

Markets in Crisis

Integrating ICT into Emergency Market Assessments: Lessons Learned from the IRC's PCMMA Pilot in Niger

Introduction

Data collection and analysis can be time-consuming, cumbersome and difficult to monitor. Paper-based assessments require a great deal of dedicated human capacity. Data from even a simple questionnaire can require days of data entry, with plenty of room for gaps or errors. With the advent of low-cost mobile data collection (MDC) tools, many organizations are transitioning away from paper-based data collection to digital means. This factsheet summarizes the key MDC-related findings and recommendations from the International Rescue Committee's (IRC's) Pre-Crisis Market Mapping Analysis (PCMMA) pilot study in Niger.

PCMMA is a relatively new approach to conducting market assessments in contexts where a future crisis is anticipated, loosely based on the Emergency Market Mapping and Analysis (EMMA) Toolkit. To date, MDC has not been used widely in EMMA or PCMMAs, for a number of reasons. Sample sizes are relatively small, data tends to be more qualitative than quantitative, and new questionnaires tend to be developed for each assessment, often at the last minute. The IRC decided to use its PCMMA pilot in Niger as an opportunity to test the extent to which MDC could help to support emergency market assessments, especially in terms of improving the speed and quality of household and vendor-level data collection.

The PCMMA pilot assessment was conducted in June and July 2015 as part of the Strengthening Global Capacity for Markets in Crisis Project funded by the U.S. Agency for International Development. Niger presents an archetypical context for mobile data collection; electricity and mobile network connectivity are intermittent, staff are distributed across various satellite offices, and travel between sites is arduous. The IRC had been using MDC in Niger before this assessment; of the 13 members of the assessment team, 9 had prior experience with MDC.

Approach

Before arriving in country, the IRC's MDC Manager assessed staff capacity and the project's overall feasibility. The mobile data platform was then selected based on the team's capacity, the context, IRC's prior experience and ease of use. Upon arrival in country, the MDC Manager worked with the assessment team to finalize paper-based surveys and digitize the forms for mobile devices. The forms were then tested on the devices, and an initial version was deployed, tested and refined. All data collectors were then trained on the mobile device usage. Once data collection began, information was synced to the server so that data could be reviewed in near-real time. Adjustments to forms were made remotely, as needed, and were updated on the devices through syncing.

Lessons Learned

What worked?

MDC allowed for near real-time review of data collection despite limited connectivity. Team leaders were able to troubleshoot form submissions from afar.

Though not all of the team leaders and data collectors had prior experience with MDC, the entire team's capacity was sufficiently built to administer the PCMMA using mobile devices.

While EMMA and PCMMA questionnaires are usually fairly qualitative, the process of converting questionnaires from paper to mobile formats forced team leaders to specify potential answers to each question. This led to better quality forms that focused on the most important data points and facilitated data analysis.

Finally, MDC produced efficiency gains in the data analysis portion of the assessment. Data collection was streamlined and data entry reduced to null. The mobile platform made refining and updating questionnaires relatively easy.

Challenges

The PCMMA guidance itself was being piloted at the same time the IRC was testing out MDC for market assessments. Without a well-established operational approach to PCMMAs, it was difficult to know exactly how and where to apply MDC for the greatest gains.

Not enough time was allotted for the conversion of the questionnaires to the mobile format and subsequent testing and revising of forms before data collection began in earnest. This meant that the MDC tools continued to be modified throughout the data collection process, leading to some inconsistencies in data.

While MDC undoubtedly saved the team time in terms of data entry and analysis, it also cost the team considerable time to build and test the mobile forms. Since relatively few interviews (around 60) were conducted on the mobile devices, it is unclear if MDC ultimately saved the team time.

The mobile forms were designed to prompt enumerators to take a picture of interviewees for possible inclusion in the report. However, because picture quality settings were set to “high” on the mobile devices, the picture file sizes were quite large. This meant that every form with a picture attached required a strong network to upload, which quickly became problematic given rural Niger’s limited available bandwidth.

Recommendations

- **Assess ICT’s real value add**

For MDC novices, PCMMA/EMMA may not be the most appropriate opportunity to pilot MDC. Given the low volume of forms collected and relatively short timelines of such assessments, the benefit of automated data entry may not outweigh the time and effort needed to develop forms and to train teams in MDC. The cost-benefit analysis may be different for teams with strong capacity in MDC.

- **Be prepared**

Consider all of a project’s hardware and connectivity needs well before the assessment begins so that technical challenges are anticipated and failures are avoided.

- **Build sufficient time into the schedule for tool development and testing**

Sufficient time for form development, digitization, testing and revision must be built into pre-assessment workshop agenda. Include an ICT specialist in the planning process to gain insight into how much time is needed for this.

- **Plan for language barriers**

If the ICT Specialist does not speak the language in which assessment tools are written, the team should appoint a translator or allow additional time for tool development and revision.

- **Choose data platforms and collection tools wisely, with the context in mind**

The most successful ICT projects take context into account, including security, connectivity and local staff’s capacity in ICT. Mobile technology is a support system, not an end-all solution.

- **Think beyond mobile data collection**

It is worth exploring ways in which ICT can support emergency market assessments beyond mere MDC, for example through ongoing market monitoring, possibly through SMS text messaging with selected market actors.

Author: Rosa Akbari

For more information on this study or on PCMMA, contact Emily Sloane, Emergency Markets Officer, at emily.sloane@rescue.org.

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