GENDER AND INSTITUTIONS IN PROSOCIAL CROWDFUNDING

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In recent years, crowdfunding in microfinance has grown, connecting prosocial lenders with entrepreneurs operating at the bottom of the pyramid worldwide. Through multilevel analysis of loans made through the Kiva crowdfunding platform, we assess how institutional factors impact individual level behavior in 22 countries, with specific attention to how gender interacts with cognitive, normative and regulatory forces that ultimately impact crowdfunded microloan repayment. We contribute to the literature by analyzing how microfoundations of institutional theory impact entrepreneurial behavior across global markets.

INTRODUCTION
Crowdfunding is rapidly becoming an important financing source for entrepreneurs. From as early as 2003, crowdfunding websites connected individuals with entrepreneurial artists in developed markets through websites like ArtistShare. Crowdfunding has since expanded to serve traditionally marginalized groups at the bottom of the pyramid (BOP; Allison, Davis, Short, & Webb, 2015; Moss, Neubaum, & Meyskens, 2014) and emerged as a means to address institutional voids in the market for early-stage entrepreneurs who lack access to mainstream financing due to the perceived risk of their ventures (Meyskens & Bird, 2015). Crowdfunding allows individuals to request financial support from a broader audience in exchange for future recognition, products, return or equity (Mollick, 2014).

Besides securing financing, microenterprises face many impediments to their development. They typically have only one or few employees (frequently family members), limited assets, and often operate within the informal economy. At the same time, microenterprises cannot always meet their strategic goals due to a lack of institutional support. Such a lack of market-supporting mechanisms may be due to the absence of specialized intermediaries (such as institutions willing to loan to the poor), failing regulatory systems, and weak contract-enforcing mechanisms (Khanna, Palepu, & Sinha, 2005). While the importance of institutions and institutional voids is widely acknowledged (Mair & Marti, 2000), limited research thus far provides specific insight into how BOP microentrepreneurs receiving crowdfunded loans are directly affected by institutional voids. Furthermore, recent calls for attention to the microfoundations of institutional processes (DiMaggio & Powell, 1991; Thornton et al., 2012) have yet to be addressed in the context of microentrepreneurs receiving financing from crowdfunding.
The research question guiding this study assesses – How do individual and institutional factors impact the repayment performance of microentrepreneurs on debt-based crowdfunding platforms? Here, we adopt a comparative perspective, which investigates how country institutional context influences speed of repayment both directly and in interaction with a key borrower characteristic: their gender. Through this approach we contribute to both the entrepreneurship and crowdfunding literature.

HYPOTHESES DEVELOPMENT

Gender, Institutions, and Status Expectations

Power and prestige in social contexts are often accorded based on stereotypes regarding gender, race, age, education, and occupation. In many countries, women face numerous social restrictions, have complex, conflicting roles and responsibilities and often require a man’s approval to acquire resources (Datta & Gailey, 2012; Khavul, Bruton, & Wood, 2009, Mair, Marti, & Ventresca, 2014). Thus, women face strong institutional forces that limit their access to traditional financial services and even business ownership. Women have typically been the preferred target market for MFIs as they are easier to monitor, more conservative in their choice of businesses, more prone to peer pressure in group loans than men and more likely to share the proceeds of their businesses with their families (Armendariz & Morduch, 2005). Because people want to maintain a positive self-image, those in groups with low status, such as women entrepreneurs, may engage in group- and self-enhancing strategies (Williams & Giles, 1978). One such strategy in the context of microlending would be adherence to repayment schedules so as to show that she is “worthy” of loans, and can comply with the rules that have previously only applied to male entrepreneurs. At the same time, many studies primarily in the development economics literature have found that women are more likely to repay their loans (Anthony & Horne, 2003; D’Espallier, Guerin, & Mersland, 2011) and less likely to default than men (Rahman, 1999), showing that borrower gender is linked to repayment performance (Nanayakkara & Mia, 2012). Therefore, we hypothesize,

Hypothesis 1: Women borrowers are associated with faster microloan repayment to crowdfunding lenders than men.

Institutional Forces and Microloan Repayment

The regulatory pillar of institutional theory represents a rational actor model of behavior, based on sanctions and conformity. Here, regulatory institutions guide behavior by means of rules, monitoring, and enforcement (North, 1990), primarily stemming from government and industrial agreements and standards. These rules are particularly important for nascent actors entering a field (Stenholm et al., 2013; Stephan et al., 2015) since they provide critical guidelines for new firms. A stable rule of law, including the existence and enforcement of a commercial code and a functioning court system, is essential for private business development and entrepreneurship (Aidis, Estrin, & Mickiewicz, 2008). The lack of regulatory institutions makes it difficult to enforce contracts and affect lending relationships. Regulatory institutional voids can prompt unproductive and even destructive behaviors by entrepreneurs including loan repayment (Ault & Spicer, 2014; Stephan et al., 2015). Weak regulatory institutions thus may also increase the time it takes for Kiva to receive the repaid principal from their MFI partners. Finally, a weak regulatory environment related to the financial sector, as well as voids in transportation and communications infrastructure, could negatively impact the speed and/or ability for an MFI to pay back Kiva, thus increasing loan repayment time. Combined, these observations suggest the following hypothesis,
Hypothesis 2: Regulatory institutions supporting entrepreneurship are associated with faster microloan repayment to crowdfunding lenders.

As explained by Stephan and colleagues (2015), “normative institutions describe social obligations and expectations about appropriate actions modeled on existing dominant practices or norms in a given culture.” Attitudes towards entrepreneurs in a population are an example of a normative institutional force that can have a profound impact on entrepreneurs’ behaviors (Ács, 2011). In terms of loan repayment by microentrepreneurs, this normative force can have an impact both through entrepreneurs’ repayment intentions as well as their actual ability to repay. In a nation that holds entrepreneurship in high regard, those running businesses tend to be more ambitious and possess higher levels of relevant skills and networks (Ács, 2011). As a result, they can earn higher profits and have a greater ability to repay. However, when normative forces relating to entrepreneurship are weak, repayment incentives for borrowers could vanish if the expectation is that a significant number of peers will default. In some markets there also exists a culture of non-repayment, where individuals have the capacity—but never the intention—to repay due to different attitudes toward debt or distinct cultural norms (Epstein & Yuthas, 2010). The combination of elevated status of entrepreneurship in the society, and the desire to avoid sanctions from the community, should result in borrowers’ increased likelihood of repaying their loans (Mair et al., 2012). Thus,

Hypothesis 3: Normative institutions supporting entrepreneurship are associated with faster microloan repayment to crowdfunding lenders.

The cognitive pillar of institutions represents “models of individual behavior based on subjectively and (often gradually) constructed rules and meanings that limit appropriate beliefs and actions” (Bruton et al., 2010: 423). In other words, the cognitive dimension reflects the knowledge, skills, and experience possessed by people in a society to start a new business, as well as the frameworks they use to categorize and assimilate new information. Societies and groups vary with regard to the extent that they are knowledgeable of business practices, as well as the value they assign to timely and accurate loan repayment. Understanding financial management and the management of loans therein, is an essential component of the cognitive environment for entrepreneurship. Where the cognitive institutions of a country are strongly supportive of entrepreneurship, entrepreneurs are endowed with a common lens with which to view the importance of timely loan repayment for their current businesses, their future opportunities, and the entrepreneurial economy, overall. For similar reasoning, these cognitive forces impact a MFI’s speed of repayment back to Kiva. Hence, we hypothesize,

Hypothesis 4: Cognitive institutions supporting entrepreneurship are associated with faster microloan repayment to crowdfunding lenders.

Interactions of Gender and Institutional Forces

A microfoundations’ view suggests that people vary in their access to and compliance with seemingly uniform institutional rules. Differences in individuals’ political power and status, combined with the institutional forces themselves, ultimately determine the behaviors that lead to production of wealth and distribution of income (Van de Ven & Lifschitz, 2013). As discussed previously, women are generally thought of as the less powerful gender in business. The regulatory context and its limitations can impact women even more than men, as exemplified by women’s heightened exposure to institutional voids, such as limited (or nonexistent) access to traditional
financial services (Agier & Szafarz, 2013, Mair et al., 2012). Hence, it appears that as a societal group, women business owners would be particularly likely to benefit from a functioning institutional regulatory regime that makes it easier for entrepreneurs to conduct their daily business. When regulatory institutions are strong, women's incentives to repay loans are strengthened more than men's. Complying with and even exceeding repayment goals in a strong regulatory environment legitimizes women as entrepreneurs—a traditional male category—elevating their status and helping them maintain a positive self-image.

We likewise expect normative and cognitive forces to affect the association between gender and crowdfunded microloan repayment. First, strong normative institutions may impact women's repayment. When entrepreneurship is held in high regard, entrepreneurs feel more empowered, which makes them more self-focused, and, consequently makes them more likely to act upon their own interest and ignore social and institutional influences. Strong normative institutions supporting entrepreneurship allow women to focus more on their businesses, empowering them to invest in loan repayments that support their long-term entrepreneurial careers. At the same time since women—especially in the developing world—have typically lower levels of business knowledge and experience than men, they may stand to benefit most from strong surrounding cognitive institutions that support entrepreneurship. For example, understanding financial management is an essential component of the cognitive environment for entrepreneurship. Where women tend to have less direct knowledge of or training in financial management, they may benefit most from strong societal cognitive institutions that support this aspect of entrepreneurship and hence their ability to repay. Overall, these arguments lead us to expect that female microentrepreneurs' repayment of loans may be particularly positively impacted when the surrounding institutional environment is strong. Hence,

*Hypotheses 5-7: The relationship between gender and the speed of crowdfunded microloan repayment to crowdfunding lenders is moderated by (H5) regulatory, (H6) normative, and (H7) cognitive institutional forces such that the stronger these institutions supporting entrepreneurship, the stronger the association between female gender of the borrower and faster repayment.*

**METHODS**

The sample included over 98,000 loans made to entrepreneurs in 22 countries who used Kiva as a crowdfunding platform to access capital for their ventures from 2006 - 2012. The data were acquired from the website [http://build.kiva.org/docs/data/loans](http://build.kiva.org/docs/data/loans). We used multi-level modeling or random coefficient modeling, to account for the nested nature of the data. The 22 countries contained one to nine MFIs each, the MFIs contained one to 286 towns, and the towns contained one to 5511 loans. We also used a hierarchical approach to test the hypotheses.

The dependent variable was the *time to repay* a crowdfunded loan, in days. Kiva records the date/time when a loan is funded on the website as well as the date/time that Kiva receives all of the loan principal in repayment. After the loan is funded and the date/time recorded, Kiva wires the money to the MFI in its respective country. Borrowers repay their loan to the MFI, which then keeps the interest and wires the principal back to Kiva. Once Kiva receives the principal, the date and time is recorded and the principal is returned to the individual crowdfunders’ Kiva accounts.

The independent variables included borrower gender, regulatory institutions, normative institutions, and cognitive institutions. *Regulatory institutions* was created using an index of
country scores using six sub-indices to reflect entrepreneurship-specific institutional conditions that impact microenterprises including financial regulations, government policies, government programs, physical infrastructure, services, and formal support. These came from the Global Entrepreneurship Monitor’s (GEM) National Expert Survey (Singer, Amoros, & Arreola, 2015; Stephan & Uhlancer, 2010). Higher values indicated a more supportive regulatory environment for entrepreneurship. *Normative institutions* was taken from the mean country scores for three items in the GEM Adult Population Survey (Singer et al., 2015; Stephan & Uhlancer, 2010). This score was the percentage of the adult population in a country who agree that, in their country, 1) most people consider starting a new business a desirable career choice; 2) you often see stories in the public media about successful new businesses; and 3) those successful at starting a new business have a high level of status and respect. A higher score indicated a stronger normative institution that encourages and fosters entrepreneurship. *Cognitive institutions* was taken from the GEM Adult Population Survey (Arenius & Minniti, 2005; Singer et al., 2015; Stephan & Uhlancer, 2010), based on a random half sample of entrepreneurially active and non-active respondents. The score was the percentage of people agreeing with a statement regarding their skill, knowledge, and experience required to start a new business. Higher values indicated a stronger cognitive institution supporting entrepreneurship in a given country. Control variables that might influence the results included loan size, infant mortality rate, GDP per capita (in USD), Kiva MFI partner risk rating and type of loan (individual or group).

**RESULTS**

We had mixed results regarding support of the hypotheses. Hypothesis 1 suggested that female borrowers would repay their loans more quickly than male borrowers, and this hypothesis was supported ($\beta = 14.76, p < 0.001$); women repay their loans nearly 15 days sooner than their male counterparts. Additionally, Hypothesis 2 suggested that the strength of regulatory institutions which fostered entrepreneurship would be positively related to the speed of crowdfunded loan repayment, and was supported ($\beta = -7.05, p < 0.001$). When factors such as financial programs, government policies, infrastructure, and services are supportive of entrepreneurship at one standard deviation above the mean, microloan borrowers repay their loans over seven days faster, and over 14 days faster than those in countries at -1 standard deviation. Hypothesis 3 was not supported ($\beta = 2.62, p < 0.001$). The strength of normative institutions supporting entrepreneurship—national norms regarding entrepreneurship as a career choice, perceptions in the media, and high social status afforded entrepreneurs—is positively related to the time needed to repay a crowdfunded microloan. Finally, Hypothesis 4 was supported ($\beta = -0.87, p < 0.01$). The strength of cognitive institutions supporting entrepreneurship—in this case, the aggregate self-perception that people within a certain country have the knowledge, skill, and experience to successfully start a new business—is negatively related to the time needed to repay a crowdfunded microloan. In other words, microloan borrowers in countries in which people's self-perceptions regarding entrepreneurship are stronger repay their loans more quickly (nearly one day faster) than countries at the mean, and over 1.5 days more quickly than countries at -1 standard deviation.

Our interaction results supported Hypothesis 5 ($\beta = 4.78, p < 0.001$) and 7. Improving the regulatory strength of institutions supportive of entrepreneurship has a greater impact on borrowers who are women than on men. For women, the difference in time for repayment is nearly four times as great (3.1 days for men vs. 11.4 days for women). However, this trend reverses when it comes to normative environments that support entrepreneurship. In such countries, women take longer to repay their loans when the normative institutional strength increases, while men...
repay their loans more quickly under these same changing conditions. Hypothesis 6 suggested that strong normative institutions would strengthen the association between female gender and faster repayment, and our hypothesis was not supported. Instead, the moderation is significant in the opposite direction ($\beta = -5.23, p < 0.001$). Finally, Hypothesis 7 was supported ($\beta = 7.54, p < 0.001$). Even in high cognitive institutional environments, crowdfunded loans take longer to repay for males than for females. In countries with relatively low cognitive institutional strength, men repay their loans over 30% more quickly than females. Yet, in countries two standard deviations higher, it takes men nearly twice as long to repay their loans (52.0 days vs. 101.3 days).

**DISCUSSION AND IMPLICATIONS**

Entrepreneurship research is increasingly recognizing the central role of microentrepreneurs operating at the BOP (e.g. Allison et al., 2015; Battilana & Dorado, 2010). This study assesses how gender interacts with cognitive, normative and regulatory forces and ultimately impacts microloan repayment. Scholars have shown that women’s entrepreneurial efforts make an impact on wealth creation (de Bruin, Brush & Walter, 2006), and we build on this finding to highlight the complex and often conflicting interactive effects of gender and institutions on loan repayment.

Through this research we make three specific contributions to both entrepreneurship and crowdfunding research. First, we draw from the literature on microfoundations of institutions to explain how an entrepreneur’s gender links with country-level institutional forces to impact loan repayment. Men take much longer to repay their crowdfunded loans as cognitive institutions supporting entrepreneurship become stronger, while women experience a slight decrease in repayment times. However, this trend reverses when it comes to normative environments that support entrepreneurship. Additionally, regulatory and cognitive institutions supportive of entrepreneurship are associated with faster loan repayment, while normative institutions supporting entrepreneurship were negatively related to repayment speed. Our study suggests that female and male business owners react differently to institutions, prompting future research to consider other micro-level (individual) differences as well (e.g. age, race, education, experience).

Second, we quantitatively explore the microentrepreneur level of analysis, traditionally unavailable to scholars on a large scale. Prosocial crowdfunding uses a web-based platform to open up a wealth of data at the individual level worldwide, and we take advantage of this. We suggest that future research on institutional forces should carefully consider the fine-grained composition of their effects, instead of simply aggregating such effects to the macro level. Finally, while nascent research on crowdfunding has focused on the actual funding of the microloan (Allison, et al., 2013), research on other parts of the process—like loan repayment—is limited. Repayment times are key in a crowdfunding context because timeliness impacts the rate at which crowdfunded principal may be re-invested in additional ventures.

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