with Voucher	0.012	0.045**	0.013	-0.005	-0.014	-0.024	0.017	0.005
	(0.024)	(0.019)	(0.023)	(0.017)	(0.022)	(0.015)	(0.027)	(0.012)
Random without Voucher	-0.028	0.005	-0.029	0.007	0.023	-0.021	-0.014	0.015
	(0.024)	(0.019)	(0.020)	(0.016)	(0.022)	(0.016)	(0.027)	(0.012)
Random with Voucher	-0.020	0.009	-0.002	-0.011	-0.025	-0.022	-0.012	0.013
	(0.022)	(0.020)	(0.020)	(0.017)	(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	0.020**	0.576	0.541	0.211	0.246	0.967	0.103
Pooled: Voucher vs. No Voucher	0.544	0.537	0.213	0.826	0.050*	0.154	0.546	0.814
High-SES: Voucher vs. No Voucher	0.509	0.802	0.490	0.196	0.844	0.178	0.178	0.217
Low-SES: Voucher vs. No Voucher	0.804	0.519	0.062*	0.904	0.218	0.288	0.718	0.640
Random: Voucher vs. No Voucher	0.758	0.882	0.234	0.343	0.064*	0.946	0.951	0.903

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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.

Table D.12: Treatment Effects on Network Meal-Sharing (Hosting) Relationships

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Meals In Total	Meals In Churn	Meals In New	Meals In Dropped	Meals In Maintained	Meals In Transformed In	Meals In Transformed Out
	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year
Panel A: Pooled Inviter Treatment Effects							
All Inviters	0.007	0.281**	0.168***	0.115	-0.170**	0.062	0.053
	(0.080)	(0.114)	(0.057)	(0.074)	(0.070)	(0.063)	(0.047)
Panel B: Pooled Inviter by Guest List Treatment Effects							
Inviter with High-SES Guest List	-0.018	0.215	0.127*	0.091	-0.163*	0.061	0.056
	(0.098)	(0.135)	(0.071)	(0.087)	(0.083)	(0.075)	(0.058)
Inviter with Low-SES Guest List	0.050	0.265*	0.176**	0.085	-0.134	0.038	0.044
	(0.098)	(0.141)	(0.071)	(0.091)	(0.085)	(0.077)	(0.061)
Inviter with Random Guest List	-0.010	0.366**	0.204***	0.171*	-0.215**	0.087	0.057
	(0.100)	(0.146)	(0.074)	(0.092)	(0.086)	(0.082)	(0.059)
Panel C: Inviter Sub-Group Treatment Effects							
High-SES without Voucher	0.041	0.224	0.121	0.108	-0.173	0.124	0.033
	(0.126)	(0.164)	(0.089)	(0.106)	(0.106)	(0.094)	(0.072)
High-SES with Voucher	-0.078	0.199	0.139	0.061	-0.152	-0.007	0.091
	(0.114)	(0.167)	(0.088)	(0.105)	(0.097)	(0.090)	(0.072)
Low-SES without Voucher	0.070	0.189	0.210**	-0.005	-0.089	0.002	0.083
	(0.123)	(0.173)	(0.091)	(0.109)	(0.105)	(0.098)	(0.077)
Low-SES with Voucher	0.028	0.340*	0.140	0.177	-0.179*	0.076	0.004
	(0.117)	(0.175)	(0.088)	(0.112)	(0.104)	(0.092)	(0.074)
Random without Voucher	-0.141	0.231	0.131	0.109	-0.239**	0.085	0.159**
	(0.119)	(0.178)	(0.090)	(0.111)	(0.107)	(0.093)	(0.077)
Random with Voucher	0.125	0.501***	0.279***	0.231**	-0.190*	0.089	-0.044
	(0.127)	(0.185)	(0.094)	(0.114)	(0.105)	(0.107)	(0.069)
Observations	1528	1528	1528	1528	1528	1528	1528
Control Mean	3.446	1.810	0.623	1.187	1.707	1.034	0.657
P-values:							
Pooled: High-SES vs. Low-SES Guest List	0.489	0.723	0.520	0.948	0.727	0.758	0.843
Pooled: Voucher vs. No Voucher	0.680	0.264	0.601	0.245	0.924	0.767	0.148
High-SES: Voucher vs. No Voucher	0.397	0.895	0.867	0.696	0.856	0.224	0.490
Low-SES: Voucher vs. No Voucher	0.767	0.462	0.524	0.152	0.453	0.497	0.381
Random: Voucher vs. No Voucher	0.061*	0.209	0.181	0.348	0.687	0.976	0.017**

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table D.13: Treatment Effects on Network Meal-Sharing (Visiting) Relationships

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Meals Out Total	Meals Out Churn	Meals Out New	Meals Out Dropped	Meals Out Maintained	Meals Out Transformed In	Meals Out Transformed Out
	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year
Panel A: Pooled Inviter Treatment Effects							
All Inviters	0.008	0.280***	0.201***	0.082	-0.130**	-0.026	0.040
	(0.075)	(0.103)	(0.054)	(0.068)	(0.064)	(0.062)	(0.051)
Panel B: Pooled Inviter by Guest List Treatment Effects							
Inviter with High-SES Guest List	0.037	0.188	0.153**	0.038	-0.079	-0.022	0.029
	(0.095)	(0.125)	(0.066)	(0.081)	(0.077)	(0.076)	(0.062)
Inviter with Low-SES Guest List	-0.004	0.303**	0.218***	0.082	-0.143*	-0.052	0.057
	(0.089)	(0.131)	(0.069)	(0.083)	(0.078)	(0.074)	(0.063)
Inviter with Random Guest List	-0.011	0.352***	0.235***	0.127	-0.168**	-0.004	0.033
	(0.095)	(0.132)	(0.070)	(0.084)	(0.077)	(0.079)	(0.061)
Panel C: Inviter Sub-Group Treatment Effects							
High-SES without Voucher	0.064	0.201	0.147*	0.058	-0.098	0.046	0.018
	(0.125)	(0.155)	(0.082)	(0.101)	(0.096)	(0.096)	(0.079)
High-SES with Voucher	-0.009	0.178	0.154*	0.025	-0.077	-0.091	0.047
	(0.109)	(0.155)	(0.081)	(0.097)	(0.093)	(0.090)	(0.075)
Low-SES without Voucher	0.071	0.217	0.208**	0.025	-0.067	-0.037	0.044
	(0.108)	(0.162)	(0.087)	(0.101)	(0.095)	(0.090)	(0.076)
Low-SES with Voucher	-0.075	0.386**	0.227***	0.137	-0.217**	-0.065	0.069
	(0.107)	(0.164)	(0.086)	(0.103)	(0.094)	(0.089)	(0.080)
Random without Voucher	-0.147	0.258	0.173**	0.094	-0.220**	-0.021	0.119
	(0.116)	(0.162)	(0.087)	(0.102)	(0.095)	(0.092)	(0.078)
Random with Voucher	0.123	0.449***	0.297***	0.162	-0.120	0.014	-0.052
	(0.117)	(0.167)	(0.089)	(0.104)	(0.091)	(0.102)	(0.070)
Observations	1528	1528	1528	1528	1528	1528	1528
Control Mean	3.108	1.549	0.530	1.018	1.422	1.108	0.736
P-values:							
Pooled: High-SES vs. Low-SES Guest List	0.659	0.390	0.364	0.593	0.399	0.686	0.658
Pooled: Voucher vs. No Voucher	0.873	0.304	0.403	0.459	0.843	0.475	0.472
High-SES: Voucher vs. No Voucher	0.599	0.900	0.945	0.772	0.847	0.209	0.748
Low-SES: Voucher vs. No Voucher	0.221	0.387	0.853	0.347	0.164	0.777	0.780
Random: Voucher vs. No Voucher	0.046**	0.331	0.247	0.568	0.337	0.759	0.043**

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table D.14: 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**
	(0.058)	(0.068)	(0.075)	(0.048)	(0.120)	(0.071)	(0.013)	(0.017)	(0.015)
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*
	(0.071)	(0.080)	(0.093)	(0.056)	(0.146)	(0.095)	(0.015)	(0.020)	(0.019)
Inviter with Low-SES Guest List	0.095	0.126	0.173*	-0.053	0.173	-0.061	-0.028*	0.004	0.027
	(0.072)	(0.085)	(0.093)	(0.059)	(0.151)	(0.086)	(0.014)	(0.020)	(0.019)
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)	(0.085)	(0.097)	(0.058)	(0.151)	(0.089)	(0.015)	(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
	(0.088)	(0.096)	(0.119)	(0.067)	(0.176)	(0.124)	(0.018)	(0.025)	(0.024)
High-SES with Voucher	0.040	0.116	-0.034	-0.126*	0.077	0.082	-0.027	-0.003	0.040*
	(0.084)	(0.099)	(0.110)	(0.066)	(0.181)	(0.118)	(0.017)	(0.024)	(0.024)
Low-SES without Voucher	0.078	0.108	0.138	-0.074	0.093	-0.103	-0.031*	-0.012	-0.001
	(0.088)	(0.099)	(0.113)	(0.072)	(0.191)	(0.106)	(0.017)	(0.024)	(0.020)
Low-SES with Voucher	0.113	0.143	0.215*	-0.021	0.252	-0.017	-0.025	0.019	0.053**
	(0.086)	(0.107)	(0.116)	(0.070)	(0.185)	(0.106)	(0.017)	(0.025)	(0.025)
Random without Voucher	-0.014	0.045	-0.007	-0.104	-0.006	0.153	-0.015	0.007	0.056**
	(0.082)	(0.101)	(0.119)	(0.069)	(0.174)	(0.114)	(0.018)	(0.023)	(0.026)
Random with Voucher	-0.042	0.173	0.073	-0.013	0.306	0.143	-0.016	0.024	0.035
	(0.081)	(0.106)	(0.125)	(0.071)	(0.202)	(0.108)	(0.017)	(0.025)	(0.026)
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	0.382	0.935	0.398	0.712	0.375	0.108	0.687	0.955	0.685
Pooled: Voucher vs. No Voucher	0.915	0.422	0.778	0.678	0.132	0.852	0.909	0.461	0.440
High-SES: Voucher vs. No Voucher	0.901	0.978	0.116	0.324	0.622	0.860	0.638	0.594	0.884
Low-SES: Voucher vs. No Voucher	0.727	0.769	0.571	0.500	0.481	0.489	0.732	0.254	0.053*
Random: Voucher vs. No Voucher	0.749	0.284	0.587	0.241	0.164	0.941	0.926	0.532	0.513

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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 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. The outcomes of columns (1)-(2)

Table D.15: Treatment Effects on Strength of Advice and Borrower Networks

	(1) Number of Advice Ties: Weak Ties 1 Year	(2) Number of Advice Ties: Medium Strength 1 Year	(3) Number of Advice Ties: Strong Ties 1 Year	(4) Number of Borrowers: Weak Ties 1 Year	(5) Number of Borrowers: Medium Strength 1 Year	(6) Number of Borrowers: Strong Ties 1 Year
Panel A: Pooled Inviter Treatment Effects						
All Inviters	-0.092**	0.034	0.013	-0.064	-0.058	-0.003
	(0.037)	(0.037)	(0.020)	(0.050)	(0.047)	(0.022)
Panel B: Pooled Inviter by Guest List Treatment Effects						
Inviter with High-SES Guest List	-0.149***	0.016	0.045*	-0.096*	-0.102*	0.019
	(0.043)	(0.043)	(0.026)	(0.059)	(0.056)	(0.028)
Inviter with Low-SES Guest List	-0.067	0.057	-0.005	-0.069	-0.049	-0.031
	(0.046)	(0.045)	(0.025)	(0.060)	(0.058)	(0.027)
Inviter with Random Guest List	-0.059	0.029	-0.001	-0.027	-0.023	0.003
	(0.046)	(0.045)	(0.024)	(0.063)	(0.058)	(0.027)
Panel C: Inviter Sub-Group Treatment Effects						
High-SES without Voucher	-0.125**	-0.021	0.023	-0.061	-0.151**	0.042
	(0.052)	(0.053)	(0.032)	(0.073)	(0.069)	(0.035)
High-SES with Voucher	-0.166***	0.032	0.062*	-0.129*	-0.067	0.003
	(0.050)	(0.051)	(0.033)	(0.068)	(0.067)	(0.034)
Low-SES without Voucher	-0.049	0.091	-0.007	-0.078	-0.065	-0.015
	(0.058)	(0.055)	(0.030)	(0.074)	(0.073)	(0.033)
Low-SES with Voucher	-0.086	0.027	-0.001	-0.060	-0.032	-0.048
	(0.056)	(0.053)	(0.030)	(0.069)	(0.071)	(0.033)
Random without Voucher	-0.038	-0.015	0.032	-0.075	-0.077	0.022
	(0.057)	(0.052)	(0.032)	(0.075)	(0.067)	(0.034)
Random with Voucher	-0.079	0.068	-0.037	0.022	0.027	-0.014
	(0.057)	(0.056)	(0.027)	(0.081)	(0.075)	(0.033)
Observations	1528	1528	1528	1528	1528	1528
Control Mean	0.462	0.459	0.140	0.662	0.789	0.206
P-values:						
Pooled: High-SES vs. Low-SES Guest List	0.061*	0.336	0.056*	0.623	0.355	0.064*
Pooled: Voucher vs. No Voucher	0.290	0.543	0.682	0.748	0.123	0.117
High-SES: Voucher vs. No Voucher	0.443	0.360	0.315	0.383	0.273	0.333
Low-SES: Voucher vs. No Voucher	0.577	0.299	0.870	0.820	0.694	0.389
Random: Voucher vs. No Voucher	0.547	0.180	0.043**	0.295	0.205	0.363

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table D.16: Treatment Effects on Borrower Network Ties

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Borrowers Total	Borrowers Churn	Borrowers New	Borrowers Dropped	Borrowers Maintained	Borrowers Transformed In	Borrowers Transformed Out
	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year
Panel A: Pooled Inviter Treatment Effects							
All Inviters	-0.145**	0.149**	0.061*	0.109**	-0.096***	-0.095*	-0.010
	(0.060)	(0.064)	(0.035)	(0.046)	(0.036)	(0.055)	(0.046)
Panel B: Pooled Inviter by Guest List Treatment Effects							
Inviter with High-SES Guest List	-0.180**	0.117	0.057	0.070	-0.156***	-0.087	0.082
	(0.073)	(0.080)	(0.045)	(0.056)	(0.044)	(0.064)	(0.056)
Inviter with Low-SES Guest List	-0.158**	0.145*	0.054	0.107*	-0.071	-0.135**	-0.035
	(0.071)	(0.078)	(0.042)	(0.057)	(0.043)	(0.065)	(0.056)
Inviter with Random Guest List	-0.094	0.187**	0.073*	0.152***	-0.059	-0.061	-0.080
	(0.073)	(0.082)	(0.044)	(0.058)	(0.047)	(0.066)	(0.056)
Panel C: Inviter Sub-Group Treatment Effects							
High-SES without Voucher	-0.118	0.124	0.044	0.089	-0.140***	-0.073	0.050
	(0.092)	(0.099)	(0.056)	(0.071)	(0.054)	(0.077)	(0.069)
High-SES with Voucher	-0.241***	0.102	0.065	0.048	-0.163***	-0.105	0.108
	(0.086)	(0.102)	(0.058)	(0.067)	(0.054)	(0.078)	(0.068)
Low-SES without Voucher	-0.166*	0.045	0.049	0.028	-0.053	-0.159**	0.033
	(0.087)	(0.095)	(0.054)	(0.069)	(0.055)	(0.074)	(0.069)
Low-SES with Voucher	-0.151*	0.246**	0.060	0.185***	-0.091*	-0.112	-0.102
	(0.085)	(0.098)	(0.051)	(0.072)	(0.051)	(0.080)	(0.070)
Random without Voucher	-0.150*	0.141	0.071	0.111	-0.075	-0.123	-0.025
	(0.089)	(0.102)	(0.055)	(0.071)	(0.061)	(0.079)	(0.068)
Random with Voucher	-0.035	0.231**	0.072	0.192***	-0.041	0.001	-0.138**
	(0.091)	(0.102)	(0.054)	(0.074)	(0.057)	(0.084)	(0.068)
Observations	1528	1528	1528	1528	1528	1528	1528
Control Mean	1.660	0.810	0.290	0.520	0.475	0.894	0.799
P-values:							
Pooled: High-SES vs. Low-SES Guest List	0.751	0.731	0.955	0.523	0.050*	0.421	0.038**
Pooled: Voucher vs. No Voucher	0.978	0.192	0.778	0.170	0.839	0.367	0.164
High-SES: Voucher vs. No Voucher	0.217	0.854	0.750	0.613	0.724	0.707	0.463
Low-SES: Voucher vs. No Voucher	0.874	0.074*	0.861	0.058*	0.538	0.581	0.096*
Random: Voucher vs. No Voucher	0.273	0.461	0.993	0.339	0.630	0.177	0.147

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table D.17: Treatment Effects on Lender Network Ties

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Lenders Total	Lenders Churn	Lenders New	Lenders Dropped	Lenders Maintained	Lenders Transformed In	Lenders Transformed Out
	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year
Panel A: Pooled Inviter Treatment Effects							
All Inviters	-0.054	0.114*	0.057*	0.076*	-0.055	-0.054	-0.022
	(0.056)	(0.062)	(0.033)	(0.046)	(0.037)	(0.051)	(0.045)
Panel B: Pooled Inviter by Guest List Treatment Effects							
Inviter with High-SES Guest List	-0.112*	0.108	0.071*	0.049	-0.107**	-0.080	0.057
	(0.068)	(0.076)	(0.042)	(0.055)	(0.043)	(0.060)	(0.054)
Inviter with Low-SES Guest List	-0.057	0.104	0.057	0.064	-0.024	-0.076	-0.044
	(0.070)	(0.077)	(0.042)	(0.056)	(0.045)	(0.062)	(0.054)
Inviter with Random Guest List	0.008	0.128	0.042	0.115**	-0.033	-0.006	-0.082
	(0.072)	(0.080)	(0.043)	(0.058)	(0.046)	(0.063)	(0.055)
Panel C: Inviter Sub-Group Treatment Effects							
High-SES without Voucher	-0.127	0.055	0.030	0.034	-0.097*	-0.072	0.071
	(0.085)	(0.096)	(0.052)	(0.069)	(0.054)	(0.071)	(0.067)
High-SES with Voucher	-0.105	0.156*	0.115**	0.059	-0.122**	-0.089	0.054
	(0.083)	(0.093)	(0.054)	(0.066)	(0.049)	(0.074)	(0.065)
Low-SES without Voucher	-0.057	-0.003	0.021	0.006	-0.005	-0.075	-0.002
	(0.090)	(0.093)	(0.052)	(0.069)	(0.056)	(0.075)	(0.066)
Low-SES with Voucher	-0.055	0.210**	0.090*	0.121*	-0.043	-0.076	-0.088
	(0.084)	(0.098)	(0.053)	(0.069)	(0.053)	(0.074)	(0.066)
Random without Voucher	-0.029	0.022	0.009	0.045	-0.017	-0.027	-0.030
	(0.093)	(0.098)	(0.052)	(0.068)	(0.061)	(0.078)	(0.066)
Random with Voucher	0.044	0.234**	0.075	0.186**	-0.050	0.015	-0.132*
	(0.087)	(0.101)	(0.055)	(0.076)	(0.052)	(0.078)	(0.069)
Observations	1528	1528	1528	1528	1528	1528	1528
Control Mean	1.551	0.823	0.288	0.536	0.449	0.815	0.810
P-values:							
Pooled: High-SES vs. Low-SES Guest List	0.426	0.959	0.745	0.787	0.049**	0.944	0.053*
Pooled: Voucher vs. No Voucher	0.591	0.008***	0.046**	0.048**	0.363	0.875	0.122
High-SES: Voucher vs. No Voucher	0.814	0.359	0.188	0.756	0.664	0.839	0.819
Low-SES: Voucher vs. No Voucher	0.986	0.056*	0.275	0.154	0.544	0.988	0.246
Random: Voucher vs. No Voucher	0.499	0.075*	0.307	0.098*	0.625	0.642	0.183

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table D.18: Treatment Effects on Composition of Networks: By Family Relationship and Connection through Husbands

	(1)	(2)	(3)	(4)
	Husbands Relatives Total	Blood Relatives Total	Husbands Friends Total	Own Friends Total
	1 Year	1 Year	1 Year	1 Year
Panel A: Pooled Inviter Treatment Effects				
All Inviters	-0.053	0.006	-0.009	0.123
	(0.082)	(0.060)	(0.019)	(0.083)
Panel B: Pooled Inviter by Guest List Treatment Effects				
Inviter with High-SES Guest List	-0.038	0.119	-0.022	0.041
	(0.099)	(0.088)	(0.023)	(0.102)
Inviter with Low-SES Guest List	-0.012	-0.084	0.001	0.127
	(0.103)	(0.073)	(0.024)	(0.101)
Inviter with Random Guest List	-0.111	-0.019	-0.006	0.204**
	(0.103)	(0.072)	(0.025)	(0.103)
Panel C: Inviter Sub-Group Treatment Effects				
High-SES without Voucher	-0.045	0.145	-0.023	0.188
	(0.129)	(0.129)	(0.028)	(0.131)
High-SES with Voucher	-0.069	0.078	-0.020	-0.079
	(0.113)	(0.096)	(0.027)	(0.120)
Low-SES without Voucher	-0.002	-0.132	-0.030	0.194
	(0.127)	(0.086)	(0.027)	(0.126)
Low-SES with Voucher	-0.016	-0.033	0.032	0.059
	(0.125)	(0.096)	(0.032)	(0.121)
Random without Voucher	-0.096	0.015	0.025	0.183
	(0.127)	(0.087)	(0.031)	(0.119)
Random with Voucher	-0.138	-0.057	-0.038	0.235*
	(0.126)	(0.095)	(0.033)	(0.132)
Observations	1528	1528	1528	1528
Control Mean	2.317	0.842	0.174	2.412
P-values:				
Pooled: High-SES vs. Low-SES Guest List	0.795	0.027**	0.317	0.393
Pooled: Voucher vs. No Voucher	0.720	0.818	0.927	0.174
High-SES: Voucher vs. No Voucher	0.869	0.635	0.908	0.068*
Low-SES: Voucher vs. No Voucher	0.925	0.368	0.077*	0.339
Random: Voucher vs. No Voucher	0.776	0.510	0.102	0.721

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table D.19: Treatment Effects on Composition of New Network Links who are Husband's Relatives

	(1)	(2)	(3)
	Husbands Relatives Married Women New	Husbands Relatives Married Men New	Husbands Relatives Single New
	1 Year	1 Year	1 Year
Panel A: Pooled Inviter Treatment Effects			
All Inviters	0.046	0.021	0.017
	(0.035)	(0.017)	(0.021)
Panel B: Pooled Inviter by Guest List Treatment Effects			
Inviter with High-SES Guest List	0.011	0.015	0.016
	(0.042)	(0.021)	(0.027)
Inviter with Low-SES Guest List	0.090*	0.030	0.052*
	(0.046)	(0.021)	(0.029)
Inviter with Random Guest List	0.039	0.018	-0.018
	(0.044)	(0.023)	(0.025)
Panel C: Inviter Sub-Group Treatment Effects			
High-SES without Voucher	0.012	0.028	0.037
	(0.051)	(0.029)	(0.038)
High-SES with Voucher	-0.000	0.005	-0.020
	(0.051)	(0.024)	(0.027)
Low-SES without Voucher	0.079	0.028	0.062
	(0.058)	(0.025)	(0.039)
Low-SES with Voucher	0.102*	0.032	0.045
	(0.058)	(0.028)	(0.035)
Random without Voucher	0.065	0.023	-0.008
	(0.055)	(0.031)	(0.030)
Random with Voucher	0.008	0.014	-0.031
	(0.054)	(0.024)	(0.029)
Observations	1528	1528	1528
Control Mean	0.214	0.058	0.103
P-values:			
Pooled: High-SES vs. Low-SES Guest List	0.085*	0.500	0.247
Pooled: Voucher vs. No Voucher	0.676	0.605	0.149
High-SES: Voucher vs. No Voucher	0.836	0.461	0.148
Low-SES: Voucher vs. No Voucher	0.742	0.914	0.701
Random: Voucher vs. No Voucher	0.367	0.755	0.478

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table D.20: Treatment Effects on Network Activities: New Network Links, Married Women who are Husband's Relatives

	(1) New Friends Husband Relatives Married Women: Advice Last Year 1 Year	(2) New Friends Husband Relatives Married Women: Lent Last Year 1 Year	(3) New Friends Husband Relatives Married Women: Borrowed Last Year 1 Year	(4) New Friends Husband Relatives Married Women: Meals In Last Year 1 Year	(5) New Friends Husband Relatives Married Women: Meals Out Last Year 1 Year	(6) New Friends Husband Relatives Married Women: Secrets Last Year 1 Year	(7) New Friends Husband Relatives Married Women: Confidante Last Year 1 Year
Panel A: Pooled Inviter Treatment Effects							
All Inviters	0.005	0.007	0.016	0.026	0.028*	0.016*	0.021*
	(0.012)	(0.013)	(0.012)	(0.016)	(0.016)	(0.009)	(0.013)
Panel B: Pooled Inviter by Guest List Treatment Effects							
Inviter with High-SES Guest List	-0.001	-0.014	0.004	0.008	0.021	0.011	-0.003
	(0.014)	(0.014)	(0.014)	(0.019)	(0.019)	(0.012)	(0.014)
Inviter with Low-SES Guest List	0.010	0.027	0.036**	0.042*	0.040*	0.024*	0.034**
	(0.015)	(0.017)	(0.017)	(0.022)	(0.021)	(0.013)	(0.017)
Inviter with Random Guest List	0.005	0.009	0.008	0.030	0.024	0.013	0.033**
	(0.014)	(0.017)	(0.015)	(0.021)	(0.020)	(0.012)	(0.017)
Observations	1528	1528	1528	1528	1528	1528	1528
Control Mean	0.037	0.045	0.037	0.074	0.069	0.021	0.042
P-values:							
Pooled: High-SES vs. Low-SES Guest List	0.463	0.011**	0.063*	0.117	0.393	0.361	0.029**
Pooled: Voucher vs. No Voucher	0.169	0.755	0.598	0.637	0.413	0.384	0.645

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table D.21: Treatment Effects on Mild-to-Severe Depression: Heterogeneously by Baseline Household Decision-Making Power

	(1)	(2)	(3)	(4)	(5)	(6)
	Mild-to-Severe Depression: No Decision-Making Power		Mild-to-Severe Depression: Some Decision-Making Power		Mild-to-Severe Depression: All Decision-Making Power	
	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year
Panel A: Pooled Inviter Treatment Effects						
All Inviters	-0.025	-0.260***	-0.009	-0.045	-0.011	-0.088
	(0.068)	(0.068)	(0.039)	(0.037)	(0.064)	(0.071)
Panel B: Pooled Inviter by Guest List Treatment Effects						
Inviter with High-SES Guest List	-0.067	-0.212**	-0.018	-0.026	-0.065	-0.063
	(0.082)	(0.084)	(0.047)	(0.044)	(0.073)	(0.081)
Inviter with Low-SES Guest List	-0.009	-0.297***	0.003	-0.063	-0.039	-0.143*
	(0.077)	(0.078)	(0.047)	(0.045)	(0.078)	(0.085)
Inviter with Random Guest List	0.002	-0.266***	-0.012	-0.043	0.080	-0.058
	(0.085)	(0.082)	(0.045)	(0.043)	(0.084)	(0.089)
Panel C: Inviter Sub-Group Treatment Effects						
High-SES without Voucher	-0.150	-0.248***	-0.065	-0.052	-0.054	0.025
	(0.093)	(0.094)	(0.057)	(0.054)	(0.087)	(0.093)
High-SES with Voucher	0.021	-0.175	0.023	-0.003	-0.082	-0.178*
	(0.099)	(0.109)	(0.057)	(0.054)	(0.087)	(0.098)
Low-SES without Voucher	-0.038	-0.307***	0.004	-0.068	-0.027	-0.174*
	(0.093)	(0.104)	(0.056)	(0.052)	(0.095)	(0.099)
Low-SES with Voucher	0.010	-0.290***	0.002	-0.057	-0.048	-0.126
	(0.087)	(0.086)	(0.060)	(0.055)	(0.095)	(0.105)
Random without Voucher	-0.115	-0.283**	-0.045	-0.030	0.132	-0.103
	(0.105)	(0.116)	(0.052)	(0.053)	(0.104)	(0.102)
Random with Voucher	0.089	-0.253***	0.023	-0.058	0.021	0.029
	(0.099)	(0.089)	(0.057)	(0.052)	(0.100)	(0.105)
Observations	310	314	838	841	339	340
Control Mean	0.300	0.444	0.299	0.316	0.291	0.395
P-values:						
Pooled: High-SES vs. Low-SES Guest List	0.437	0.271	0.636	0.380	0.722	0.289
Pooled: Voucher vs. No Voucher	0.018**	0.591	0.167	0.746	0.404	0.596
High-SES: Voucher vs. No Voucher	0.083*	0.525	0.167	0.432	0.771	0.045**
Low-SES: Voucher vs. No Voucher	0.608	0.874	0.981	0.848	0.846	0.661
Random: Voucher vs. No Voucher	0.074*	0.799	0.257	0.626	0.332	0.210

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table D.22: Treatment Effects on Network Churn in Husband's Relatives: Heterogeneously by Baseline Household Decision-Making Power

	(1) Network Churn in Husbands Relatives: No Baseline Decision-Making Power 1 Year	(2) Network Churn in Husbands Relatives: Some Baseline Decision-Making Power 1 Year	(3) Network Churn in Husbands Relatives: All Baseline Decision-Making Power 1 Year
Panel A: Pooled Inviter Treatment Effects			
All Inviters	0.615***	0.147	0.072
	(0.189)	(0.123)	(0.152)
Panel B: Pooled Inviter by Guest List Treatment Effects			
Inviter with High-SES Guest List	0.505**	0.093	-0.065
	(0.224)	(0.149)	(0.183)
Inviter with Low-SES Guest List	0.638***	0.304*	0.366
	(0.222)	(0.170)	(0.232)
Inviter with Random Guest List	0.707***	0.041	-0.090
	(0.252)	(0.135)	(0.183)
Panel C: Inviter Sub-Group Treatment Effects			
High-SES without Voucher	0.466	0.345*	-0.259
	(0.282)	(0.188)	(0.198)
High-SES with Voucher	0.535**	-0.133	0.203
	(0.267)	(0.177)	(0.253)
Low-SES without Voucher	0.520*	0.276	0.415
	(0.282)	(0.197)	(0.285)
Low-SES with Voucher	0.707***	0.334	0.327
	(0.250)	(0.229)	(0.275)
Random without Voucher	0.509	0.109	-0.101
	(0.375)	(0.162)	(0.222)
Random with Voucher	0.845***	-0.027	-0.070
	(0.273)	(0.159)	(0.207)
Observations	314	841	340
Control Mean	1.333	1.420	0.872
P-values:			
Pooled: High-SES vs. Low-SES Guest List	0.552	0.211	0.070*
Pooled: Voucher vs. No Voucher	0.265	0.134	0.292
High-SES: Voucher vs. No Voucher	0.826	0.023**	0.077*
Low-SES: Voucher vs. No Voucher	0.519	0.818	0.778
Random: Voucher vs. No Voucher	0.400	0.432	0.892

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table D.23: Treatment Effects on Marital Status

	(1) Still Married 1 Year	(2) Newly Married 1 Year	(3) Divorced, Seperated, or Widowed 1 Year	(4) Husband Tie Strength 1 Year	(5) Husband Risk-Sharing Discomfort 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.24: 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)	(0.016)	(0.023)	(0.015)	(0.006)
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)	(0.019)	(0.028)	(0.018)	(0.008)
Inviter with Low-SES Guest List	0.013	-0.036*	0.044	-0.023	-0.001
	(0.032)	(0.019)	(0.028)	(0.018)	(0.007)
Inviter with Random Guest List	0.025	-0.030	0.016	-0.014	0.002
	(0.032)	(0.019)	(0.027)	(0.019)	(0.007)
Panel C: Inviter Sub-Group Treatment Effects					
High-SES without Voucher	-0.016	0.001	0.048	-0.021	0.008
	(0.039)	(0.024)	(0.035)	(0.021)	(0.012)
High-SES with Voucher	0.008	-0.022	0.031	-0.014	-0.004
	(0.039)	(0.022)	(0.034)	(0.022)	(0.010)
Low-SES without Voucher	0.014	-0.026	0.037	-0.009	0.005
	(0.040)	(0.024)	(0.034)	(0.023)	(0.010)
Low-SES with Voucher	0.011	-0.046**	0.052	-0.037*	-0.007
	(0.039)	(0.021)	(0.035)	(0.020)	(0.008)
Random without Voucher	0.014	-0.040*	0.041	-0.014	-0.000
	(0.038)	(0.021)	(0.034)	(0.023)	(0.009)
Random with Voucher	0.036	-0.018	-0.010	-0.013	0.005
	(0.040)	(0.024)	(0.034)	(0.023)	(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	0.620	0.200	0.859	0.778	0.738
Pooled: Voucher vs. No Voucher	0.586	0.632	0.453	0.609	0.330
High-SES: Voucher vs. No Voucher	0.601	0.361	0.668	0.787	0.341
Low-SES: Voucher vs. No Voucher	0.951	0.421	0.693	0.225	0.257
Random: Voucher vs. No Voucher	0.616	0.366	0.186	0.977	0.665

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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.

Table D.25: 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 Dropped Iron Sheets 1 Year	(4) Number Dropped Thatched Roof 1 Year
Panel A: Pooled Inviter Treatment Effects				
All Inviters	0.077	0.185*	0.081	0.268*
	(0.067)	(0.101)	(0.071)	(0.153)
Panel B: Pooled Inviter by Guest List Treatment Effects				
Inviter with High-SES Guest List	0.117	0.106	0.025	0.159
	(0.084)	(0.127)	(0.085)	(0.182)
Inviter with Low-SES Guest List	0.030	0.174	0.097	0.295
	(0.085)	(0.122)	(0.088)	(0.185)
Inviter with Random Guest List	0.083	0.286**	0.127	0.361*
	(0.086)	(0.134)	(0.088)	(0.196)
Panel C: Inviter Sub-Group Treatment Effects				
High-SES without Voucher	0.150	0.124	0.040	-0.035
	(0.105)	(0.153)	(0.100)	(0.219)
High-SES with Voucher	0.083	0.088	0.008	0.359
	(0.105)	(0.165)	(0.108)	(0.223)
Low-SES without Voucher	-0.005	0.134	0.033	0.232
	(0.100)	(0.153)	(0.106)	(0.220)
Low-SES with Voucher	0.070	0.216	0.166	0.357
	(0.113)	(0.143)	(0.105)	(0.231)
Random without Voucher	0.097	0.211	0.090	0.005
	(0.113)	(0.155)	(0.102)	(0.211)
Random with Voucher	0.071	0.362*	0.165	0.703***
	(0.102)	(0.187)	(0.114)	(0.266)
Observations	1116	1116	1116	1116
Control Mean	0.770	1.168	0.909	2.715
P-values:				
Pooled: High-SES vs. Low-SES Guest List	0.336	0.601	0.390	0.450
Pooled: Voucher vs. No Voucher	0.955	0.554	0.398	0.009***
High-SES: Voucher vs. No Voucher	0.598	0.853	0.790	0.117
Low-SES: Voucher vs. No Voucher	0.554	0.627	0.258	0.628
Random: Voucher vs. No Voucher	0.840	0.482	0.556	0.014**

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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.

Table D.26: Treatment Effects on Husband's Relatives within the Network: by Child-Rearing Intensity

	(1) Network Churn in Husbands Relatives: No Young Child-Rearing 1 Year	(2) Network Churn in Husbands Relatives: Only Infant Caregiving 1 Year	(3) Network Churn in Husbands Relatives: Ever Pregnant 1 Year
Panel A: Pooled Inviter Treatment Effects			
All Inviters	0.254**	0.266	0.404**
	(0.127)	(0.189)	(0.179)
Panel B: Pooled Inviter by Guest List Treatment Effects			
Inviter with High-SES Guest List	0.227	0.129	0.222
	(0.148)	(0.221)	(0.216)
Inviter with Low-SES Guest List	0.340**	0.514**	0.557**
	(0.161)	(0.260)	(0.219)
Inviter with Random Guest List	0.191	0.228	0.419*
	(0.148)	(0.222)	(0.223)
Panel C: Inviter Sub-Group Treatment Effects			
High-SES without Voucher	0.255	0.357	0.432
	(0.176)	(0.258)	(0.304)
High-SES with Voucher	0.196	-0.077	0.058
	(0.182)	(0.270)	(0.234)
Low-SES without Voucher	0.414**	0.528*	0.404*
	(0.201)	(0.299)	(0.243)
Low-SES with Voucher	0.271	0.502	0.674**
	(0.198)	(0.358)	(0.301)
Random without Voucher	0.172	0.458*	0.158
	(0.173)	(0.267)	(0.278)
Random with Voucher	0.211	0.013	0.638**
	(0.180)	(0.267)	(0.262)
Observations	767	394	340
Control Mean	1.194	1.481	1.198
P-values:			
Pooled: High-SES vs. Low-SES Guest List	0.453	0.129	0.130
Pooled: Voucher vs. No Voucher	0.681	0.083*	0.440
High-SES: Voucher vs. No Voucher	0.770	0.130	0.248
Low-SES: Voucher vs. No Voucher	0.543	0.947	0.401
Random: Voucher vs. No Voucher	0.838	0.131	0.123

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table D.27: Treatment Effects on Depression: by Child-Rearing Intensity

	(1)	(2)	(3)	(4)	(5)	(6)
	Mild-to-Severe Depression: No Young Child-Rearing		Mild-to-Severe Depression: Only Infant Caregiving		Mild-to-Severe Depression: Ever Pregnant	
	1 Month	1 Year	1 Month	1 Year	1 Month	1 Year
Panel A: Pooled Inviter Treatment Effects						
All Inviters	-0.003	-0.077*	-0.049	-0.119**	0.051	-0.072
	(0.040)	(0.042)	(0.056)	(0.058)	(0.056)	(0.060)
Panel B: Pooled Inviter by Guest List Treatment Effects						
Inviter with High-SES Guest List	0.019	-0.037	-0.078	-0.077	-0.007	-0.078
	(0.048)	(0.049)	(0.066)	(0.072)	(0.070)	(0.074)
Inviter with Low-SES Guest List	-0.051	-0.105**	0.053	-0.144**	0.047	-0.100
	(0.047)	(0.049)	(0.079)	(0.068)	(0.067)	(0.071)
Inviter with Random Guest List	0.026	-0.092*	-0.087	-0.140**	0.111	-0.033
	(0.049)	(0.050)	(0.065)	(0.065)	(0.067)	(0.073)
Panel C: Inviter Sub-Group Treatment Effects						
High-SES without Voucher	-0.021	-0.034	-0.050	-0.112	-0.052	-0.040
	(0.057)	(0.058)	(0.083)	(0.079)	(0.079)	(0.099)
High-SES with Voucher	0.059	-0.041	-0.097	-0.041	0.017	-0.112
	(0.061)	(0.060)	(0.080)	(0.094)	(0.086)	(0.074)
Low-SES without Voucher	-0.018	-0.072	0.053	-0.136*	0.001	-0.181**
	(0.058)	(0.060)	(0.097)	(0.082)	(0.077)	(0.080)
Low-SES with Voucher	-0.085	-0.135**	0.035	-0.156*	0.105	-0.015
	(0.055)	(0.058)	(0.099)	(0.081)	(0.089)	(0.086)
Random without Voucher	0.003	-0.146**	-0.156**	-0.070	0.062	-0.016
	(0.059)	(0.059)	(0.079)	(0.080)	(0.077)	(0.095)
Random with Voucher	0.050	-0.032	-0.023	-0.200***	0.154*	-0.057
	(0.062)	(0.062)	(0.081)	(0.073)	(0.088)	(0.087)
Observations	765	767	392	394	337	340
Control Mean	0.335	0.372	0.296	0.398	0.222	0.297
P-values:						
Pooled: High-SES vs. Low-SES Guest List	0.118	0.133	0.083*	0.314	0.415	0.748
Pooled: Voucher vs. No Voucher	0.675	0.755	0.847	0.640	0.132	0.574
High-SES: Voucher vs. No Voucher	0.243	0.919	0.619	0.464	0.448	0.416
Low-SES: Voucher vs. No Voucher	0.296	0.321	0.874	0.816	0.266	0.055*
Random: Voucher vs. No Voucher	0.494	0.090*	0.152	0.107	0.334	0.705

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table D.28: 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)	(0.013)	(0.022)	(0.024)	(0.105)	(0.213)
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)	(0.016)	(0.027)	(0.030)	(0.127)	(0.254)
Inviter with Low-SES Guest List	-0.018	0.005	-0.035	0.087***	0.127	0.529**
	(0.012)	(0.016)	(0.026)	(0.029)	(0.130)	(0.255)
Inviter with Random Guest List	-0.021*	-0.003	-0.058**	0.027	0.210	0.675**
	(0.013)	(0.016)	(0.029)	(0.031)	(0.133)	(0.272)
Panel C: Inviter Sub-Group Treatment Effects						
High-SES without Voucher	0.006	0.032	-0.041	0.069*	0.189	0.079
	(0.015)	(0.020)	(0.033)	(0.036)	(0.151)	(0.300)
High-SES with Voucher	0.016	0.021	-0.034	0.070*	0.091	0.408
	(0.015)	(0.020)	(0.033)	(0.038)	(0.163)	(0.321)
Low-SES without Voucher	-0.016	0.003	-0.045	0.089***	0.028	0.384
	(0.014)	(0.019)	(0.032)	(0.034)	(0.156)	(0.311)
Low-SES with Voucher	-0.020	0.006	-0.025	0.086**	0.236	0.683**
	(0.015)	(0.020)	(0.031)	(0.037)	(0.161)	(0.303)
Random without Voucher	-0.028*	-0.004	-0.067*	0.016	0.187	0.281
	(0.016)	(0.018)	(0.036)	(0.037)	(0.168)	(0.306)
Random with Voucher	-0.015	-0.001	-0.049	0.038	0.235	1.059***
	(0.014)	(0.023)	(0.036)	(0.039)	(0.164)	(0.365)
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	0.010**	0.192	0.932	0.551	0.912	0.247
Pooled: Voucher vs. No Voucher	0.536	0.873	0.513	0.839	0.609	0.029**
High-SES: Voucher vs. No Voucher	0.526	0.639	0.860	0.992	0.588	0.356
Low-SES: Voucher vs. No Voucher	0.789	0.902	0.567	0.942	0.251	0.386
Random: Voucher vs. No Voucher	0.432	0.909	0.677	0.622	0.807	0.052*

Standard errors in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. 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.

Table D.29: Occupation

	(1) Business	(2) New Business	(3) Business Copying	(4) Business Capital	(5) Agriculture	(6) Piecework	(7) Piecework: Idle Days	(8) Piecework Effort
High-SES × No Voucher	0.098***	0.076**	0.039**	0.098	-0.056	-0.065*	-0.572*	-0.200**
	(0.032)	(0.030)	(0.020)	(0.075)	(0.038)	(0.037)	(0.315)	(0.079)
High-SES × Voucher	0.090***	0.060**	0.039**	0.136*	-0.028	-0.021	0.391	-0.007
	(0.032)	(0.029)	(0.020)	(0.074)	(0.038)	(0.037)	(0.313)	(0.079)
Low-SES × No Voucher	0.011	-0.006	-0.016	0.006	-0.014	0.014	-0.062	-0.011
	(0.032)	(0.029)	(0.020)	(0.074)	(0.038)	(0.037)	(0.312)	(0.079)
Low-SES × Voucher	0.023	-0.003	-0.005	0.002	-0.021	0.028	0.143	0.002
	(0.032)	(0.030)	(0.020)	(0.075)	(0.038)	(0.037)	(0.315)	(0.079)
Random × No Voucher	0.052*	0.042	0.038*	0.026	-0.010	-0.017	-0.221	-0.087
	(0.032)	(0.030)	(0.020)	(0.074)	(0.038)	(0.037)	(0.314)	(0.079)
Random × Voucher	0.030	0.036	-0.003	-0.034	-0.014	0.028	0.036	-0.036
	(0.032)	(0.029)	(0.020)	(0.074)	(0.038)	(0.036)	(0.311)	(0.079)
Observations	1586	1586	1586	1587	1587	1587	1586	1586
Control Mean	0.179	0.129	0.048	-0.011	0.516	0.335	1.808	0.028
P-values:								
High-SES: V=NV	0.820	0.636	0.979	0.659	0.527	0.302	0.008	0.035
Low-SES: V=NV	0.727	0.919	0.635	0.964	0.876	0.733	0.569	0.892
Random: V=NV	0.531	0.858	0.074	0.484	0.942	0.284	0.476	0.580

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).[33] 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

[33] 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 Model Predictions and Empirical Tests

Each of the following tests maps directly to a theoretical prediction, using the coefficients estimated in Equations 1–6 to empirically evaluate Lemma 6.1 and Proposition 6.1(a)-(b). 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.

Evaluating Model Assumptions

Model Assumption 6.1: Each Type has an Absolute Advantage

Interactions with one type is better at generating instrumental utility returns, and interactions with the other type is better at generating intrinsic utility returns.

Test: *Inviters with the High-SES Guest List have greater second-stage treatment effects on some outcomes than Inviters with the Low-SES Guest List; and Inviters with the Low-SES Guest List have greater second-stage treatment effects on other outcomes than Inviters with the High-SES Guest List*

Model Lemma 6.1: Subsidies Induce Diversification

Interactions with high-SES and low-SES women generate different types of benefits, which agents both value, 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 large for mixed bundles faster than they are for homogeneous bundles [Proposition 6.1]

Test: $\beta_1^{H\&L} > \beta_1^{H\text{-}only}$ and $\beta_1^{H\&L} > \beta_1^{L\text{-}only}$ (Equations 4, 5 and 6)

Among Inviters with the Random Guest List, the Voucher increases the probability of selecting a mixed bundle to a greater extent than it increases the probability of selecting a High-SES-only bundle, ro a Low-SES-only bundle.

Model Predictions in the Experiment

Model Proposition 6.1: Diversification conditional on the zero-subsidy counterfactual

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 (within-SES) relationships are more sensitive to financial investment than the benefits of within-SES (cross-SES) relationships, then prices constrain cross-SES (within-SES) linking [Proposition 6.1(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 6.1(b)].

Test: $\beta_1^H > 0$ or $\beta_1^L > 0$, and $\beta_2 = \beta_3 = \beta_4 = \beta_5$ (Equations 1and 2)

- $\beta_1^H > 0 \quad \Rightarrow$ high prices of social interaction contribute to income-based homophily
- $\beta_1^L > 0 \quad \Rightarrow$ high prices of social interaction contribute to economic connectedness

Among Inviters with the Random Guest List, the Voucher increases the probability of inviting either High-SES or Low-SES women. Inviters with the High-SES Guest List and Low-SES Guest List invite women at the same rate, with or without the Voucher.

This test determines if prices inhibits linking with specific types of people, which generates broader implications for network composition by income.

Ruling out Alternate Models

My model rests on the assumption that women face trade-offs between the intrinsic utility benefits of low-SES interactions and the financial benefits of high-SES interactions, and that the returns and thus this trade-off are sensitive to financial investment in the interaction. This implies that linking patterns that appear as either an intrinsic preference for homophily or a state-independent constraint from forming links across-SES are actually an optimal price response.

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 1) *Without the Voucher, Inviters with the High-SES Guest List send fewer invitations than Inviters with the Low-SES Guest List*: 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 1 and 2) *The Voucher increases invitations to high-SES women among Inviters with the High-SES Guest List and Inviters with the Random Guest List, more so than it increases invitations to low-SES Guests among Inviters with the Low-SES Guest List*: High prices constrain cross-SES relationships because high-SES links are infeasible without financial investment

F.2 Model Proofs

Assumption F.1 (Each type has an absolute advantage in producing one type of utility)**.** *Without loss of generality, denote types H and L with θ and θ'. Let θ be the type that is relatively more productive in generating a financial return, and let θ' be the type that is relatively more productive in generating intrinsic utility.*

1. *For any fixed number of invitations $s \in \{0, 1\}$, and for every fixed level of investment $\bar{I} \in [0, 1]$:*

$$\mathbb{Y}(S_\theta = s+1, S_{\theta'} = s, \bar{I}) \; > \; \mathbb{Y}(S_\theta = s, S_{\theta'} = s+1, \bar{I})$$

$$\mathbb{V}(S_\theta = s+1, S_{\theta'} = s, \bar{I}) \; < \; \mathbb{V}(S_\theta = s, S_{\theta'} = s+1, \bar{I})$$

2. *Furthermore, the marginal benefit of the second θ type has no additional advantage in producing $\mathbb{V}$ when paired with another θ-type, relative to when paired with a θ'-type (and the symmetric condition for θ'). For any fixed level of investment $\bar{I} \in [0, 1]$:*

$$\mathbb{Y}(S_\theta = 1, S_{\theta'} = 1, \bar{I}) - \mathbb{Y}(S_\theta = 1, S_{\theta'} = 0, \bar{I}) \; \geq \; \mathbb{Y}(S_\theta = 0, S_{\theta'} = 2, \bar{I}) - \mathbb{Y}(S_\theta = 0, S_{\theta'} = 1, \bar{I})$$

$$\mathbb{V}(S_\theta = 1, S_{\theta'} = 1, \bar{I}) - \mathbb{V}(S_\theta = 0, S_{\theta'} = 1, \bar{I}) \; \geq \; \mathbb{V}(S_\theta = 2, S_{\theta'} = 0, \bar{I}) - \mathbb{V}(S_\theta = 1, S_{\theta'} = 0, \bar{I})$$

Lemma F.1. *(Conditions for a Preference for Diversity) Define λ_Y and λ_V as value-weights on consumption and intrinsic utility of relationships, respectively, in the agent's total utility function:*

$$\lambda_Y = \frac{\partial U}{\partial Z} \cdot \frac{\partial Z}{\partial \mathbb{Y}} > 0, \quad \lambda_V = \frac{\partial U}{\partial \mathbb{V}} > 0$$

Given a fixed investment level $\bar{I} \in [0, 1]$, a diverse set of two invitations (i.e., $(S_L, S_H) = (1, 1)$) is more "productive" than a concentrated set of two invitations (i.e., $(S_L, S_H) \in \{(2, 0), (0, 2)\}$) whenever:

$$\frac{\lambda_Y}{\lambda_V} \in \begin{cases} \left(\frac{\mathbb{V}(0,2,\bar{I}) - \mathbb{V}(1,1,\bar{I})}{\mathbb{Y}(1,1,\bar{I}) - \mathbb{Y}(0,2,\bar{I})} \, , \, \frac{\mathbb{V}(1,1,\bar{I}) - \mathbb{V}(2,0,\bar{I})}{\mathbb{Y}(2,0,\bar{I}) - \mathbb{Y}(1,1,\bar{I})} \right) & \textit{if} \quad \mathbb{Y}(2,0,\bar{I}) - \mathbb{Y}(1,1,\bar{I}) > 0 \\ \left(\frac{\mathbb{V}(0,2,\bar{I}) - \mathbb{V}(1,1,\bar{I})}{\mathbb{Y}(1,1,\bar{I}) - \mathbb{Y}(0,2,\bar{I})} \, , \, \infty \right) & \textit{if} \quad \mathbb{Y}(2,0,\bar{I}) - \mathbb{Y}(1,1,\bar{I}) \leq 0 \end{cases} \tag{9}$$

where λ_Y and λ_V are held fixed, but evaluated locally for the comparison between a concentrated and diversified bundle.

Define $R(S_L, S_H, I)$ as the total weighted returns from relationship initiation and investment decisions, net of effort costs:

$$R(S_L, S_H, I) := \lambda_Y \mathbb{Y}(S_L, S_H, I) + \lambda_V \big(\mathbb{V}(S_L, S_H, I) - S_L c_L - S_H c_H \big).$$

Assumption F.2 (One type is more responsive to investment)**.** *Without loss of generality,* *assume that returns to interaction with the θ-type benefit relatively more from investment than the θ'-type, at all feasible bundles.*

1. *For a fixed $s \in \{0,1\}$, and a fixed $s' \in \{1,2\}$, with $s + s' \leq 2$:*

$$\begin{aligned} &\frac{\partial}{\partial I}\big(R(S_\theta = s', S_{\theta'} = s, I) - R(S_\theta = 0, S_{\theta'} = s, I)\big) \\ &\quad > \frac{\partial}{\partial I}\big(R(S_\theta = s, S_{\theta'} = s', I) - R(S_\theta = s, S_{\theta'} = 0, I)\big) \end{aligned} \tag{10}$$

2. *There exists a feasible level of investment at which the incremental benefit of adding a θ-type to a θ'-type exceeds the incremental benefit of adding a θ'-type to a θ-type. Formally, let $I_0 := I^*_\theta(0) = I^*_{\theta'}(0)$ denote a common zero-subsidy optimal investment. Assume that $\exists \tilde{I} \in [I_0/2, 1]$ such that*

$$R^{\theta'}(1,1,\tilde{I}) - R^{\theta'}(0,1,I_0) \;>\; R^{\theta}(1,1,\tilde{I}) - R^{\theta}(1,0,I_0). \tag{11}$$

Proof of Lemma F.1. Conditions 6.1 implies that:

$$\mathbb{Y}(S_\theta = 1, S_{\theta'} = 1, I) > \mathbb{Y}(S_\theta = 0, S_{\theta'} = 2, I) \quad \text{and}$$
$$\mathbb{V}(S_\theta = 1, S_{\theta'} = 1, I) > \mathbb{V}(S_\theta = 2, S_{\theta'} = 0, I)$$

We can denote the total returns to social relationships as:

$$\mathbb{R}(S_L, S_H, I) = \lambda_Y \mathbb{Y}(S_L, S_H, I) + \lambda_V \mathbb{V}(S_L, S_H, I)$$

We want to find a region of preferences where $\mathbb{R}(1,1,I) > \mathbb{R}(2,0,I)$ and $\mathbb{R}(1,1,I) > \mathbb{R}(0,2,I)$.

$$\begin{aligned}
\mathbb{R}(1,1,I) &> \mathbb{R}(2,0,I) \\
\iff \lambda_Y \mathbb{Y}(1,1,I) + \lambda_V \mathbb{V}(1,1,I) &> \lambda_Y \mathbb{Y}(2,0,I) + \lambda_V \mathbb{V}(2,0,I) \\
\iff \lambda_V(\mathbb{V}(1,1,I) - \mathbb{V}(2,0,I)) &> \lambda_Y(\mathbb{Y}(2,0,I) - \mathbb{Y}(1,1,I)) \\
\frac{\lambda_V}{\lambda_Y} &> \frac{\mathbb{Y}(2,0,I) - \mathbb{Y}(1,1,I)}{\mathbb{V}(1,1,I) - \mathbb{V}(2,0,I)}
\end{aligned}$$

$$\begin{aligned}
\mathbb{R}(1,1,I) &> \mathbb{R}(0,2,I) \\
\iff \lambda_Y \mathbb{Y}(1,1,I) + \lambda_V \mathbb{V}(1,1,I) &> \lambda_Y \mathbb{Y}(0,2,I) + \lambda_V \mathbb{V}(0,2,I) \\
\iff \lambda_Y(\mathbb{Y}(1,1,I) - \mathbb{Y}(0,2,I)) &> \lambda_V(\mathbb{V}(0,2,I) - \mathbb{V}(1,1,I)) \\
\frac{\lambda_Y}{\lambda_V} &> \frac{\mathbb{V}(0,2,I) - \mathbb{V}(1,1,I)}{\mathbb{Y}(1,1,I) - \mathbb{Y}(0,2,I)}
\end{aligned}$$

Note that the denominator of the lower-bound on λ_Y/λ_V is always positive. If $\mathbb{Y}(2,0,I) - \mathbb{Y}(1,1,I) > 0$, then we can arrange the lower bound on λ_V/λ_Y to obtain an upper bound on λ_Y/λ_V:

$$\frac{\lambda_Y}{\lambda_V} < \frac{\mathbb{V}(1,1,I) - \mathbb{V}(2,0,I)}{\mathbb{Y}(2,0,I) - \mathbb{Y}(1,1,I)}$$

If $\mathbb{Y}(2,0,I) - \mathbb{Y}(1,1,I) \leq 0$, then $\mathbb{R}(1,1,I) > \mathbb{R}(2,0,I)$ holds for all $\lambda_Y/\lambda_V > 0$, so the upper bound is effectively $+\infty$. □

Proof of Lemma 6.1. Fix $\tau \in \mathbb{R}$ and write $p(\tau) := p^I - \tau$. Using $Z = \bar{y} + \mathbb{Y}(S_L, S_H, I) - p(\tau)\, I\,(S_L + S_H)$, the problem at subsidy τ is equivalent to

$$\max_{(S_L,S_H)\in\{(0,0),(1,0),(0,1),(2,0),(0,2),(1,1)\},\, I\in[0,1]} R(S_L, S_H, I) \;-\; \lambda_Y\, p(\tau)\, I\,(S_L + S_H).$$

Let $(S_L^*(0), S_H^*(0), I^*(0))$ be an optimizer at $\tau = 0$. Set

$$\tau^+ \;:=\; \inf\left\{\tau \in \mathbb{R} : \max_{\substack{(S_L,S_H)\in\{(0,0),(1,0),(0,1),(2,0),(0,2),(1,1)\}\\ I\in[0,1] \\ S_L+S_H \,>\, S_L^*(0)+S_H^*(0)}} \Big[R(S_L, S_H, I) - \lambda_Y\, p(\tau)\, I\,(S_L + S_H) \Big]\right.$$

$$\left. \geq \max_{\substack{(S_L,S_H)\in\{(0,0),(1,0),(0,1),(2,0),(0,2),(1,1)\}\\ I\in[0,1] \\ S_L+S_H \,=\, S_L^*(0)+S_H^*(0)}} \Big[R(S_L, S_H, I) - \lambda_Y\, p(\tau)\, I\,(S_L + S_H) \Big] \right\},$$

Now I show the existence of such a τ^+. For any fixed (S_L, S_H, I), define

$$F(S_L, S_H, I; \tau) := R(S_L, S_H, I) - \lambda_Y\,(p^I - \tau)\, I\,(S_L + S_H).$$

Then

$$\frac{\partial}{\partial \tau} F(S_L, S_H, I; \tau) = \lambda_Y\, I\,(S_L + S_H).$$

At the baseline choice $(S_L^*(0), S_H^*(0), I^*(0))$ this derivative equals

$$\lambda_Y\, I^*(0)\,\big(S_L^*(0) + S_H^*(0)\big).$$

If $S_L^*(0) + S_H^*(0) < 2$, then there exists a feasible $(\widetilde{S}_L, \widetilde{S}_H, 1)$ with $\widetilde{S}_L + \widetilde{S}_H > S_L^*(0) + S_H^*(0)$. For this choice,

$$\frac{\partial}{\partial \tau} F(\widetilde{S}_L, \widetilde{S}_H, 1; \tau) = \lambda_Y(\widetilde{S}_L + \widetilde{S}_H) \;>\; \lambda_Y\, I^*(0)\,(S_L^*(0) + S_H^*(0)).$$

Since $I^*(0) \leq 1$. Therefore

$$\frac{\partial}{\partial \tau} F(\widetilde{S}_L, \widetilde{S}_H, 1; \tau) > \frac{\partial}{\partial \tau} F(S_L^*(0), S_H^*(0), I^*(0); \tau).$$

Define the difference

$$D(\tau) := F(\widetilde{S}_L, \widetilde{S}_H, 1; \tau) - F(S_L^*(0), S_H^*(0), I^*(0); \tau).$$

This is an affine function of τ with

$$\frac{d}{d\tau} D(\tau) > 0.$$

Hence $D(\tau)$ is strictly increasing in τ. Because $D(0) \leq 0$ (the baseline bundle is optimal at $\tau = 0$), it follows that there exists some finite τ with $D(\tau) > 0$. At such a τ, the bundle with

$\widetilde{S}_L + \widetilde{S}_H > S_L^*(0) + S_H^*(0)$ yields strictly higher utility than the baseline bundle. By definition, the smallest such value of τ is τ^+.

By the definition of τ^+, for any $\tau > \tau^+$,

$$\max_{\substack{S_L+S_H>S_L^*(0)+S_H^*(0)\\ I\in[0,1]}} \Big[R(S_L,S_H,I) - \lambda_Y p(\tau) I(S_L+S_H)\Big] > \max_{\substack{S_L+S_H=S_L^*(0)+S_H^*(0)\\ I\in[0,1]}} \Big[R(S_L,S_H,I) - \lambda_Y p(\tau) I(S_L+S_H)\Big].$$

Hence any optimizer at $\tau > \tau^+$ satisfies $S_L^*(\tau) + S_H^*(\tau) > S_L^*(0) + S_H^*(0)$.

Fix $\tau > \tau^+$ and suppose $S_L^*(\tau) + S_H^*(\tau) = 2$. Let $I_{2,0}^*(\tau) \in \arg\max_{I\in[0,1]}\{R(2,0,I) - 2\lambda_Y p(\tau) I\}$, and define $I_{0,2}^*(\tau)$ analogously. Then

$$\big(R(1,1,I_{2,0}^*(\tau)) - 2\lambda_Y p(\tau) I_{2,0}^*(\tau)\big) - \big(R(2,0,I_{2,0}^*(\tau)) - 2\lambda_Y p(\tau) I_{2,0}^*(\tau)\big) = R(1,1,I_{2,0}^*(\tau)) - R(2,0,I_{2,0}^*(\tau)).$$

By Lemma F.1, we know that for all I,

$$\lambda_Y\big(\mathbb{Y}(1,1,I) - \mathbb{Y}(2,0,I)\big) + \lambda_V\big(\mathbb{V}(1,1,I) - \mathbb{V}(2,0,I)\big) > 0.$$

With the cost-bounds assumption (8), the additional term $\lambda_V(c_L - c_H)$ does not overturn this inequality, so that

$$R(1,1,I) - R(2,0,I) > 0 \quad \text{for all } I \in [0,1].$$

Therefore, in particular,

$$R(1,1,I_{2,0}^*(\tau)) - R(2,0,I_{2,0}^*(\tau)) > 0.$$

The same argument shows the $(1,1)$ bundle strictly dominates $(0,2)$ at τ. Therefore, if $S_L^*(\tau) + S_H^*(\tau) = 2$, the unique maximizer has $(S_L^*(\tau), S_H^*(\tau)) = (1,1)$, so

$$S_L^*(\tau) < 2 \qquad \text{and} \qquad S_H^*(\tau) < 2.$$

□

Proof of Proposition 6.1(a). Let $I_0 := I^*_{g_1}(0) = I^*_{g_2}(0)$. For each group $g \in \{g_1, g_2\}$, define the rescaled return function

$$\widehat{R}_g(S_\theta, S_{\theta'}, I) \;:=\; \frac{1}{\lambda_Y^g}\, R(S_\theta, S_{\theta'}, I).$$

Then, for any I with $2I > I_0$, define

$$\widehat{f}_{g_1}(I) :=\; p^I - \frac{\widehat{R}_{g_1}(1,1,I) - \widehat{R}_{g_1}(0,1,I_0)}{2I - I_0}, \qquad \widehat{f}_{g_2}(I) :=\; p^I - \frac{\widehat{R}_{g_2}(1,1,I) - \widehat{R}_{g_2}(1,0,I_0)}{2I - I_0}.$$

By definition,

$$\tau^+_{g_1} \;=\; \inf_{2I>I_0} \widehat{f}_{g_1}(I), \qquad \tau^+_{g_2} \;=\; \inf_{2I>I_0} \widehat{f}_{g_2}(I).$$

Let $\tilde{I}$ be such that

$$\widehat{R}_{g_1}(1,1,\tilde{I}) - \widehat{R}_{g_1}(0,1,I_0) \;<\; \widehat{R}_{g_2}(1,1,\tilde{I}) - \widehat{R}_{g_2}(1,0,I_0).$$

Define the numerator gap

$$\widehat{g}(I) \;:=\; \big[\widehat{R}_{g_2}(1,1,I) - \widehat{R}_{g_2}(1,0,I_0)\big] \;-\; \big[\widehat{R}_{g_1}(1,1,I) - \widehat{R}_{g_1}(0,1,I_0)\big].$$

Then $\widehat{g}(\tilde{I}) > 0$, and by continuity there exists a closed neighborhood U of $\tilde{I}$ and a constant $\eta > 0$ such that

$$\widehat{g}(I) \;\geq\; \eta \;>\; 0 \qquad \text{for all } I \in U.$$

Let $m := \min_{I\in U}(2I - I_0) > 0$. For every $I \in U$,

$$\widehat{f}_{g_2}(I) - \widehat{f}_{g_1}(I) = \frac{\widehat{g}(I)}{2I - I_0} \;\geq\; \frac{\eta}{m} \;=:\; \varepsilon \;>\; 0.$$

Taking infima over $U \subset D := \{I : 2I > I_0\}$ yields

$$\tau^+_{g_2} \;\geq\; \inf_{I\in U} \widehat{f}_{g_2}(I) \;\geq\; \inf_{I\in U} \widehat{f}_{g_1}(I) + \varepsilon \;\geq\; \tau^+_{g_1} + \varepsilon.$$

Hence $\tau^+_{g_1} < \tau^+_{g_2}$.

Now fix $\tau \in (\tau^+_{g_1}, \tau^+_{g_2})$. The rest of the argument proceeds exactly as in the baseline proof: there exists $I_1 \in D$ such that

$$\widehat{f}_{g_1}(I_1) < \tau,$$

which rearranges to

$$\widehat{R}_{g_1}(1,1,I_1) - \widehat{R}_{g_1}(0,1,I_0) > (2I_1 - I_0)\, p(\tau).$$

Multiplying through by $\lambda_Y^{g_1}$ recovers

$$R(1,1,I_1) - R(0,1,I_0) > \lambda_Y^{g_1}(2I_1 - I_0)\, p(\tau),$$

so at price $p(\tau)$, moving from $(0,1,I_0)$ to $(1,1,I_1)$ yields a strictly positive gain for group g_1. By Conditions (9) and (8), $(1,1)$ dominates $(2,0)$ and $(0,2)$ at I_1, so $(0,1)$-baseline agents diversify.

Meanwhile, because $\tau < \tau^+_{g_2}$, we have $\tau < \widehat{f}_{g_2}(I)$ for all I, which rearranges to

$$R(1,1,I) - R(1,0,I_0) < \lambda_Y^{g_2}(2I - I_0)\, p(\tau),$$

so $(1,0)$-baseline agents never add a θ'. By (9) and (8), they also never choose $(2,0)$, so they do not increase initiations.

Therefore, when $\tau \in (\tau^+_{g_1}, \tau^+_{g_2})$:

- All $(0,1)$-baseline agents diversify to $(1,1)$ at some $I_1 > I_0/2$.
- $(1,0)$-baseline agents make no change.
- Aggregate θ-type initiations increase, while aggregate θ'-type initiations remain unchanged.

□

Proof of Proposition 6.1(b). Fix baseline costs $c^0 = (c^0_\theta, c^0_{\theta'})$ with $c^0_\theta = c^0_{\theta'}$. Let $\tau^* \in \big(\tau^+_{g_1}(c^0),\, \tau^+_{g_2}(c^0)\big)$. Consider the prohibitive-cost *shock* c^1 defined as follows: for each agent k with group $g(k) \in \{g_1, g_2\}$, the post-shock effort-cost pair is

$$(c^k_\theta, c^k_{\theta'}) \in \big\{(c^1_\theta, c^0_{\theta'}),\ (c^0_\theta, c^1_{\theta'})\big\}, \quad \text{with} \quad c^1_\theta > \bar{c}_\theta,\ \ c^1_{\theta'} > \bar{c}_{\theta'},$$

so exactly one type is infeasible after the shock. The assignment of shocks is split evently across agents (independently of group g), and *baseline allocations are equivalent* across the two halves: the shares at $(0,0)$, $(1,0)$, $(0,1)$ match.

Let $\widehat{R}_g$ be as defined earlier, and let $I_0 := I^*_{g_1}(0) = I^*_{g_2}(0)$. For agent k (with group $g(k)$), define the *single-type* threshold subsidies at baseline costs c^0:

$$\widehat{\tau}^{(\theta)}_{1,k,(0)} := \inf_{I\in(0,1]} \Big\{ p^I - \frac{\widehat{R}_{g(k)}(1,0,I;c^0) - \widehat{R}_{g(k)}(0,0,0;c^0)}{I} \Big\}, \tag{12}$$

$$\widehat{\tau}^{(\theta)}_{2,k,(1)} := \inf_{2I>I_0} \Big\{ p^I - \frac{\widehat{R}_{g(k)}(2,0,I;c^0) - \widehat{R}_{g(k)}(1,0,I_0;c^0)}{2I - I_0} \Big\}, \tag{13}$$

$$\widehat{\tau}^{(\theta)}_{2,k,(0)} := \inf_{I\in(0,1]} \Big\{ p^I - \frac{\widehat{R}_{g(k)}(2,0,I;c^0) - \widehat{R}_{g(k)}(0,0,0;c^0)}{2I} \Big\}, \tag{14}$$

and analogously $\widehat{\tau}^{(\theta')}_{1,k,(0)}$, $\widehat{\tau}^{(\theta')}_{2,k,(1)}$, $\widehat{\tau}^{(\theta')}_{2,k,(0)}$ with $(1,0)$, $(2,0)$ replaced by $(0,1)$, $(0,2)$, respectively. For $(0,0)$ baselines, the pair $\big(\widehat{\tau}^{(\cdot)}_{1,k,(0)}, \widehat{\tau}^{(\cdot)}_{2,k,(0)}\big)$ yields 0/1/2 additional invitations without double counting, since by construction $\widehat{\tau}^{(\cdot)}_{2,k,(0)} \geq \widehat{\tau}^{(\cdot)}_{1,k,(0)}$.

Let the baseline state indicator be

$$B^k_{0,0} := \mathbf{1}\{s^k_0 = (0,0)\}, \qquad B^k_{1,0} := \mathbf{1}\{s^k_0 = (1,0)\}, \qquad B^k_{0,1} := \mathbf{1}\{s^k_0 = (0,1)\}.$$

For a θ-*only* agent after the shock, the induced change at subsidy τ is

$$\Delta S^k_\theta(\tau) = B^k_{0,0}\Big(\mathbf{1}\{\tau \geq \widehat{\tau}^{(\theta)}_{1,k,(0)}\} + \mathbf{1}\{\tau \geq \widehat{\tau}^{(\theta)}_{2,k,(0)}\}\Big) + B^k_{1,0}\,\mathbf{1}\{\tau \geq \widehat{\tau}^{(\theta)}_{2,k,(1)}\}, \tag{15}$$

and for a θ'-*only* agent,

$$\Delta S^k_{\theta'}(\tau) = B^k_{0,0}\Big(\mathbf{1}\{\tau \geq \widehat{\tau}^{(\theta')}_{1,k,(0)}\} + \mathbf{1}\{\tau \geq \widehat{\tau}^{(\theta')}_{2,k,(0)}\}\Big) + B^k_{0,1}\,\mathbf{1}\{\tau \geq \widehat{\tau}^{(\theta')}_{2,k,(1)}\}. \tag{16}$$

No changes when $2I \leq I_0$ for any τ. Optimality of $(1,0,I_0)$ and $(0,1,I_0)$ at $\tau = 0$ under c^0 implies, for all I,

$$\widehat{R}_g(2,0,I) - \widehat{R}_g(1,0,I_0) \leq (2I - I_0)\,p^I, \qquad \widehat{R}_g(0,2,I) - \widehat{R}_g(0,1,I_0) \leq (2I - I_0)\,p^I.$$

Hence, for any τ and any I with $2I \leq I_0$,

$$\big[\widehat{R}_g(2,0,I) - \widehat{R}_g(1,0,I_0)\big] - (p^I - \tau)(2I - I_0) \ \leq\ \tau(2I - I_0) \ \leq\ 0,$$

and analogously for $(0,2)$. Therefore no change is ever profitable when $2I \le I_0$, which justifies the domain $2I > I_0$ in (13) and its θ' analogue.

Ordering of single-type thresholds. For each move $m \in \{(1|0),(2|1),(2|0)\}$ and each agent k, define the per-unit (or per-increment) utility gains

$$\Phi_m^{\theta,k}(I) := \frac{\widehat{R}_{g(k)}(\theta\text{-bundle at } m; I; c^0) - \widehat{R}_{g(k)}(\text{baseline at } m; c^0)}{\text{units of } I \text{ at } m},$$

$$\Phi_m^{\theta',k}(I) := \frac{\widehat{R}_{g(k)}(\theta'\text{-bundle at } m; I; c^0) - \widehat{R}_{g(k)}(\text{baseline at } m; c^0)}{\text{units of } I \text{ at } m}.$$

Assumption 6.2 and $c^0_\theta = c^0_{\theta'}$ imply

$$\begin{aligned} & \Phi_m^{\theta,k}(I) \;\ge\; \Phi_m^{\theta',k}(I) \quad \text{for all feasible } I, \\ \Rightarrow \qquad \widehat{\tau}^{(\theta)}_{m,k} \;&=\; \inf_I \left\{p^I - \Phi_m^{\theta,k}(I)\right\} \;\le\; \inf_I \left\{p^I - \Phi_m^{\theta',k}(I)\right\} \;=\; \widehat{\tau}^{(\theta')}_{m,k}. \end{aligned} \tag{17}$$

That is, each θ single-type threshold is weakly lower than its θ' counterpart.

Aggregate comparison at τ^*. Let J be the set of θ-only agents and J^c the set of θ'-only agents after the shock; $|J| = |J^c|$ and baseline-state shares match by construction. Summing (15) over $k \in J$ and (16) over $k \in J^c$, and applying (17) state-by-state yields, for every τ (in particular for τ),

$$\sum_{k \in J} \Delta S^k_\theta(\tau) \;\ge\; \sum_{k \in J^c} \Delta S^k_{\theta'}(\tau). \tag{18}$$

Therefore, at the fixed τ^*, the aggregate increase in θ-type invitations is *weakly* larger than the aggregate increase in θ'-type invitations.

Equality cases. Equality in (18) occurs when τ^* is either strictly below all relevant single-type thresholds or weakly above all relevant single-type thresholds, namely

$$\tau^* < \begin{cases} \min\{\widehat{\tau}^{(\theta)}_{1,k,(0)},\, \widehat{\tau}^{(\theta')}_{1,k,(0)}\}, & \text{if } s^k_0 = (0,0), \\ \min\{\widehat{\tau}^{(\theta)}_{2,k,(1)},\, \widehat{\tau}^{(\theta')}_{2,k,(1)}\}, & \text{if } s^k_0 = (1,0), \\ \min\{\widehat{\tau}^{(\theta)}_{2,k,(1)},\, \widehat{\tau}^{(\theta')}_{2,k,(1)}\}, & \text{if } s^k_0 = (0,1), \end{cases}$$

or

$$\tau^* \ge \begin{cases} \max\{\widehat{\tau}^{(\theta)}_{1,k,(0)},\, \widehat{\tau}^{(\theta')}_{1,k,(0)}\}, & \text{if } s^k_0 = (0,0), \\ \max\{\widehat{\tau}^{(\theta)}_{2,k,(1)},\, \widehat{\tau}^{(\theta')}_{2,k,(1)}\}, & \text{if } s^k_0 = (1,0), \\ \max\{\widehat{\tau}^{(\theta)}_{2,k,(1)},\, \widehat{\tau}^{(\theta')}_{2,k,(1)}\}, & \text{if } s^k_0 = (0,1). \end{cases}$$

I now show that each of the six equality cases is feasible under the maintained assumptions by showing that a small, controlled change to the return function—"perturbations" that are allowable under the model assumptions—can allow $\widehat{\tau}^{\theta}_{m,k}$ and $\widehat{\tau}^{\theta'}_{m,k}$ to be greater or lesser than τ^*, without changing the key features of the model.

Consider a modified return function

$$\widehat{R}^{(\eta,\gamma)}_g(S_\theta, S_{\theta'}, I) := \widehat{R}_g(S_\theta, S_{\theta'}, I) \ - \ \eta\, I\,(S_\theta + S_{\theta'}) \ + \ \gamma\, I\, S_\theta S_{\theta'}, \tag{D}$$

with parameters $\eta, \gamma \in \mathbb{R}$. The $-\eta$ term subtracts the same multiple of I for every single-type bundle, while the $+\gamma$ term only affects the mixed-type bundle $(1,1)$. On single-type bundles ($S_\theta S_{\theta'} = 0$), the γ-term vanishes, so the $-\eta$ term shifts *every* single-type threshold by exactly $+\eta$:

$$\widehat{\tau}^{(\cdot)}_{m,k}(\eta,\gamma) = \widehat{\tau}^{(\cdot)}_{m,k}(0,0) \ + \ \eta, \qquad m \in \{(1|0), (2|1), (2|0)\}. \tag{19}$$

This means that, by choosing $\eta > 0$, all subsidies required to induce an additional invitation increase, and by choosing $\eta < 0$, all subsidies required to an induce an additional invitation decrease. The relative ordering described above is maintained, regardless of η.

Although agents can never choose a mixed bundle because of the effort-cost shock, note that we need to ensure that τ^* is still within the assumed interval that is defined using $(c^0_\theta, c^0_{\theta'})$, where mixed bundles are feasible, for values of η and γ. Note that the perturbation shifts both groups' f_g by the same continuous function of (η,γ):

$$f^{(\eta,\gamma)}_g(I) = p^I - \frac{\widehat{R}^{(\eta,\gamma)}_g(1,1,I) - \widehat{R}^{(\eta,\gamma)}_g(0,1,I_0)}{2I - I_0} = \Big(p^I - \frac{\widehat{R}_g(1,1,I) - \widehat{R}_g(0,1,I_0)}{2I - I_0}\Big) + \eta - \gamma\,\frac{I}{2I - I_0}.$$

Thus, both f_{g_1} and f_{g_2} move together under this shift. By continuity, regardless of η, we can adjust γ so that the same τ^* still lies strictly between $\tau^+_{g_1}(c^0;\eta,\gamma)$ and $\tau^+_{g_2}(c^0;\eta,\gamma)$.

Case 1: $\tau^* < \min\{\widehat{\tau}^{(\theta)}_{1,k,(0)}, \widehat{\tau}^{(\theta')}_{1,k,(0)}\}$ when $s^k_0 = (0,0)$.

By (19), pick $\eta > \tau^* - \min\{\widehat{\tau}^{(\theta)}_{1,k,(0)}(0,0), \widehat{\tau}^{(\theta')}_{1,k,(0)}(0,0)\}$ so that $\tau^* < \min\{\widehat{\tau}^{(\theta)}_{1,k,(0)}(\eta,\gamma), \widehat{\tau}^{(\theta')}_{1,k,(0)}(\eta,\gamma)\}$. (For completeness: the same choice of η also ensures $\tau^* < \min\{\widehat{\tau}^{(\theta)}_{2,k,(0)}(\eta,\gamma), \widehat{\tau}^{(\theta')}_{2,k,(0)}(\eta,\gamma)\}$, so $(0,0)$ agents add none.)

Case 2: $\tau^* < \min\{\widehat{\tau}^{(\theta)}_{2,k,(1)}, \widehat{\tau}^{(\theta')}_{2,k,(1)}\}$ when $s^k_0 = (1,0)$.

Choose $\eta > \tau^* - \min\{\widehat{\tau}^{(\theta)}_{2,k,(1)}(0,0), \widehat{\tau}^{(\theta')}_{2,k,(1)}(0,0)\}$ and use (19).

Case 3: $\tau^* < \min\{\widehat{\tau}^{(\theta)}_{2,k,(1)}, \widehat{\tau}^{(\theta')}_{2,k,(1)}\}$ when $s^k_0 = (0,1)$.

Same argument as Case 2.

Case 4: $\tau^* \geq \max\{\widehat{\tau}^{(\theta)}_{1,k,(0)}, \widehat{\tau}^{(\theta')}_{1,k,(0)}\}$ when $s^k_0 = (0,0)$.

Pick $\eta < \tau^* - \max\{\widehat{\tau}^{(\theta)}_{1,k,(0)}(0,0), \widehat{\tau}^{(\theta')}_{1,k,(0)}(0,0)\}$ (i.e., a sufficiently negative η) and use (19) so that $\tau^* \geq \max\{\widehat{\tau}^{(\theta)}_{1,k,(0)}(\eta,\gamma), \widehat{\tau}^{(\theta')}_{1,k,(0)}(\eta,\gamma)\}$. (Again, the same choice yields $\tau^* \geq \max\{\widehat{\tau}^{(\theta)}_{2,k,(0)}(\eta,\gamma), \widehat{\tau}^{(\theta')}_{2,k,(0)}(\eta,\gamma)\}$, so $(0,0)$ agents add two on both sides.)

Case 5: $\tau^* \geq \max\{\widehat{\tau}^{(\theta)}_{2,k,(1)}, \widehat{\tau}^{(\theta')}_{2,k,(1)}\}$ when $s^k_0 = (1, 0)$.

Choose $\eta < \tau^* - \max\{\widehat{\tau}^{(\theta)}_{2,k,(1)}(0, 0), \widehat{\tau}^{(\theta')}_{2,k,(1)}(0, 0)\}$ and use (19).

Case 6: $\tau^* \geq \max\{\widehat{\tau}^{(\theta)}_{2,k,(1)}, \widehat{\tau}^{(\theta')}_{2,k,(1)}\}$ when $s^k_0 = (0, 1)$.

Same argument as Case 5.

In all six cases, by adjusting η, we can move τ^* below all thresholds (so no agent moves) or above all thresholds (so everyone moves equally), thereby making each of the six equality cases feasible. The γ parameter ensures that τ^* continues to sit inside the interior interval from part (a), so the link back to the original proposition is preserved. □