The Impact of Mobile Training on Sales Performance: Evidence from a Natural Field Experiment

Elizabeth Lyons
UC San Diego

ADRAS IBLI Academic Workshop
June 11, 2015
Can mobile training help firms overcome challenges associated with serving customers in rural areas of developing countries?
Rural Market Demand and Supply

- Retail & service firms recognizing profit potential in rural regions of developing countries (e.g. Neuwirth, 2012)
- However, challenges may prevent or delay these markets from developing to meet demand (e.g. Dihel, 2011)
  - Infrastructure
  - Transportation
  - Labor norms
  - Skilled human capital

By looking at effect of giving employees access to training in a manner that overcomes infrastructure shortages on firm performance, this study has important implications for the development of the private sector in these regions.
Presentation Overview

- Research Setting Background
- Research Design
  - Experimental Design
  - Training Provision
  - Data Collection
- Conclusion

No Results Yet!
Index Based Livestock Insurance (IBLI) Sales Agents

- Agents sell IBLI to pastoralists in arid and semi-arid regions of Northern Kenya
- Agents are employees of local insurance companies that underwrite IBLI
  - Focus on agents in one of these companies, TIA
- Agents are responsible for finding and selling to potential customers
  - This involves travelling around their assigned divisions, approaching pastoralists, explaining the product, answering customer inquiries, completing transactions
- Two sales seasons per year: Jan-Feb & Aug-Sep
- Agents receive 3-4 days of face-to-face training before sales season begins
Agent Knowledge Shortages

Evidence from customer feedback, pilot testing that IBLI sales agents frequently misunderstand the product & sales process

Agent knowledge relevant for selling IBLI may be under-provided, or under-invested in for several reasons, for instance:

- Short-term contracts make firm-specific and worker-specific investments unattractive (Autor, 2001; Booth et al., 2002)
- Firm-level problems codifying knowledge necessary for training agents (Zack, 1999)
- Lack of understanding about value of training (Schultz, 1961)
Research Design Outline

Natural Field Experiment:
- Test causal impact of mobile-based training, how effect varies with incentives to invest in training

Research Tool
- Mobile Training Application

Data Collection
- Data collection through mobile phones
- Surveys and tests
Experimental Design

All sales agents selling IBLI for TIA are included in sample (approximately 130 participants)

- One quarter do not receive access to mobile training
- One quarter receive access to basic mobile training
- One quarter receive access to basic mobile training plus mobile-credit based incentives to perform well on quizzes
- One quarter receive access to “gamified” mobile training

Agents spread across four or five counties; 6-20 divisions per county

- To avoid geographic spillovers, randomization will occur across clusters of divisions
  - Still allows for county fixed effects
Mobile Training Application

Mobile phones offer firms a low-cost means of providing information to customers and employees that may otherwise be hard to reach

▶ Face-to-face training beyond what is already being offered is costly
▶ Agents seem to frequently come out of face-to-face training with little additional knowledge

Android application will allow agents to continuously train while in the field

▶ Agents can go through training at their own pace, re-read sections they find hard to understand

Two sections:

▶ Training Modules with Quizzes
▶ Frequently Asked Questions
Who is Takaful Takaful of Africa (TIA)?

This module contains a lesson and a quiz. You may go through the lesson and then take the quiz, or skip the lesson and go straight to the quiz.
Mobile Training Application

Who is Takaful Takaful of Africa (TIA)?

TIA aims to provide risk management and financial security based on ethical principles and values.

Frequently Asked Questions

- Which livestock can be protected by IBLT?
- How long does an IBLT policy insure me for?
- Why is the tabaru (premium) in my Division different from the premium of other Divisions?
- What risk is covered by IBLT?
- If I buy a policy, how many pay-outs am I eligible for?
- How does the satellite work?
- Will my tabaru by refunded?
- How do I get updates on what the index is?
Mobile Data Collection

ODK-based Survey on Agent Characteristics and Motivations
  ▶ Family and education background
  ▶ Work histories
  ▶ Views on IBLI and agent job
  ▶ Capacity to learn

Sales and Activity Data
  ▶ Sales performance
  ▶ Sales effort

Training App Performance
  ▶ Training effort
  ▶ Quiz Performance
Additional Data Collection

IBLI Knowledge

- Oral exam of IBLI Knowledge before and after sales season

Sales Ability

- Prior IBLI sales histories

Region and Time Dummies
(Hopeful) Contributions

ICT Productivity and Efficiency Impacts

▶ Productivity of firms (Brynjolfsson and Hitt, 2000; Bartel et al., 2007)
▶ Information transfer in absence of face-to-face interactions (Arrow, 1969; Teece et al., 1977)

Human capital development

▶ Training of low-skilled workers (Acemoglu and Pischke, 1999)
▶ Selection into training (Card, 1999)
▶ Revenue outcomes of firm-sponsored training (McKenzie and Woodruff, 2013)
Thank you!