Small Businesses Disaster Microinsurance in for Urban Resilience: The Results of Demand and Knowledge Surveys in Three Indian Cities*

Abstract
Small business owners make up the core of many developing communities, providing essential goods and helping jump-start local economies. Many of these communities, however, exist near oceans or in volatile climates that are prone to natural disasters. In most cases, these business owners do not have access to proper coping mechanisms, meaning that disasters can imperil their businesses, their families, and their communities. Even if they escape complete bankruptcy, they have to dig into personal savings or take out costly loans, which makes it very difficult for them to recover. Microinsurance may be just what small business owners need – an inexpensive way to limit loss before it happens. Although still in an embryonic stage, microinsurance has proved successful in initial experiments. This study looks at knowledge of and demand for microinsurance in three different regions of India. Our findings reflect that while small business owners largely did not know about microinsurance, after hearing about it many wanted to subscribe to programs. This study also reveals a lack of literature on microinsurance and the need for more experiments on actual adoption patterns and for trial programs by governments, NGOs, and commercial insurers.

Introduction
The western world is increasingly focused on refugees and humanitarian emergencies. International organizations are mounting efforts to address the unprecedented four million Syrian refugees and internally displaced persons.1 And the United Nations High Commissioner for Refugees (UNHCR) reports over 59.5 million refugees around the world.2 Yet the refugee problem pales in comparison to the larger problem of urban poverty -- a problem hidden in plain sight. A 2013 report by the UN-Habitat revealed the existence of 863 million people living in slums.3 Of course, urban poverty has not gone entirely unnoticed. In 2000, the United Nations released the Millennium Development Goals to combat issues that plague the developing world.4 The MDGs did not specifically single out urban poverty. But the UN's newly agreed Sustainable Development Goals do have a focus on cities -- a call for improving slums and creating more sustainable communities.5 Nevertheless, disasters -- which shock potential donors and typically result in spikes in contributions to NGOs -- consistently garner more attention than the chronic problems of urban poverty. In fact, long-term conditions for access to water, sanitation, and shelter in most slums do not meet the basic Sphere Standards guidelines for even short-term conditions in disaster-stricken areas. There is a growing consensus that small-scale and decentralized capitalist enterprise presents one of the best ways to identify and address needs in urban settings. People living in slums rely on small business owners for inexpensive, reliable goods. Such goods not only meet the immediate needs of poor consumers, but can also provide the basis of market transactions that can make it possible for other commerce to develop. But these business owners often face immense pressure from annual disasters like floods and hurricanes, making it much harder to assume the risks of opening a store in the first place. And failure of these businesses prevents entire communities from having access to quality goods on a consistent basis. Since small business owners fulfill such a necessary role, NGOs have searched for ways to minimize barriers to entry and to maintain such businesses once in place. Microfinance has emerged as a particularly promising tool; by having greater access to capital, people improve
their condition and the condition of those around them. But introducing capital into a closed market like a small village can artificially inflate demand without increasing supply. With limited supply, and little outside competition, wealthy merchants can simply raise their prices, adding to local inequality and risking high inflation.6 Even in open market communities, microfinance is not a complete answer, since it fails to solve the problem of risk faced by the poor that prevents appropriate levels of capital investment in new business. So how do we best encourage people in slums to undertake risky ventures with potentially high returns for themselves and others around them? Microinsurance may be a complementary part of the answer. Investment inevitably involves risk, yet too much risk deters investment. That is especially true for entrepreneurs in developing economies, for whom risk may result in bankruptcy and impoverishment. So managing that risk is not only essential to capitalism, but to economic development in emerging economies. In response, over the last 15 years governments and NGOs have started to introduce microinsurance in India and across the world. Several previous studies have proven the effectiveness and reliability of microinsurance.7 The concept of microinsurance is simple: When businesses are doing well, they pay insurance companies a relatively small amount in premiums against the risk of natural disasters or environmental pressures. Should those disasters occur, insurers compensate the purchasers - potentially saving their businesses and their families. But research into the impacts of microinsurance has been limited. Some studies have shown that microinsurance helped people recover from disasters faster than any other coping strategy.8 And insurance companies have the motivation to create programs. In 2005, insurance providers in Bangladesh, India, Pakistan, and Malawi all expressed interest in marketing their products to the poor. On a global scale, creative alliances between NGOs, insurance companies, governments, and donor organizations could enable microinsurance programs to be successful.9 But the lack of detailed surveys of interest among business owners and of the actual impact of microinsurance seems to have slowed widespread adoption. Moreover, some are not convinced about the merits of microinsurance. Several studies have shown that microinsurance encourages entrepreneurs to take sensible risks, which is generally good for impoverished communities.10 However, many argue that microinsurance may create a form of moral hazard, actually promoting unsustainable or overly dangerous endeavors.11 Furthermore, since microinsurance has not been rolled out on a large scale, adoption rates remain an open question. Some aid workers worry about business owners’ lack of awareness or understanding of the product. Others are concerned that people without extensive financial experience may be wary of new financial programs. India seems an ideal place to test microinsurance as a tool for addressing urban poverty. Many Indian city-dwellers live in city slums. In a city like Mumbai, slums house roughly 54% of urban residents.12 Moreover, India already has enacted the right legal incentives: following in the United Kingdom’s footsteps, India recently passed a progressive law that requires insurance companies to create programs for the poor [CITATION NEEDED]. Its dense slums also struggle with natural disasters like hurricanes and floods -- exactly the kinds of unpredictable hazards that microinsurance programs are designed to protect against. This meta-study investigates these concerns and looks at the potential for microinsurance in the developing world. In each surveyed region, we gauged knowledge of microinsurance and small business owners’ desire for such programs. Our study contextualizes those findings and
assesses the potential success of microinsurance programs. Finally, we relate these findings to the state of current humanitarian efforts and suggest next steps.

**Methodology**

We employed purposive sampling to carry out our survey. Since no comprehensive database of small business owners in slums exists, we could not sample randomly. A purposive design let us focus on the vulnerable vendors most in need of microinsurance programs.

Our survey instrument included questions about demographics and household information. It also asked about previous experience with disaster, and gauged knowledge of and interest in microinsurance.

We conducted our survey in Assam, Odisha, and Tamil Nadu, three states in India that include dense urban slums. All three states frequently struggle with environmental pressures. In Assam, a poor drainage system exacerbates annual floods. And cyclones regularly devastate both Odisha and Tamil Nadu.

We collaborated with the All India Disaster Mitigation Institute (AIDMI), an NGO based in Gujarat, and relied on regional organizations to survey and collect data from business owners. After teams at AIDMI and Stanford had finalized the survey template, they sent it to CBO staff in the field. In addition to surveying respondents, the CBO staff brought valuable local knowledge and chose specific study sites.

The second stage of the study was a randomized control trial. We used demographic information to analyze demand for microinsurance by people of different social classes who owned and operated businesses. Local teams conducted each survey of business owners: 1622 in Assam, 1551 in Odisha, and 1746 in Tamil Nadu. Teams used ICT tools, like tablets, to facilitate the collection of data. They sent that data back to AIDMI and Stanford, who analyzed the findings and helped draw conclusions.

**Results**

Table 1 displays the basic demographic information from each study site. Generally, we did not find major discrepancies between the locations. In all three locations, males made up most of the business owners interviewed. Most house owners had ownership documents, but many lived in *kutcha* houses -- buildings made out of weak or flimsy materials -- which would not fare as well in a natural disaster. Many also owned shops made out of temporary materials not likely to survive natural disasters. Among the three sites, between 31% and 54% of vendors were between the ages of 25 and 44, while between 28% and 44% of vendors were between the ages of 45 and 64.

Many sold food and other goods; 21% to 31% sold fruits and vegetables, the biggest industry in all three regions. Others offered bread or other groceries. And a few offered sundry items or more specialized products.
Table 1: Demographic Information

<table>
<thead>
<tr>
<th>Variable</th>
<th>Assam</th>
<th>Odisha</th>
<th>Tamil Nadu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Business Owners</td>
<td>75%</td>
<td>92%</td>
<td>74%</td>
</tr>
<tr>
<td>Average Household Size</td>
<td>4.7 people</td>
<td>6.1 people</td>
<td>4.5 people</td>
</tr>
<tr>
<td>Lived in Slums</td>
<td>8%</td>
<td>45%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Owned Their Home</td>
<td>33%</td>
<td>71%</td>
<td>91%</td>
</tr>
<tr>
<td>Had Ownership Documents</td>
<td>31%</td>
<td>61%</td>
<td>84%</td>
</tr>
<tr>
<td>Lived in Kutcha Houses</td>
<td>49%</td>
<td>36%</td>
<td>3%</td>
</tr>
<tr>
<td>Owned Fragile Shops</td>
<td>62%</td>
<td>92%</td>
<td>42%</td>
</tr>
<tr>
<td>Owned Mobile Businesses</td>
<td>56%</td>
<td>43%</td>
<td>7%</td>
</tr>
<tr>
<td>Had Seasonal Jobs</td>
<td>2%</td>
<td>3%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Average Income</td>
<td></td>
<td>Rs. 7240.36</td>
<td></td>
</tr>
</tbody>
</table>

After ascertaining the conditions that small business owners lived and worked in, we asked about previous disasters; we present the results in Table 2. Nearly everyone in all three sites had been affected by disasters at some point, and a considerable number had had their businesses or goods damaged. However, each community struggled with different hazards. In Assam, 67% of people who reported being affected by disasters listed floods as being particularly damaging. And in both Odisha and Tamil Nadu, everyone impacted by disasters referred to cyclones. People in Odisha specifically complained about Super Cyclone (1999), Cyclone Phailin (2013), and Cyclone Hudhud (2014). Respondents reported varying levels of destruction. In Tamil Nadu, for example, 61% of those who had damaged businesses said they suffered major damage, and 34% had lost their businesses completely. And in Assam, 23% of those with damaged businesses described major damage.

Table 2: Effects of Disasters

<table>
<thead>
<tr>
<th>Variable</th>
<th>Assam</th>
<th>Odisha</th>
<th>Tamil Nadu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impacted by Disasters</td>
<td>81%</td>
<td>96%</td>
<td>96%</td>
</tr>
<tr>
<td>Had Businesses Damaged</td>
<td>31%</td>
<td>33%</td>
<td>96%</td>
</tr>
<tr>
<td>Had Goods Damaged</td>
<td>39%</td>
<td>30%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Lost Days of Work</td>
<td>30%</td>
<td>35%</td>
<td></td>
</tr>
</tbody>
</table>

Prior to explaining microinsurance, surveyors asked vendors how they would respond to a natural disaster. In Assam, 53% of respondents said that they would use savings to cope. Most people in Odisha and Tamil Nadu -- 73% and 100%, respectively -- said they would take out a loan. Others also wanted to sell their assets. However, all of these options can be harmful to business owners and their families.
To learn more about the potential for future programs in the region, surveyors specifically asked about knowledge of and demand for microinsurance, and we display their findings in Table 3. Some of the data in this category were inconsistent with each other. After they understood the concept of microinsurance, 90% of seasonal vendors and 91% of non-seasonal vendors in Odisha wanted to subscribe to programs. However, only 75% of non-seasonal vendors and only 61% of seasonal vendors in Assam wanted to sign up. Despite these differences, it is notable that most business owners responded very favorably to the idea of microinsurance.

We found that, in general, wealthier households wanted to buy more expensive microinsurance plans, but the least expensive model (between 100 and 200 Rupees) suited most respondents. This held true across all three study sites.

The survey template asked the respondents who did not want microinsurance to explain their aversion. By and large, most people -- around 44% of those who did not want plans in Assam -- simply could not afford the price. Some feared chit scams, a form of financial fraud that has taken advantage of people across India in recent years. Others did not believe that they faced enough risk to justify the purchase. Another group had purchased insurance previously, but did not think that they needed it currently. However, it should be noted that the group who were not interested in microinsurance made up a small minority of all business owners in the region.

Table 3: Insurance and Microinsurance

<table>
<thead>
<tr>
<th>Variable</th>
<th>Assam</th>
<th>Odisha</th>
<th>Tamil Nadu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knew about Insurance</td>
<td>78%</td>
<td>94%</td>
<td>84%</td>
</tr>
<tr>
<td>Subscribed to Insurance</td>
<td>29%</td>
<td>51%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Knew about Microinsurance</td>
<td>1%</td>
<td>&lt;1%</td>
<td>9%</td>
</tr>
<tr>
<td>Wanted Microinsurance</td>
<td>74%</td>
<td>91%</td>
<td>100%</td>
</tr>
<tr>
<td>Wanted Annual Plans</td>
<td>82%</td>
<td>56%</td>
<td>86%</td>
</tr>
</tbody>
</table>

Discussion

The comprehensive data from this survey of almost 5000 business owners shows low awareness of microinsurance but potentially high demand. It supports previous findings that small business owners want such programs, but takes these findings a step further by analyzing the specific desires of the target group and the reasons why certain groups did not want to subscribe.13

The study also corroborates previous findings about small business owners' knowledge of microinsurance. Like previous reports, it finds that very few vendors know about microinsurance programs.14 The survey of three different regions demonstrates that this lack of awareness exists across India.

This lack of awareness is troubling, and poses an immediate threat to any program. The most important goal for microinsurance providers should be to spread awareness of these programs, which have the potential to help people immensely. After all, microinsurance works best when implemented across the community; its positive effects would be reduced if only a few small business owners knew about it. Widespread insurance pay-outs can help maintain demand and thus the economic viability of an entire community.

Our study indicates that, by and large, small business owners understand the risks that threaten them, and they want to take preventative measures to make sure that they can adequately prepare for disasters. If more people know about microinsurance and its positive effects, we
predict that people will understand its effectiveness as a coping mechanism. Even better, if people know about microinsurance, they will not turn to counter-productive or less-successful coping strategies.

Of course, it is important to note that intent does not necessarily equal action; people will vote with their feet. Future surveys and microinsurance trials will be needed to test actual rather than just predicted demand for microinsurance policies.

Our study also demonstrates ways in which insurance companies can price discriminate to maximize profit and make programs more economically sustainable. Most small business owners wanted to purchase the most comprehensive insurance product they could afford, suggesting an opportunity for a range of insurance coverage and pricing.

This paper looked specifically at knowledge of and demand for microinsurance across three different regions in India. To create a more complete picture of microinsurance, we have to do more research. There is not enough literature on the subject for insurance providers to confidently implement programs. To fill this knowledge gap, we have to test microinsurance programs and their success more thoroughly. This would have to include several studies and experiments on a smaller scale testing actual implementations and different ways to promote awareness. A next step for research would be to compare the actual impact of microinsurance in aiding development. A future study could compare the experiences of two similar communities facing natural disasters, where microinsurance was common in one community and not in the other. Only after these sorts of tests will commercial insurers likely have the confidence to roll out microinsurance on a wider scale.

Governments and nonprofit organizations are actively exploring ways to help small business owners as a path to economic development. Despite years of experimentation, microinsurance remains a niche area. Business owners in many small communities have spotty insurance coverage and little knowledge of microinsurance. Future research needs to address awareness and alternative economic models to make it attract for insurers to build sustainable and scalable businesses across the region and the world.
References
Mubashiru, Sumaya, and Abubakar Musah. "Traditional Risk Coping Mechanisms and Microinsurance of Selected Rural SMES in Northern Ghana."


* The paper is still in draft as peer review is in progress. We are trying to finalized the same before the WCHS and share during the event itself.