Transactions Costs and Social Distance in Philanthropy: Evidence from a Field Experiment*

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Abstract

The importance of various motivations for altruistic behavior is still an open question. We use data from a field experiment at Kiva, the online microfinance platform, to examine the role of transactions costs and social distance in philanthropy. Requests for loans are either written in English or another language, and our treatment consists of posting requests in the latter category with or without translation. We find evidence that relatively small transactions costs have a large effect on the share of funding coming from speakers of languages other than that in which the request was written. Social distance plays a smaller role in funding decisions. Additionally, our results demonstrate the importance of a *lingua franca*.

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1 Introduction

A growing literature seeks to identify the motivations for other-regarding behavior. In particular, the effects of social identity and social distance - the perceived degree of closeness or

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kinship between individuals - in philanthropy are attracting increasing attention, though there is little evidence on the relative importance of these factors compared to others, such as transactions costs or signals of quality about a particular charity. This paper examines the results of a field experiment at Kiva, the online peer-to-peer microfinance platform. Loan requests are posted in English (60%) or a foreign language (40%); the experiment consists of leaving foreign language requests untranslated or treating them with translation. Comparing the share of funding for requests originally written in English, translated from a foreign language, or left untranslated, we provide evidence on the relative importance of transactions costs and of social distance operating via language. The former effect is identified using random variation and the latter using the original language of the request. We find that, at least in this context, relatively small transactions costs have large effects, and social distance does not seem have a major influence on funding decisions.

Strictly speaking, those who make funds available through Kiva are making loans, not gifts. However, given that no interest is paid, it is possible to purchase gift cards to create accounts for others, and Kiva's statements of purpose focus on helping others and building a community, the approach seems more akin to charitable giving than lending. As such, we feel that the language of philanthropy is appropriate in discussing behavior in this context.

As Kiva is an international platform with an English interface, our results also demonstrate the value of *lingua franca* - a common language between individuals who do not share a mother tongue - by allowing lenders and borrowers that are either proficient in English or have access to translation technology to exchange funds. While the international trade literature has investigated the effects of language and culture on bilateral trade by incorporating language dummies, common language indicator and linguistic distance into the standard gravity model (Frankel (1998)), the importance of English as a *lingua franca* in facilitating trade flows has only recently been documented (Ku and Zussman (2010)).

In a different vein, our work addresses the funding of microfinance, at least in a specific, though impactful, context. Some feel that "there are good reasons for excitement about the promise of microfinance" (Morduch (1999a)), but skeptics doubt that small-scale loans could alleviate poverty on a meaningful level (Becker (2011) and Bateman (2010)). Reflecting the importance of microfinance in public discourse, the Nobel Peace Prize was awarded in 2006 to Mohammad Yunus, the founder of the Grameen Bank and a leading advocate for the approach.[1]

[1]Perhaps even more indicative of the high profile of microfinance, no less a cultural touchstone than *The Simpsons* devoted a recent episode ("Loan-A-Lisa," original airdate October 3, 2010) to the idea and featured Yunus as a guest star. In the episode, Lisa Simpson browses a Kiva-like website – and chooses to loan to a borrower in her own town, illustrating the potential influence of social distance on funding decisions.

By 2009, the microfinance industry has initiated loans for more than 190 million clients (Reed (2011)). Yet the "success [of microfinance] has yet to be demonstrated despite glowing appraisals" (Posner (2006)) and recently, allegations of abuses have sparked mass defaults in India (Polgreen and Bajaj (2010)). A related industry, direct peer-to-peer lending, also exists in the United States. It does face some problems with fraud and default risk, though, as discussed in a recent New York Times article (Lieber (2011)). There is also a growing trend of "crowdfunding," or raising small donations online to fund creative projects, often through websites similar in spirit to Kiva (The Economist (2010)). Belleflamme, Lambert, and Schwienbacher (2010) lay out a theoretical model to rigorously define the attributes of crowdfunding and provide some stylized facts based on a survey. Ajay, Catalini, and Goldfarb (2011) explicitly discuss Kiva in the context of crowdfunding and argue that issues of social distance are similar to those of more for-profit oriented platforms since "even individuals who commit funds to projects for non-pecuniary reasons are likely to be sensitive to the types of costs that traditionally favor financial transactions between co-located individuals."

External validity is always a concern in field experiments of this nature. Kiva has a particular mission, and the types of donors and giving behavior may not be the same as those for other charities, even as Kiva's impact is substantial, with about 830,000 active users who have made loans totaling more than $350 million, funding nearly 870,000 entrepreneurs (82% female) in 66 countries.[2] Given the scope of Kiva's operations and the nature of our experiment, our findings shed light on the importance of social distance, transactions costs, a lingua franca, and the funding of microfinance.

The paper is organized as follows: Section 2 discusses the related literature. In section 3 we delve further into Kiva's mission and structure. The design of the experiment and the data are presented in Sections 4 and 5. In Section 6 we discuss our empirical approach. Section 7 presents the results; a battery of robustness checks are presented in 7.2. We conclude in section 8.

2 Literature Review

Our work is related to several branches of the literature on the motivations for altruism. A number of researchers have examined the impact of social distance in other-regarding behavior, motivated by social identity theory, developed in Tajfel and Turner (1979) and formalized in economics by Akerlof (1997) and Akerlof and Kranton (2000). In this context, the hypothesis is that individuals will treat in-group members more generously; Chen and Li (2009) provide a

[2] See `http://www.kiva.org/about/facts`.

thorough review of the relevant literature. Our work examines this issue from a new perspective - namely, shared language - and provides more evidence on the subject.

A large subset of these studies are lab experiments with artificial or induced group identities, which tend to show the influence of social distance. For instance, Chen and Li (2009) assign groups based on preferences for different artists, and find that individuals are more charitable and show more reciprocity towards those in their group. Charness, Rigotti, and Rustichini (2007) find that group members "affects behavior in a strategic environment, even if this membership provides no information and has no effect on payoffs... [though] groups need to be salient to be important." Buchan, Johnson, and Croson (2006), using artificial groups in an investment game in four different countries, find "that country of origin significantly influences [other-regarding preferences], but also find mixed support for the relationship between [other-regarding preferences] and social distance" in different countries.

When these group identities may be more salient, though, the effects of social distance are mixed. Charness, Haruvy, and Sonsino (2007) compare altruistic behavior in classroom and more anonymous Internet settings. Individuals exhibited other-regarding preferences, but the researchers "were surprised at how little difference [they] observed between the treatments, particularly since... classroom experiments are nearly the polar opposite [of Internet experiments] with respect to social distance." There is some evidence that reducing social distance through showing photographs of other participants (Andreoni and Petrie (2004)) or revealing the names of other participants (Charness and Gneezy (2008)) increases altruism, though in some contexts "strategic considerations crowd out impulses toward generosity or charity" (Charness and Gneezy (2008)). Breman and Granstrom (2008) develop a dictator game in which the recipient is in a developing country. The treatments attempt to vary social distance, as measured by the identifiability of the recipient, by revealing a photograph, information about the recipient, or both. Unlike Charness and Gneezy (2008) and Andreoni and Petrie (2004), however, they find no effect of social distance relative to the baseline anonymity treatment.

Less stylized experiments have shown similarly mixed evidence. Glaeser, Laibson, Scheinkman, and Soutter (2000) find that "when individuals are closer socially, both trust and trustworthiness rise... national and racial differences between partners strongly predict a tendency to cheat one another." Similarly, Leider, Mobius, Rosenblat, and Quoc-Anh (2009) decompose giving into baseline altruism, directed altruism, and enforced reciprocity using a series of online experiments that take advantage of social networks. They find that "generosity... decreased with social distance." Shang, Reed, and Croson (2008) conduct a field experiment with a public radio station and show that donors gave more money if told that previous donor

of the same gender gave a large contribution. DellaVigna, List, and Malmendier (forthcoming) examine social pressure in door-to-door experiments; importantly, the intended charity is also varied between "a local children's hospital, which has a reputation as being a premier hospital for children, and an out-of-state charity, that most solicitees are unaware of." They estimate much higher social pressure costs for the in-state charity, which can be interpreted as preference for less distant recipients of philanthropy. On the other hand, List and Price (2009), in door-to-door solicitations that examine the match between the race and gender of the solicitor and prospective donor, "provide evidence that social connection per se has minimal impact on contribution decisions," but rather that "individuals act upon stereotypes and are more cooperative with people perceived to be more helpful or trustworthy." Fong and Luttmer (2011) find similar results, indicating that individuals do not respond to race directly in giving decisions. Their experiment manipulates both the perceived worthiness and race of potential recipients of philanthropy and find that "respondents rate recipients as relatively more worthy when shown pictures of recipients from their own racial group," though giving does not vary substantially by race when worthiness is held constant.

Two non-experimental papers also shed light on social distance. Meer (2011), studying social pressure and using administrative data from a private selective research university, finds that characteristics shared between solicitor and donor lead to a higher likelihood of giving and a larger amount given, conditional on giving. On the other hand, Ajay, Catalini, and Goldfarb (2011)'s recent work on crowdfunding examines the effects of geographic proximity in investments on Sellaband, a crowdfunding platform for aspiring musicians. Controlling for "the entrepreneur's offline social network," they find that "investment patterns over time are independent of geographic distance between entrepreneur and investor." Overall, it seems fair to state that there is no definitive picture of the effects of social distance on altruism. Our work adds to the discussion on this unresolved issue.

As discussed below, we are also concerned about how signals of the quality of a charity affect giving. Vesterlund (2003) develops a model in which charities can signal their quality by announcing donor contributions. List and Lucking-Reiley (2002) find that larger amounts of seed money and leadership gifts led to greater giving; they posit that these gifts indicate the quality of the charity. Borgloh, Dannenberg, and Aretz (2010) present experimental evidence on donor preferences for different charities, controlling for reputation by using only certified charities. Within each of four causes, they offer a choice of a relatively small and a relatively large charity. Information gathered after the experiment indicated that those who gave to large organizations did so because of their perceived professionalism and a higher likelihood

of achieving their objectives. There is some evidence in the social psychology literature that individuals with accents or less proficient English skills are judged as less credible (Lev-Ari and Kaysar (2010)); we address the presence of English speakers as a signal of quality below.

Huck and Rasul (2010), in a paper that informs the interpretation of our results, vary transactions costs in a carefully-designed field experiment. Namely, in the treatment condition, individuals do not have to copy a small amount of information from a letter to an enclosed bank transfer form in order to make a gift. Eliminating this relatively minor inconvenience, though, "increased response rates by 26% relative to the baseline treatment" - raising response from 2.7% to 3.4%. They conclude that "if non-response is due to transactions costs, attempts to change default options or to reduce the transactions costs of making and implementing decisions can have large effects on outcomes." We also find large effects of fairly minor transactions costs in a different context, in which donors are deciding between options rather than making a decision on the extensive margin, that is, whether or not to make a donation.

3 Kiva

Founded in 2005, Kiva is an online platform that facilitates lending relationships between socially-motivated lenders and developing-world entrepreneurs. Kiva's mission is to alleviate poverty by engaging the public in microfinance. Loans are targeted towards individuals or groups of borrowers and yield zero interest for lenders.

Kiva collaborates with Micro Finance Institutions (MFIs) in developing countries. The main role served by MFIs is to screen borrowers. Kiva performs due diligence and training at each MFI prior to allowing it to post requests to assess its stability, governance, and to prevent fraud. Upon approval, Kiva maintains its due diligence through surveys and periodic visits to the MFIs' entrepreneurs. Further, each MFI has an upper limit on the amount its borrowers can request per calendar month. The limit, which ranges from a few thousand dollars to a quarter of a million dollars, is based on the MFI's tenure with Kiva and on its financial strength. Requests that are submitted after the MFI has reached its limit are backlogged and posted at the beginning of the following month. Transactions are made through Kiva in United States dollars, but lenders repay in their local currency. As a result, foreign currency fluctuations can result in repayments that differ from the original amount lent. Kiva allows MFIs either to carry all the foreign exchange risk or to pass on the risk of currency devaluations over 20% of the value of the loan to the lenders.

A potential borrower is screened by a local MFI which disburses a microloan from its own financial resources. A loan officer at the MFI assists the borrower in building an

internet profile which is submitted to Kiva. The profile includes a brief biography, loan amount, repayment schedule and purpose and can be written in English, Spanish, French, Russian or Portuguese; in our analysis, we omit loan requests that were originally written in Portuguese and Russian due to small sample size. Volunteers at Kiva translate non-English requests and edit those written in English prior to posting them in the website, since most MFI loan officers are local workers who either do not speak English or whose English is poor. A request's web page includes the borrower's profile together with information on the MFI including the time the MFI has been partnering with Kiva, the number of loans and their volume and the default rate of previous loans originated through Kiva. Once a request is posted, its content cannot be changed. Requests are presented in a list sorted by an algorithm favoring requests that have been posted or attracted bids recently. In addition, requests with a greater average number of bids per hour posted are presented closer to the top of the list.

Potential lenders from all around the world browse loan requests and choose entrepreneurs they wish to support. Upon completing their lending activity, lenders are asked to donate money to Kiva to support its operational expenses. Loan requests have 30 days to reach full funding. If a loan reaches its target, Kiva transfers money from the lenders to the MFI. Kiva does not transfer funding if the request is not fully funded. Thus, as long as requests are not funded, MFIs carry the risk of default. This risk is transferred to the individual lenders as soon as requests are fully funded. As a result, MFIs select borrowers that are very likely to be funded. This at least partially explains the observation that it is extremely rare - 0.25% in our sample - for loan requests not to be fully funded. While lenders receive no interest, loan fees and interest rate paid by borrowers are, on average, 38 percent. [3] Loans are repaid according to the repayment schedule presented in the loan web page. Loans can be repaid monthly, quarterly or just once at the end of the loan term. The repayment schedule, chosen jointly by the entrepreneur and the loan officer, is based on the expected time in which the entrepreneur would accumulate enough money to repay the loan. Loan collection is performed by the MFIs, which transfer repayments to Kiva for distribution to lenders.

Kiva allows borrowers to borrow amounts as large as $10,000, but the average loan amount is $450 and is scheduled to be repaid 11 months, on average, after its origination. Borrowers reside in 54 countries with Peru and the Philippines (about 15% each) and Nicaragua,

[3] MFIs can be NGOs or for-profit organizations. The total amount originated by a loan officer is low relative to the industry standards, even at developing countries. The reason is that loans are small and that loan officers that operate in villages serve only a few borrowers. According to Kiva, the broad majority of the interest payments reflect operating expenses from serving borrowers rather than financial expenses of borrowing the money to lend to micro-entrepreneurs. Rigbi (2011) explores the effects of interest rates in Prosper.com, a similar online person-to-person loan marketplace operating in the US only.

Cambodia, and Ghana (about 7% each) having the largest share of borrowers. Projects are associated with 15 sectors of the economy, assigned by Kiva; these sectors can be used by lenders to filter requests. The most common are food and retail (about 28% each) and agriculture (15%). The average default rate of loans at Kiva is 1.04%. One explanation for this low rate is MFIs' practice of covering entrepreneurs' defaults in order to keep their published default rates low. This practice, which is now forbidden by Kiva, was allowed throughout most of 2009.[4] As a general rule, though, microfinance is characterized by low default rates. For example, the default rate at the Grameen Bank from 1985 to 1994 was about 1.5% (Morduch (1999b)). Greater detail is provided in Section 5.

4 Experimental Design

Loan requests submitted to Kiva are written in English or in a foreign language. Requests written in a foreign language are translated to English prior to being posted in the website. The loan request's web page includes the translated text along with the original text written in a foreign language. Kiva's translators are volunteers who are screened using a special test designed with a set of translation problems common to Kiva loans. About 50% of the volunteers are accepted and are required to go through training before working independently on incoming requests.

Beginning on August 15, 2009 incoming loan requests in a foreign language were randomly assigned for treatment – i.e. being translated to English – with a probability of 0.7. Randomization was performed by Kiva's server. From September 18, 2009 to October 18, 2009 the probability decreased to 0.5. Requests that were not assigned to treatment were immediately posted to the website conditional on the MFI being below its monthly limit. Other requests were first translated and posted after verifying that the funding MFI was not above its limit.[5]

Figures 1 and 2 exhibit two loan requests that were written in French. While the request featured in Figure 1 was translated to English, the request presented in Figure 2 was posted in without any changes. Note that even the untranslated request includes some information in English, such as the sector, activity, and repayment schedule. As such, lenders who cannot read the untranslated description of the borrower may still choose to make a loan. If the entire

[4] See `http://www.kiva.org/updates/kiva/2010/02/10/update-on-recent-change-in-default.html`.

[5] In addition to translating foreign language loan requests, Kiva's volunteers edit requests that were originally written in English. The experimental design described above applies also to English loan requests. We find that editing English requests only slightly increase their readability, as measured by the indices described below, and that it has a small effect on the pace at which these requests are funded. Thus, we bundle edited and non-edited English requests throughout the analysis. Full results are available on request.

web page was untranslated, it is easy to imagine that the estimated effects would be much larger.[6]

5 Data

Our data contain information on loan requests posted between August 15, 2009 and October 18, 2009 that were written in English, Spanish or French. Thus, these requests were potentially active until November 18, 2009. We observe lenders' decisions on which requests to fund over this time period, as well as their country of residence. A natural specification would be to estimate the effect of interactions between borrower and lender gender on funding decisions, but unfortunately, we do not observe lenders' gender. A total of 10,221 loan requests were posted throughout the sample period. These requests were funded by 77,592 lenders who made 271,710 individual loans. Among these lenders, 59,735 reside in English speaking countries, 622 in Spanish speaking countries and 1,063 in French speaking countries.[7]

We observe virtually all of the information presented on each loan request's web page, including the amount requested, the number of male and female borrowers, the repayment term, the economic sector to which the loan is targeted, the borrower's brief statement, and information on the MFI originating the loan. Importantly, the original language of the request and whether the request was translated or edited are observed. As detailed below, we supplement the analysis by using the *Lingua::EN:Fathom* package in PERL to extract readability indices for requests posted in English as well as statistics related to the length for English and non-English loan requests.[8]

Figure 3 presents the number of new requests, calculated daily, by their original language. The sharp jumps observed in the number of new requests on the first day of each month are driven by requests that were submitted to Kiva earlier, but whose posting were postponed due to the funding MFI's borrowing limit.[9] We demonstrate that the timing of posting new requests exhibits similar patterns in the treatment and control groups in Figure 4. The figure

[6]Due to space limitations, only the main body of the request is reproduced. The full page, including the amount requested and information about the MFI, can be viewed by following the links.

[7]Data on languages are taken from the CIA World Factbook - `https://www.cia.gov/library/publications/the-world-factbook/fields/2098.html`. Canada is the only country in our data that has two of the languages of interest as official languages. We define Canadian lenders as either English or French speakers, depending on their province of residence. 81.8% of Quebecois named French as their primary language (Statistics Canada (2006)). We therefore define Quebecois lenders as French speakers, while other Canadian lenders are defined as English speakers.

[8]We obtain three common readability indices: Kincaid, Flesch and Fog. The readability indices are based on the average number of words in a sentence, average number of syllables in a sentence and the percent of complex words defined as words with three or more syllables. For more information on the Fathom PERL package and the readability indices, see `http://search.cpan.org/dist/Lingua-EN-Fathom/lib/Lingua/EN/Fathom.pm`.

[9]While no request were left untranslated past October 18, 2009, some such requests were posted on November 1, 2009 due to MFIs exceeding their monthly limit in October.

presents the share of new requests posted in any given day and treatment status out of the total number of requests posted in that week in the same language and treatment status.

Table 1 contains information on the number of requests by the borrower's country of residence. In addition, for each country the number of MFIs partnering with Kiva as well as the number of requests written in each language are provided. The table demonstrates that requests of borrowers from any country are written in at most two languages and that the number of MFIs partnering with Kiva in a country is correlated with the number of requests posted form that country. Furthermore, only one MFI operates in multiple countries.

Table 2 provides loan request descriptive statistics by language and treatment status. The characteristics compared are the amount requested, borrowers' gender division and the term of the loan. Both mean values of each trait as well as t-statistics are presented. The t-statistics correspond to tests of mean equalities between the treatment and control groups in which sector by posting-day fixed effects are taken into account. In addition, we regress the treatment status on the loan request characteristics and find that the characteristics cannot explain whether a request was translated. This last finding together with the table demonstrate that loan request characteristics are almost perfectly balanced between treatment and control groups.

6 Empirical Approach

To understand a lender's decision to translate a request, it is useful to focus on a lender considering lending to a request. The lender considers the marginal benefit to him or herself and the marginal cost. This benefit includes the difference between the value of lending to that request and the expected value of moving on to another request, where the value of lending to a request partly depends on the social distance between the lender and the request. We define social distance as a mismatch between the language spoken in the lender's country of residence and the original language of the request. Therefore, when the original language of the request matches the lenders language, we expect a higher likelihood of funding and thus a higher funding share from speakers of that language. Cost, on the other hand, includes the opportunity and cognitive costs of processing and translating (if necessary) additional requests. Given that translation reduces the marginal costs, it is expected that translation would increase the funding share of lenders from English-speaking countries.

Our randomized field experiment allows us to identify the relative importance of social distance and transactions costs in loans to Kiva, based on several assumptions. In Card, DellaVigna, and Malmendier (2011)'s taxonomy, we follow the "competing models" approach.

We lay out these assumptions explicitly below and discuss their implications. However, since we do not have estimates of the costs associated with translation, we cannot identify structural parameters of a formal model. By 2009, when our experiment takes place, it is quite straightforward to get adequate translations of short passages from services such as Google Translate and Babelfish, which have greatly reduced the burden of interpreting text written in an unknown language. These costs therefore seem like a minor inconvenience at worst. A related concern is that potential lenders are not familiar with these services; however, given that they frequent an online microfinance website and are making loans to individuals in developing countries, it seems reasonable to presume that they are relatively sophisticated Internet users.[10]

Hypothesis 1: *Lenders face additional transactions costs for requests written in languages other than that spoken in their country of residence.*

Hypothesis 2: *Lenders from Spanish (French)-speaking countries face lower transactions costs for loans posted in English than for loans posted in French (Spanish).*

Hypothesis 3: *English (French; Spanish)-speaking country residents feel social distance from French and Spanish (Spanish and English; French and English) requests, irrespective of translation (if applicable).*

Hypotheses 1 and 2 lay out our beliefs about transactions costs in this experiment. Individuals face some costs for any loan, with the lowest being for loans written in the language spoken at their country of residence. Given that Kiva is an English-language website, we believe that all individuals have at least some fluency in English, suggesting that, on average, lenders from Spanish (French)-speaking countries face higher transactions costs for loans posted in French (Spanish) than for loans posted in English. We further posit in Hypothesis 3 that individuals feel less social distance, operating via language by itself, from requests *originally* written in the language of their country of residence, irrespective of whether those requests are translated or not.

The most natural approach to testing these hypotheses is to examine funding decisions using a set of lender-by-request combinations. Unfortunately, this is infeasible using our data. The set of choices that each lender faces consists of about 1,000 requests at a time and the only information available on lenders is their place of residence; this makes identification of the effect of treatment on lenders' giving intractable.[11] Our experiment does allow us to identify

[10] Based on Census ZIP code level data, we find that, on average, American Kiva lenders are at the 87^{th} percentile of the ZIP code average income distribution and at the 92^{nd} percentile of the share of Master's degree and above holders ZIP code distribution.

[11] We attempted to approximate this concept by creating observations corresponding to a loan granted by a lender on a given request as well as any loan request that was active when that loan was granted. For instance, if a lender gives to one particular request while there are six total active requests, six observations are created

the average treatment effect across lenders in the aggregate, though we are unable to delve into possible heterogeneity of lender types and their responses to transactions costs and social distance.

Another natural variable to consider is a loan request's funding probability. However, a key feature in Kiva's operation is that it allows its partner MFIs to pre-disburse funds to borrowers before their loan request is funded (and sometimes even before the request is posted). As a result, maintaining the financial stability of the partnering MFIs requires Kiva and its partners to avoid posting loan requests that would remain non-funded.[12] As such, we focus on the share of funding coming from residents of countries with different primary languages.

We estimate the following specification:

$$Y_{i,Lang} = \gamma_{0,Lang} + \gamma_{1,Lang} \cdot Spanish\ Translated_i + \gamma_{2,Lang} \cdot French\ Translated_i + \gamma_{3,Lang} \cdot Spanish_i + \gamma_{4,Lang} \cdot French_i + \epsilon_{i,Lang} \quad (1)$$

$Y_{i,Lang}$ is the share of loans that request i receives from lenders that reside in $Lang$-speaking countries, where $Lang$ is English, Spanish, or French. The coefficients $\gamma_{1,Lang}$ and $\gamma_{2,Lang}$ are the average treatment effects of translation from Spanish and French, respectively, on the funding share by residents of $Lang$-speaking countries. $\gamma_{3,Lang}$ and $\gamma_{4,Lang}$ are the effects of originating a loan in those languages on funding share by residents of $Lang$-speaking countries. Requests originally posted in English are the comparison group.[13] We estimate equations for each language separately.[14] Since the dependent variable is restricted to the range $[0, 1]$ and is

with the one the lender gave to being designated as a positive response. The essential assumption is that there is no instance in which lenders browse requests but decline to make any loan; this assumption, while limiting and somewhat arbitrary, reduces the possible combinations by several orders of magnitude. Regardless, the sample still results in over 160 million observations, each representing a potential lender-request combination. The percentage of potential lender-request combinations resulting in a positive response is a mere 0.10%. The results we found are similar in spirit to those in 7.1 and appear to provide support for the transactions costs of translation mechanism. However, the effects are necessarily extremely small, on the scale of 0.05 percentage point changes in probability. Given the low baseline response, the need to use a set of linear probability models rather than a choice model, and the very small effects, we exclude the results of this exercise from the paper; they are available on request.

[12] One possible concern is that since all requests are funded and lenders are participating for philanthropic reasons, they may be fairly indifferent about which requests they fund. It seems reasonable to believe, though, that lenders are not pure altruists and that they feel more warm glow from funding requests that appeal to them.

[13] A natural alternative to the estimated specification would be to pool requests written in a foreign language (Spanish/French) together. The results are similar to the results obtained from specification 1. However, for the results of this specification to be easily interpretable, two very strong assumptions are required. First, lenders from Spanish (French)-speaking countries face the same transactions costs for loans posted in Spanish and in French. Second, Spanish (French)-speaking country residents do not feel social distance from French (Spanish) requests. Therefore, we feel that separating the languages apart is the best approach.

[14] The value that the dependent variable takes across equations is not independent, since the share funded by speakers of one language crowds out funding by the speakers of other languages. One way to account for this is by estimating equations simultaneously. We find that the estimates are nearly identical if equations are estimated simultaneously; the coefficients generally differ in the fourth significant digit. Note also that we exclude the share funded by speakers of languages other than English, Spanish, and French, so those shares may not sum to 1. Including an equation for the share of funds from those other countries in the jointly estimated

censored for a non-negligible portion of the requests, particularly for the French and Spanish equations, we use a Tobit model. Richer specifications discussed below include vectors of sector-by-date controls, along with a set of loan request characteristics. Notably, the fact that requests are randomly assigned for translation guarantees consistent estimates of Equation 1 even in absence of the additional controls. Incorporating posting date fixed effects accounts for the differences in the number of active requests over time. A lower number of active requests likely results in a greater number of potential lenders per active request, possibly affecting funding decisions. Loan request characteristics include the dollar amount requested by borrowers, the number of borrowers of each gender and the number of months the borrower requested to amortize the loan.[15]

Our hypotheses give rise to a number of implications for the values of the coefficients in Equation 1. Beginning with those residing in English-speaking countries, the presence of transactions costs and social distance from foreign-language requests indicates that $\gamma_{3,English}$ and $\gamma_{4,English}$ should be negative. Translation eliminates the transactions costs so we expect that $\gamma_{1,English}$ and $\gamma_{2,English}$ will be positive; yet the presence of social distance means that the combined effects $\gamma_{1,English} + \gamma_{3,English}$ and $\gamma_{2,English} + \gamma_{4,English}$ will still be negative. Since the language being translated should not affect the cost paid, $\gamma_{1,English}$ and $\gamma_{2,English}$ should be equal. We can also test whether social distance from Spanish and French requests is equal for English speakers.

One may believe that the differences between untranslated and translated requests are instead due to social distance operating via language: requests posted without translation seem removed from the lender's experience and are passed over in favor of other, less remote requests. However, even for translated requests, the original text is shown on the web page (see Figure 1) along with the translation. Suppose social distance that operates via language was the only operative mechanism. One would then expect that translated and untranslated requests would capture the same share of funding. Our results indicate that this is not the case.

One compelling alternative explanation for these differences is that English requests are perceived to be of higher quality. One could imagine that lenders view MFIs without English speakers as being less competent. MFI characteristics such as length of time partnered

model does not substantially alter our results; additionally, there is no obvious pattern in the coefficients of interest in that equation. Full results are available on request.

[15] Another potentially relevant variable is the identity of the MFI originating the loan. For example, lenders might favor requests posted by one MFI due to better practices it employs in screening borrowers or due to the time the MFI has been partnering with Kiva and its portfolio performance. Few MFIs write their loan requests in more than a single language, making it is difficult to identify language effects separately from MFI effects. We discuss this issue further in section 7.2.1.

with Kiva, number of entrepreneurs funded, risk rating, and default rate are posted with every request, obviating some of the hypothesized proxy effect for quality. Kiva also stakes its reputation on maintaining MFI partners that are of high quality, and lenders come to Kiva to help individuals living in poverty in lesser-developed countries. It seems less likely, then, that the presence of translation in a request sends a particularly strong signal of quality about the MFI or the borrower that affects time-to-funding. Our results in Section 7.2.1 provide further evidence that this mechanism is not driving our results. It is, however, certainly possible that even within an MFI and given all the loan characteristics for which we control, the lack of translation sends a negative signal about the borrower. While Kiva posted a notice on their Frequently Asked Questions page explaining that some requests would no longer be translated, we cannot directly address this concern using our data.[16]

For Spanish and French speakers, we expect that own-language untranslated requests will capture the highest share of funding. If social distance operating via language is driving the results – that is, Spanish and French lenders seek requests originally written in those languages because they feel more kinship with those borrowers – there should be little difference in funding share between untranslated and translated requests for lenders from Spanish and French speaking countries. In addition, if lenders from Spanish and French-speaking countries experience the same social distance from requests written in English and in the other foreign language, then the same funding shares are expected in requests originally written in English and in requests translated from the other foreign language ($\gamma_{2,Spanish} + \gamma_{4,Spanish} = \gamma_{1,French} + \gamma_{3,French} = 0$). The presence of social distance and transactions costs imply a lower share of funding in the other foreign language translated requests than the own language requests ($\gamma_{2,Spanish} + \gamma_{4,Spanish} < \gamma_{3,Spanish}$ and $\gamma_{1,French} + \gamma_{3,French} < \gamma_{4,French}$). However, since funding share is effectively zero-sum, translation of requests to English introduces more English-speaking lenders who crowd out other lenders, thus reducing the share coming from own-language speakers ($\gamma_{1,Spanish} < 0$ and $\gamma_{2,French} < 0$). In addition, the partial fluency in English suggests lower funding share in requests posted in the other foreign language relative to requests posted in English ($\gamma_{4,Spanish} < 0, \gamma_{3,French} < 0$). An alternate hypothesis is that Spanish and French speakers dislike the act of translation or are angry at the quality of translation; while we cannot directly address this story, it seems fairly implausible. We can test for the presence of transactions costs by examining the effect of translation on requests in the other language. We discuss a number of other potential explanations for our results in 7.2.

If individuals are misclassified in the language categories, we expect that our estimates

[16] See `http://www.kiva.org/updates/kiva/2009/08/11/some-loans-may-look-little-different.html`.

of the effects of transactions costs will be attenuated. For instance, suppose all of those classified as English speakers were in fact fluent in Spanish and paid no translation costs for Spanish-language requests. In the absence of social distance, we would expect to see no difference in the share of funding provided by English-speaking lenders to Spanish-language requests; adding social distance in the form of affinity for Spanish might produce results showing that English speakers prefer Spanish-language requests. Given the results below, we are not greatly concerned about misclassification.

One concern in interpreting our results, as mentioned above, is the zero-sum nature of funding share. It may be that an increase in the share funded by a particular language group does not reflect a change in behavior by that group, as we posit, but rather a change in the behavior of a different language group. To investigate this possibility, we examine the effects of treatment on funding share immediately after a request is posted, when crowding-out is not a concern. The main insights of our analysis below are carried through: in this context, transactions costs have large effects relative to social distance operating via language. Full results are available on request.

7 Results

7.1 Funding Share

We examine how different groups of lenders are affected by the original and posted language of loan requests. Lenders are distinguished based on the predominant or official languages spoken in their country of residence. Specifically, we focus on lenders from English, Spanish and French speaking countries. For each loan request we calculate the share of lenders associated with each language. Table 3 presents the average raw shares for lenders from English, Spanish and French speaking countries, as well as lenders from countries in which languages other than the three analyzed are predominant.[17] In terms of lenders' country of residence, the table demonstrates that majority of lenders are from English-speaking countries. This group of lenders is dominated by American lenders, who are responsible for nearly two-thirds of the loans. In addition, there are more lenders from French speaking countries (mainly France and Quebec) than from Spanish-speaking countries (mainly Spain and Portugal). Furthermore, lenders from English-speaking countries have similar shares in requests that were originally written in Spanish and French, both translated and untranslated. Yet, the funding shares of Spanish speaking lenders in Spanish requests differ from their shares in French requests, and

[17]The sum of shares is lower than 1 due to missing country of residence for nearly 5% of the lenders (3,874 out of 77,592).

a similar pattern is observed for French-speaking lenders.

We estimate Equation 1, including posting-date-by-sector effects and the loan request characteristics mentioned in Section 6. The estimated coefficients of the loan request characteristics are not presented in Table 4, though are available on request.[18] While some characteristics have a statistically significant effect on the share of funding from speakers of a given language, none of the effects are particularly large (usually one or two orders of magnitude smaller than the treatment effects). No discernible pattern emerges, which is unsurprising given that an increase in the share of funding by speakers of one language reduces the share of funding available to others.[19]

The unconditional marginal effects are presented in Table 4, with each panel in the table corresponding to each language spoken at the lenders' country. For example, in Panel A, the dependent variable is the share of a loan granted by lenders from English-speaking countries. Standard errors clustered at the MFI level. Each result is supplemented with the p-values corresponding to tests of the null hypothesis that, conditional on the covariates, the overall effect of being translated from Spanish or French to English are the same as being originally posted in English. The null hypothesis cannot be rejected in any case except for one, namely, that the share of a request funded by borrowers from *Lang*-speaking countries that is originally posted in English is equal to the share of a translated French or Spanish request funded by borrowers from the same group of countries.

For the share from English speakers, we see that there is a statistically significant and negative effect for untranslated requests that does not exist for translated requests. If social distance that operates via language only was driving the results, there would be a difference in funding share between translated and original English requests. It seems clear that Spanish and French speakers take a larger share of untranslated requests written in those languages, but that English speakers are not affected once they are freed from the costs associated with translation and crowd out Spanish and French speakers from requests originally written in those languages but then translated. Moreover, if translation provided some negative signal of quality, we would also expect that translated requests would have a lower share of funding from English speakers than requests originally written in English; we take this as further evidence

[18] The length of the text of a loan request might be a relevant dependent variable if there are cognitive costs associated with reading and processing requests or if the length of a request is used by lenders as a quality signal. We experimented with specifications that include the length of the loan request. We used either the number of characters or number of words as the length variables, and included each of them as a linear variable and as a second order polynomial. We find that the estimated treatment effects are unchanged and that the length of the loan request is uncorrelated with the funding share.

[19] Jenq, Pan, and Theseira (2011) find that the loan request characteristics we focus on, as well as other traits reflected in the borrower's pictures such as the skin color and attractiveness of the borrowers have significant effect on the time it takes for a request to get funded.

that signals of quality are not driving our results.

Spanish and French speakers are substantially more likely to lend to untranslated requests written in their own language. Given that Spanish speakers provide about 0.9% of funds and French speakers provide about 3% of funds, the estimated effects on loan share for untranslated requests in Panels B and C of Table 4 are very large. This result could be driven by both social distance and transactions costs. There is no difference between untranslated requests written in the other foreign language and requests written in English, though this does not necessarily mean that lenders feel similar social distance from requests written in English and in the other foreign language.

For Spanish speakers, there is no effect of translating French requests, while for French speakers, there is statistically significant and negative effect of translating Spanish requests, though it is small. This suggests that transactions costs are effectively equal for English and the other foreign language, contradicting Hypothesis 2. For both Spanish and French speakers, translation of the home language is associated with a negative effect that fully offsets the positive untranslated own-language effect. There is no difference in funding share for requests that appear in English, regardless of their original language. One possible explanation for this result is that Spanish and French speakers are being crowded out by English-speaking lenders, who fund a larger share of translated loans. Another explanation is that the original, untranslated passage is listed after the translated passage. This could add an additional minor transactions cost, making French and Spanish less likely to give to those requests. If French and Spanish speakers felt strong kinship with requests originally posted in their language, it stands to reason that even in the presence of the attenuating effects discussed above, a higher share of funding would go to those requests regardless of translation.

All in all, the results for English speakers are strongly suggestive of a transactions costs explanation. We also believe that the results for French and Spanish speakers are also driven by transactions costs, but cannot completely discount the possibility that other forces are disguising the impact of social distance operating via language.

7.2 Robustness

7.2.1 Continents, Countries, and MFIs

One possible concern is that our estimates are proxying for continents, nationalities, former colonies, or the MFIs themselves rather than language. To address this question, we begin by including indicators for continent in our main specifications. We find no significant effects of

these indicators in any specification, and there is no effect on the variables of interest.[20] We also estimate specifications including the log of per capita GDP in the borrower's country to proxy for the level of poverty and the possibility that lenders feel that these borrowers are more deserving. This variable is also small, statistically insignificant, and has no effect on the variables of interest.

The results presented in Table 4 were obtained in regressions that do not control for the identity of the MFIs originating the loan. Few MFIs submit their loan requests in multiple languages.[21] Thus, it is difficult to separate MFI fixed effects from language effects. In order to verify that the results are not driven by the MFIs, we include MFI fixed effects instead of language effects. Note that this also subsumes country fixed effects, since nearly all of these organizations operate only in one country. We find that that estimated treatment effects are not markedly different from the effects presented in Table 4. This provides further evidence that it is language, rather than country or continent, that is driving our results.

Another concern is that the language MFIs choose to write their requests is endogenous, and as a result the comparison between requests originally written and English and requests written in a foreign language is biased. To account for this, we limit the analysis to MFIs that produce their loan requests in a single language; this has no qualitative effect on the results. We also control for MFI quality by incorporating MFI characteristics, such as the MFI's risk rating assigned by Kiva (which reflects the repayment risk associated with the MFI), the average interest rate paid by the MFI's borrowers, the total dollar amount lent by the MFI, whether the MFI carries the entire risk of foreign currency devaluations and the MFI's tenure with Kiva. We find that nearly all of the MFI characteristics are uncorrelated with the share of funding and that including them does not substantially change the results. As with all the discussion in 7.2, full results are available on request.

7.2.2 Treatment Intensity and Supply of Credit

One feature of the experiment is that the treatment intensity of incoming requests fluctuates throughout the experiment. Specifically, in the first month of the experiment the treatment intensity of incoming requests was 70%, but decreased to 50% in the second month. The results presented in Section 7.1 may be convoluted with fluctuating treatment intensity. Ignoring the treatment intensity might be a problem if, for example, there are a limited amount of lenders

[20] We also estimate our model for Africa and Latin America separately. Requests from African MFIs are written in either French or English, while those from Latin America are written in either Spanish or English. The treatment effects in these models are similar to those in 4.

[21] There are seven MFI that write their loan requests in multiple languages. These MFIs are responsible for about 18% of the loan requests in our sample.

willing to give to loan requests posted in Spanish. In this event, the estimated effect of translation might be biased. Additionally, other features of Kiva's procedures suggest that the treatment intensity changes over time. First, there is variability in requests' time-to-funding. Hence, even if the treatment intensity of *incoming* requests is fixed throughout the experiment, the treatment intensity of *existing* requests might not be fixed. Second, requests that were posted before the experiment started and that were listed in the website afterwards affect the treatment intensity. Figure 5 presents the time series of the treatment intensity by the original language. The figure spans from the beginning of the experiment on August 15, 2009 to November 18, 2009, the last day requests posted throughout the experiment could have still been funded. It is evident that the treatment intensity fluctuated during that time period.

In order to take these changes into account, we reproduce the funding share analysis presented in Section 7.1 while allowing the estimated treatment effects to depend on the treatment intensity. Specifically, each request was assigned to a quartile within the treatment intensity distribution based on the treatment intensity at the time the request was posted. We then estimate Equation 1 for sub-samples defined by the requests' quartiles. We find no discernable patterns in the results, suggesting that changes in the treatment intensity do not reverse our results.

To further verify that the supply of credit is not affected by translation, we estimate the relationship between the daily amount lent in requests originally written in each language and the treatment intensity. Since the time series of incoming requests presented in Figure 3 reveals a monthly trend, we include day-of-month controls. We find no correlation between the supply of credit and the treatment intensity. This suggests that the total amount of credit is not changing when requests are untranslated, but rather that the relative allocations are changing.

7.2.3 Readability

Another explanation that may induce differences in lenders' giving is the extent to which lenders can understand the brief information about the borrower that is included on the loan request page. Specifically, requests that were translated to English might be more or less understandable than requests that were originally written in English. To test the hypothesis that readability affects lending behavior, we calculate several readability indices, designed to measure comprehension difficulty, for loan requests that were posted in English.[22] The distributions of the values of the Kincaid index for each language are presented in Figure 6.

[22]We present results based on the Kincaid index. Similar results are obtained if we instead use the Flesch or the Fog indices, and full results are available on request.

The value of a passage's Kincaid index should be interpreted as the mean number of schooling years required to understand the passage. While requests that were originally written in English requires 8.41 years of schooling in order to be understood, the corresponding years of schooling for translated Spanish and French requests are 8.81 and 9.07, respectively; these differences are statistically significant. In addition, translated requests' Kincaid index values are less dispersed around their mean values. To test whether differences in loan requests' readability are associated with changes in lenders' giving behavior, we estimate Equation 1 augmented with a normalized readability index value. Since readability measures are only calculated for requests that were translated or originally written in English, untranslated requests are omitted. We find that a request's readability does not have an effect on the share of a request funded by different groups of lenders. In addition, the estimated language effects are qualitatively unchanged when controlling for any of the readability indices. We cannot, however, reject the possibility that more readable requests are easier to follow, resulting in lower transactions costs and more funding, but that requests written in more sophisticated language (reflected in a higher readability index) makes them seem of higher quality, also attracting more funders. If both mechanisms are operative and similar in magnitude, we would find no effect. Given the short length of these passages, the observable information on the MFI's quality, and that lenders have opted in to participating in Kiva's mission of providing funds to those living in poverty in lesser-developed countries, the latter mechanism seems unlikely. It therefore seems plausible that readability does not have a large effect on funding.

8 Conclusions

Using the results of a field experiment at a leading peer-to-peer microfinance lending website, we document the effects of language and translation on philanthropy. We examine the share of funding received from lenders living in countries with different predominant languages, and find that there is no difference between translated requests and those originally written in English for English speakers. Spanish and French speakers exhibit preferences for untranslated requests written in their language, but no preference for those requests when they are translated.

While we cannot completely reject alternate hypotheses, our findings are strongly suggestive that the transactions costs arising from translation, not social distance that operates via language or signals of quality, are the primary driver of our results. Our experiment provides more evidence on the effects of social distance, the importance of which are the subject of some contention in the altruism literature. We also find strong effects of transactions costs, which seem to be relatively underexamined in this literature. We also demonstrate the importance of

a *lingua franca*, which can lower transactions costs and enhance trade and capital flows among individuals with different native languages.

It may not be entirely surprising that small transactions costs have large effects, since lenders are browsing a large number of fairly similar requests. But given the immense number of charities — IRS Publication 78 lists over 830,000 charitable organizations entitled to deductible contributions — it is valuable to know that even small frictions can have large effects in this context.[23] Furthermore, it may also not be unexpected that the effects of social distance are small in this case. After all, social distance has many components and our finding is related to one aspect, language, after controlling for a great deal of other information about borrowers. Yet that this additional distance does not matter on the margin is instructive.

In terms of the broader applicability of our work, it is important to note that individuals who have Kiva accounts have already paid the fixed cost of setting up that account and are primed to make a donation, as opposed to facing a choice on the extensive margin of whether to give or not. The finding that even relatively small transactions costs have large effects is illuminating; it is quite possible that overall effects in other cases are even larger.

References

Ajay, A., C. Catalini, and A. Goldfarb (2011): "The Geography of Crowdfunding," *NBER Working Paper No. 16820*.

Akerlof, G. A. (1997): "Social Distance and Social Decisions," *Econometrica*, 65, 1005–1027.

Akerlof, G. A., and R. Kranton (2000): "Economics and Identity," *Quarterly Journal of Economics*, 115(3), 715–753.

Andreoni, J., and R. Petrie (2004): "Public Goods Experiments Without Confidentiality: A Glimpse Into Fund-Raising," *Journal of Public Economics*, 88(7-8), 1605–1623.

Bateman, M. (2010): *Why Doesn't Microfinance Work?: The Destructive Rise of Local Neoliberalism*. Zed Books Ltd.

Becker, G. (2011): "Overselling of Microfinance," *January 23, 2011,* `http://www.becker-posner-blog.com/2011/01/overselling-of-microfinance-becker.html`.

Belleflamme, P., T. Lambert, and A. Schwienbacher (2010): "Crowdfunding: An Industrial Organization Perspective," *Working Paper, Universite Catholique de Louvain*.

[23] See Internal Revenue Service (Publication 78) (2011)

Borgloh, S., A. Dannenberg, and B. Aretz (2010): "Experimental Evidence of Donors Preferences for Charities," *Center for European Economic Research Discussion Paper 10-052*.

Breman, A., and O. Granstrom (2008): "The More We Know, The More We Care? Identification and Deservingness in a Cross-Border Experiment," *Working Paper, University of Arizona*.

Buchan, N. R., E. J. Johnson, and R. T. Croson (2006): "Lets Get Personal: An International Examination of the Influence of Communication, Culture and Social Distance on Other Regarding Preferences," *Journal of Economic Behavior & Organization*, 60, 373–398.

Card, D., S. DellaVigna, and U. Malmendier (2011): "The Role of Theory in Field Experiments," *Journal of Economic Perspectives*, 25(3), 39–62.

Charness, G., and U. Gneezy (2008): "Whats in a Name? Anonymity and Social Distance in Dictator and Ultimatum Games," *Journal of Economic Behavior & Organization*, 68, 29–35.

Charness, G., E. Haruvy, and D. Sonsino (2007): "Social Distance and Reciprocity: An Internet Experiment," *Journal of Economic Behavior & Organization.*, 63(1), 88–103.

Charness, G., L. Rigotti, and A. Rustichini (2007): "Individual Behavior and Group Membership," *The American Economic Review*, 97(4), 1340–1352.

Chen, Y., and S. X. Li (2009): "Group Identity and Social Preferences," *The American Economic Review*, 99(1), 431–457.

DellaVigna, S., J. List, and U. Malmendier (forthcoming): "Testing for Altruism and Social Pressure in Charitable Giving," *Quarterly Journal of Economics*.

Fong, C., and E. Luttmer (2011): "Do Fairness and Race Matter in Generosity? Evidence from a Nationally Representative Charity Experiment.," *Journal of Public Economics*, 95(5-6), 372–394.

Frankel, J. A. (ed.) (1998): *The Regionalization of the World Economy*. The University of Chicago Press.

Glaeser, E. L., D. Laibson, J. A. Scheinkman, and C. L. Soutter (2000): "Measuring Trust," *Quarterly Journal of Economics*, 115, 811–846.

Huck, S., and I. Rasul (2010): "Transaction Costs in Charitable Giving: Evidence from Two Field Experiments," *The B.E. Journal of Economic Analysis & Policy*, 10(1 (Advances)).

Internal Revenue Service (Publication 78) (2011): *Cumulative List of Organizations described in Section 170(c) of the Internal Revenue Code of 1986*.

Jenq, C., J. Pan, and W. Theseira (2011): "What Do Donors Discriminate On? Evidence From Kiva.org," Discussion paper, Booth School of Business.

Ku, H., and A. Zussman (2010): "Lingua Franca: The Role of English in International Trade," *Journal of Economic Behavior & Organization*, 75(2), 250–260.

Leider, S., M. Mobius, T. Rosenblat, and D. Quoc-Anh (2009): "Directed Altruism and Enforced Reciprocity in Social Networks," *Quarterly Journal of Economics*, 124(4), 1815–1851.

Lev-Ari, S., and B. Kaysar (2010): "Why Don't We Believe Non-Native Speakers? The Influence of Accent on Credibility," *Journal of Experimental Social Psychology*, 46(6), 1093–1096.

Lieber, R. (2011): "The Gamble of Lending Peer to Peer," *The New York Times. February 4, 2011,* `http://www.nytimes.com/2011/02/05/your-money/05money.html`.

List, J., and D. Lucking-Reiley (2002): "The Effects of Seed Money and Refunds on Charitable Giving: Experimental Evidence from a University Capital Campaign," *The Journal of Political Economy*, 110(1), 215–233.

List, J., and M. Price (2009): "The Role of Social Connections in Charitable Fundraising: Evidence from a Natural Field Experiment," *Journal of Economic Behavior & Organization*, 69(2), 160–160.

Meer, J. (2011): "Brother, Can You Spare a Dime: Peer Pressure in Charitable Solicitation," *Journal of Public Economics*, 95(7-8), 926–941.

Morduch, J. (1999a): "The Microfinance Promise," *Journal of Economic Literature*, 37, 1569–1614.

——— (1999b): "The Role of Subsidies in Microfinance: Evidence from the Grameen Bank," *Journal of Development Economics*, 60(1), 229–248.

Polgreen, L., and V. Bajaj (2010): "India Microcredit Faces Collapse From Defaults," *New York Times. November 17, 2010,* http://www.nytimes.com/2010/11/18/world/asia/18micro.html.

Posner, R. (2006): "Microfinance and Third World Poverty and Development," *October 29, 2006,* http://www.becker-posner-blog.com/2006/10/microfinance-and-third-world-poverty-and-development--posner.html.

Reed, L. R. (2011): *State of the Microcredit Summit Campaign Report 2011.* Microcredit Summit Campaign, Washington, DC.

Rigbi, O. (2011): "The Effects of Usury Laws: Evidence from the Online Loan Market," Discussion paper, Ben-Gurion University of the Negev.

Shang, J., A. Reed, and R. Croson (2008): "Identity Congruency Effects on Donations," *Journal of Marketing Research*, 45(3), 351–361.

Statistics Canada (2006): *Population by mother tongue and age groups, 2006 counts, for Canada, provinces and territories - 20(table).*

Tajfel, H., and J. Turner (1979): *The Social Psychology of Intergroup Relations*chap. An Integrative Theory of Intergroup Conflict, pp. 33–47. Brooks/Cole, Monterey, CA.

The Economist (2010): "Putting Your Money Where Your Mouse Is," *September 2, 2010* http://www.economist.com/node/16909869?story_id=16909869.

Vesterlund, L. (2003): "The Informational Value of Sequential Fundraising," *Journal of Public Economics*, 87, 627–658.

Table 1: Requests by Borrower Country

Borrower's Country	# of MFIs	Original Language				
		English	Spanish	French	Russian	Total
Peru	4	109	1,452	0	0	1,561
Philippines	4	1,526	0	0	0	1,526
Nicaragua	4	5	787	0	0	792
Cambodia	4	707	0	0	0	707
Ghana	2	677	0	0	0	677
Nigeria	1	510	0	0	0	510
Togo	3	0	0	439	0	439
Uganda	3	427	0	0	0	427
Bolivia	4	0	393	0	0	393
Tajikistan	2	261	0	0	101	362
Kenya	2	289	0	0	0	289
El Salvador	1	0	258	0	0	258
Lebanon	2	258	0	0	0	258
Sudan	1	205	0	0	0	205
Mongolia	1	198	0	0	0	198
Senegal	2	0	0	182	0	182
Benin	1	14	0	161	0	175
Sierra Leone	1	146	0	0	0	146
Mexico	1	0	144	0	0	144
Paraguay	1	33	108	0	0	141
Tanzania	1	139	0	0	0	139
Mali	1	0	0	111	0	111
Samoa	1	109	0	0	0	109
Dominican Republic	1	101	0	0	0	101
Honduras	1	0	97	0	0	97
Ukraine	1	86	0	0	0	86
Guatemala	1	0	78	0	0	78
Rwanda	1	51	0	0	0	51
Nepal	1	45	0	0	0	45
Costa Rica	1	0	44	0	0	44
Viet Nam	1	33	0	0	0	33
The Democratic Republ	1	0	0	30	0	30
Haiti	1	8	0	0	0	8
Total	56	5,937	3,361	923	101	10,322

The table presents the number of requests by the borrower's country. In addition, the number of MFIs and requests by the original language are shown.

Table 2: Descriptive Statistics

	English	Spanish			French		
	Total	Translated	Non-Translated	Total	Translated	Non-Translated	Total
# Requests	5937	2172	1189	3361	611	312	923
	Edited	Translated	Non-Translated	t-Stat.	Translated	Non-Translated	t-Stat.
$ Amount	716.09	821.96	754.16	2.32	792.72	747.12	0.31
# Female	1.53	1.94	1.73	0.95	1.89	1.42	0.01
# Male	0.38	0.36	0.30	1.79	0.45	0.38	0.21
All Male	0.18	0.21	0.21	0.69	0.21	0.25	1.06
All Female	0.76	0.72	0.75	1.48	0.76	0.73	1.13
Single Borrower	0.88	0.86	0.88	1.01	0.90	0.93	0.55
# Borrowers	1.91	2.29	2.03	1.23	2.33	1.80	0.05
Term	11.02	10.59	10.46	1.18	12.67	12.90	2.92

The table presents mean values for various loan request characteristics based on the request's original language and its treatment status. For each foreign language and characteristic a t-statistic is presented. The t-statistics correspond to tests of mean equalities between the treatment and control groups in which sector by posting-day fixed effects are taken into account. The table demonstrates that loan request characteristics are almost perfectly balanced between treatment and control groups.

Table 3: Funding Shares by Lender Language

	Request's Original Language				
	English	French		Spanish	
Speakers		Non-translated	Translated	Non-translated	Translated
English	0.711	0.626	0.734	0.624	0.712
Spanish	0.008	0.007	0.009	0.012	0.009
French	0.028	0.048	0.028	0.029	0.025
Other Language	0.166	0.182	0.168	0.137	0.146

The table presents the average share funded based on the predominant language in the lenders' country of residence, the requests' original language and the treatment status. The sum of shares in any request's original language and treatment status (i.e. column) is lower than 1 due to missing country of residence for nearly 5% of the lenders.

Table 4: Effect of Translation on the Share of a Request Funded by the Lender's Language

Panel A: Dep Var. - Share of Loans from English Speaking Countries			
	(1)	(2)	(3)
Spanish * Translated	0.083***	0.044***	0.047***
	(0.009)	(0.008)	(0.008)
French * Translated	0.1***	0.048***	0.05***
	(0.014)	(0.009)	(0.009)
Original Language Spanish	-0.085***	-0.04***	-0.044***
	(0.014)	(0.011)	(0.009)
Original Language French	-0.084***	-0.032***	-0.029***
	(0.021)	(0.009)	(0.007)
Sector * Date F.E.	✖	✓	✓
Loan Request Characteristics	✖	✖	✓
Observations	10,209	10,209	10,209
P-Val. Spanish	0.83	0.567	0.622
P-Val. French	0.354	0.149	0.011

Panel B: Dep Var. - Share of Loans from Spanish Speaking Countries			
	(4)	(5)	(6)
Spanish * Translated	-0.003***	-0.003***	-0.004***
	(0.001)	(0.001)	(0.001)
French * Translated	0.000	0.000	0.000
	(0.001)	(0.001)	(0.001)
Original Language Spanish	0.004***	0.004***	0.005***
	(0.002)	(0.001)	(0.001)
Original Language French	0.001	0.000	0.000
	(0.002)	(0.002)	(0.002)
Sector * Date F.E.	✖	✓	✓
Loan Request Characteristics	✖	✖	✓
Observations	10,209	10,209	10,209
P-Val. Spanish	0.351	0.387	0.369
P-Val. French	0.54	0.757	0.703

Panel C: Dep Var. - Share of Loans from French Speaking Countries			
	(7)	(8)	(9)
Spanish * Translated	-0.003*	-0.003**	-0.004**
	(0.002)	(0.002)	(0.002)
French * Translated	-0.019***	-0.018***	-0.02***
	(0.004)	(0.003)	(0.003)
Original Language Spanish	0.003	0.003	0.003
	(0.003)	(0.003)	(0.002)
Original Language French	0.021***	0.021***	0.022***
	(0.004)	(0.004)	(0.003)
Sector * Date F.E.	✖	✓	✓
Loan Request Characteristics	✖	✖	✓
Observations	10,209	10,209	10,209
P-Val. Spanish	0.909	0.903	0.662
P-Val. French	0.536	0.428	0.311

Standard errors clustered by MFI in parentheses
*** p<0.01, ** p<0.05, * p<0.1

The table presents the Tobit unconditional marginal effects of the treatment and language effects, namely, $\gamma_{1,Lang}$ through $\gamma_{4,Lang}$ in Equation 1, where *Lang* is English, Spanish or French. The unit of observation is a loan request. The dependent variable in the equation corresponding to language *Lang* is the share of a loan request that was funded by lenders that reside in countries in which the language *Lang* is the predominant language. The table consists from three panels. A panel corresponds to the predominant language at the lenders' country of residence. For example, in Panel A, the dependent variable is the share of loans granted by lenders from English speaking countries. In addition to the marginal effects, each regression output is supplemented with the p-values corresponding to tests of the null hypothesis that, conditional on the covariates, the overall effect of being translated from Spanish or French to English are the same as being originally posted in English. Specifications differ by the number of control variables included. Loan request characteristics include the dollar amount requested by borrowers, the number of borrowers of each gender and the number of months the borrower requested to amortize the loan.

Figure 1: Translated French Loan Request

About the Loan

Location:	Agoe, Togo	**Repayment Term:**	14 months (more info)
Activity:	Plastics Sales	**Repayment Schedule:**	Monthly
Loan Use:	To buy dishes, pails, plasticware	**Currency Exchange Loss:**	Possible
		Default Protection:	Covered

This is a lady who has been selling dishes, buckets, and plasticware since 2007 in Soviépé, one of the outlying districts of Lomé. She is unmarried but has four children. This commerce allows her to support herself and also to feed and school her children. For these reasons, she would like to obtain a WAGES loan to be able to stock up with 20 plates, 15 buckets, and a dozen items of plastic goods of all sorts.

Translated from French by Dan Kuey, Kiva Volunteer

Cette dame vend des plats, seaux et des objets en plastique depuis 2007 à Soviépé, l'un des quartiers périphériques de Lomé. Elle n'est pas mariée mais a 04 enfants, ce commerce lui permet de se prendre en charge et de couvrir également les besoins alimentaires et scolaires de ses enfants. Pour cela, elle voudrait avoir un crédit de WAGES pour pouvoir s'approvisionner avec 20 plats, 15 seaux et une douzaine d'objets en plastique de toute sorte.

RSS Subscribe

The figure presents a loan request that was written in French, but was posted after being translated to English together with the original text in French. The request's full web page, including also the amount requested and information about the MFI, can be viewed at `http://www.kiva.org/lend/129218`.

Figure 2: Untranslated French Loan Request

About the Loan

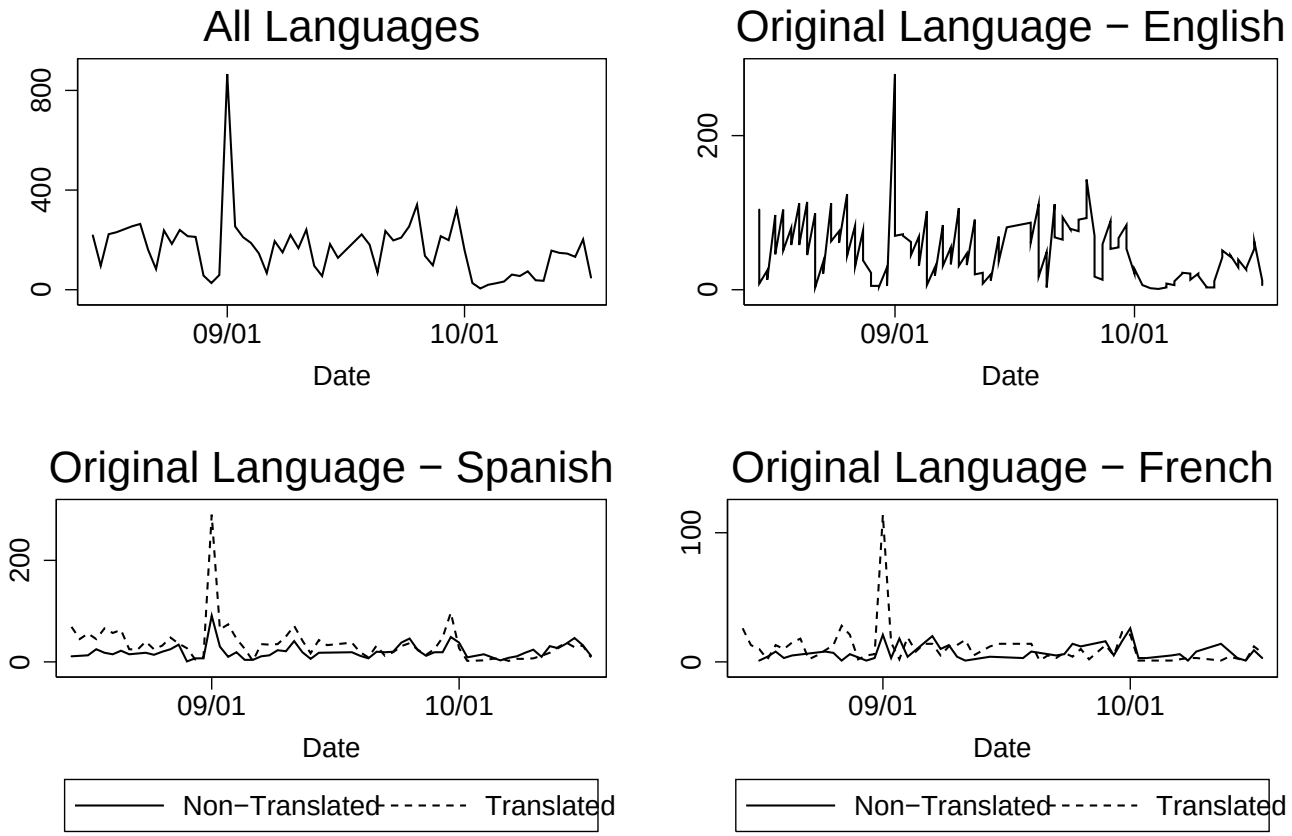
Location:	Agoe, Togo
Sector:	Food
Activity:	Food Production/Sales
Loan Use:	Achat des bals de friperie
Repayment Term:	14 months (more info)
Repayment Schedule:	Monthly
Currency Exchange Loss:	Possible
Default Protection:	Covered

Cette dame est veuve et a 03 enfants à sa charge. Pour subvenir aux besoins de sa famille, elle vend depuis 1998 dans le marché d'Assiyéyé à Lomé des friperies. Elle livre aussi ces vêtements à des clients à domicile. Pour nenouveler son stock qui épuise, elle sollicite un crédit de WAGES pour acheter 06 bals de vêtements de toute sorte. Elle a une clientèle qui lui est fidèle.

RSS Subscribe

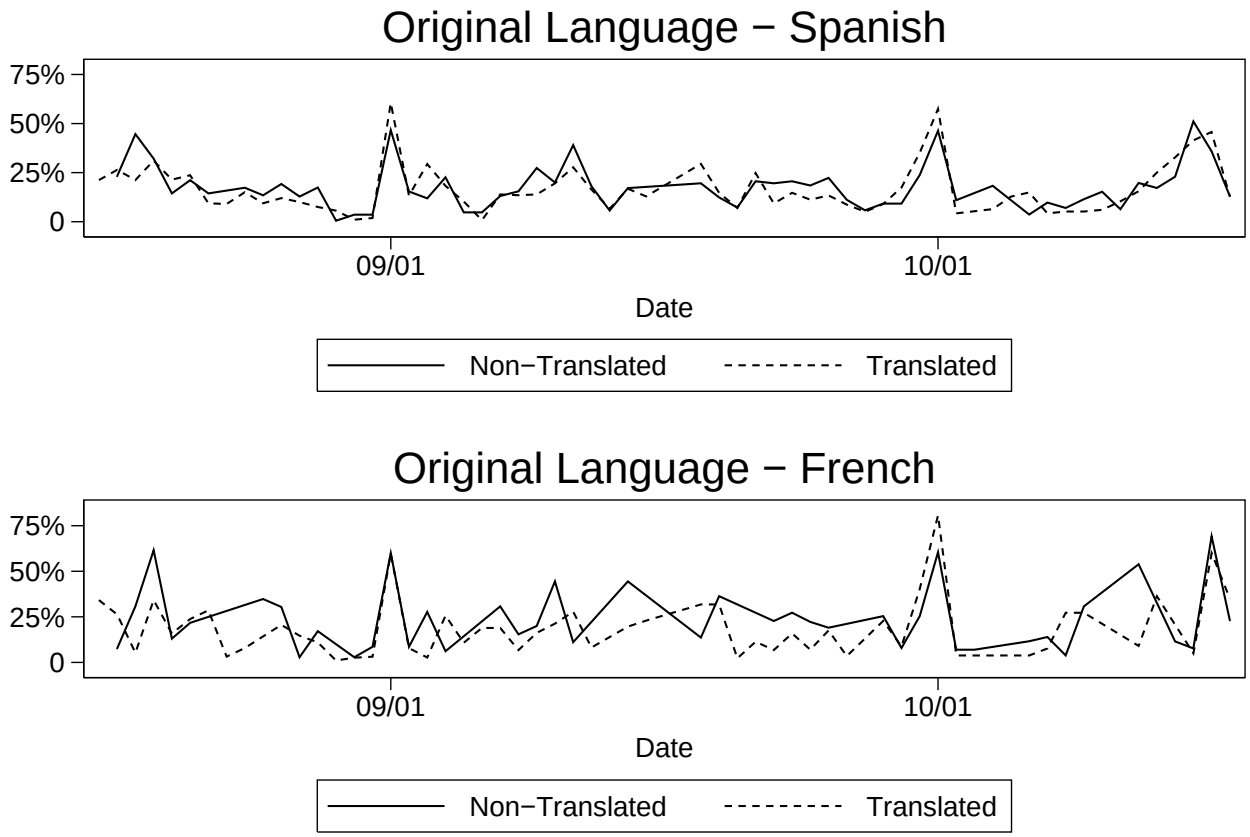
The figure presents a loan request that was written and posted in French. The request's full web page, including also the amount requested and information about the MFI, can be viewed at `http://www.kiva.org/lend/129732`.

Figure 3: Time Series of Incoming Requests - Calculated Daily



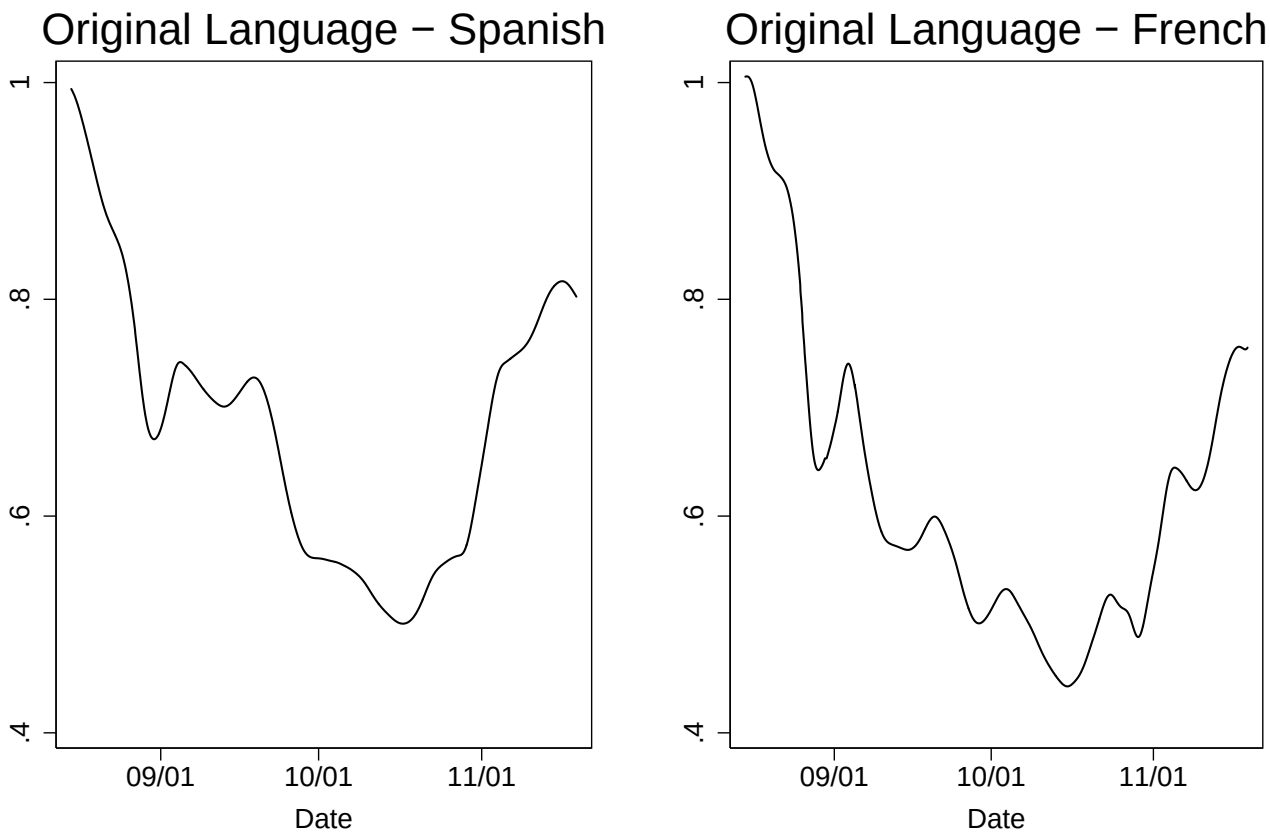
The figure presents the time series of incoming requests posted on any given day from August 15, 2009 - October 17, 2009. The figures correspond to the foreign languages include the number of requests posted in the original foreign language (untranslated) and in English (translated). The sharp jumps observed in the number of new requests on the first day of each month are driven by requests that were submitted to Kiva earlier, but whose posting were postponed due to the funding MFI's borrowing limit.

Figure 4: # New Daily Requests / # New Weekly Requests



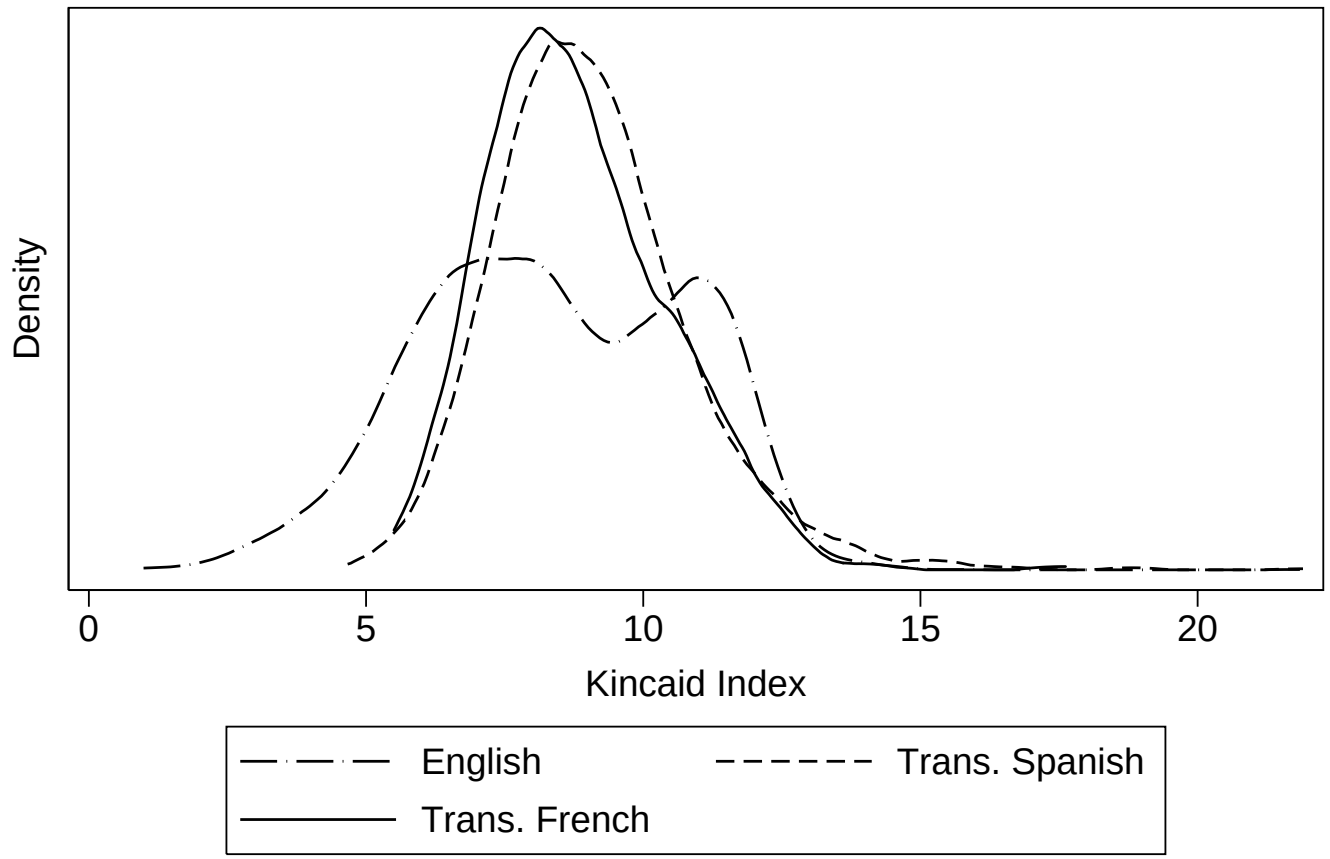
The figure presents the share of new requests that were posted in any given day by language and treatment as a percentage of the total number of new requests by language and treatment that were posted in the same week. The time period presented is August 15, 2009 - October 17, 2009. The observation that the ratios do not differ dramatically between treatment and control groups within a language demonstrates that the timing of posting new requests exhibit similar patterns in the treatment and control groups.

Figure 5: Treatment Intensity by the Original Language



The figure presents smoothed time series of the treatment intensity for existing requests in each language. The treatment intensity in a given day and a foreign language is defined as the ratio between the number of active translated loan requests that were originally written in that foreign language and the total number of active requests originally written in that language. The figure spans form the beginning of the experiment on August 15, 2009 to November 18, 2009, the last day requests posted throughout the experiment could have still been funded and though were active. The figure demonstrates that the treatment intensity fluctuated during that time period. The bandwidth used is 0.1.

Figure 6: Kincaid Readability Indices



The figure presents the distribution of Kincaid readability index for requests that were posted in English. The value of the Kincaid index of a passage equals to 0.39 * (Avg. Words per Sentence) + 11.8* (Avg. Syllables per Sentence) - 15.59. A separate kernel is drawn based on a request's original language. The value of the Kincaid index reflects the mean number of years of education required to understand the lender's biography included in the loan request. The figure demonstrates that the values of the Kincaid index of requests that were originally written in Spanish and French have similar distributions. Furthermore, the mean values of the index for English, Spanish and French requests are 8.41, 8.81 and 9.07, respectively. Notably, while the mean value of English requests is significantly different from the mean values of Spanish and French requests at the 1% level, the hypothesis that the mean values of Spanish and French requests are the same cannot be rejected.