

Researchers

Antoinette Schoar
Massachusetts Institute of Technology

Staff

Sebastian Chaskel
Program Director, Peace & Recovery

Timeline

2010-2012

Sample Size

50 participants in 13 neighborhoods of Bogotá

Mobile Application as a Tool for Improving Record Keeping and Accounting Practices of Micro Retailers

Abstract

Many subsistence entrepreneurs in developing countries do not maintain adequate business records which may limit their ability to streamline business operations and increase profits. This exploratory study was designed to explore take up and role of a new mobile application in helping small shopkeepers in Colombia to keep records, create business reports and manage other business tasks. Results show that while the application wasn't widely adopted by the study participants, it was particularly useful for some of the shopkeepers who had good record keeping practices before they were introduced to the application.

Note: This research project is a pilot study designed to provide insights for a potential scale up to a full randomized controlled trial.

Policy Issue

Many entrepreneurs in developing countries who rely on their small businesses to meet basic consumption needs do not maintain records of business expenses or sales. Without a system for managing finances, these small businesses may miss opportunities to increase profits and trim expenses. Providing tools to these micro entrepreneurs to help them manage their finances may be a way to improve their business outcomes and household consumption levels.

Context of the Evaluation

Colombia has an estimated 400,000 micro and small stores or "tiendas", which account for 52% of food and retail sales [\[\[1\],\[2\]\]](#). While tienda entrepreneurs sell hundreds of different products and manage relationships with wholesalers, most of them continue to use minimal business administration tools, for example, writing down sales and purchases in notebooks, or don't use any record keeping at all.

To test if a more formal and engaging record keeping system could improve shopkeepers' business records management, IPA partnered with Frogtek, a firm that builds business tools for entrepreneurs in emerging markets. Frogtek developed Tiendatek, a smart phone application that allows shopkeepers systematize their business by managing their accounting, inventories, sales, payments to suppliers, expenses and earnings. All data generated by the shopkeeper is uploaded and stored on a mobile phone and a Frogtek web server. The Tiendatek application creates reports on sales, purchases, credit, inventory, and break-even points based on the data uploaded by a shopkeeper.

Tiendatek relies on mobile phone technology, which is widespread and popular in Colombia. The country has among the highest rates of participation in the communication and technology markets, with 92.3 cell phone subscriptions per 100 people and 45.5% of the population using internet [\[\[3\]\]](#). Thus, the application is easily accessible for micro and small retailers.

Details of the Intervention

This exploratory study was designed with the goal of understanding take up of Tiendatek application and characteristics of shopkeepers who end up adopting the application. In the case of sufficient take up the study was also designed to explore whether and how the application helped small shopkeepers to better manage their businesses. The study targeted shopkeepers with sales between 1,000 and 2,000 USD a month. Frogtek staff interviewed shopkeepers, assessed their interest, delivered a mobile phone with Tiendatek application installed and provided training in one or two visits. Shopkeepers also received technical assistance from Frogtek staff for 6 months after delivery of the phone. In total, 58 shopkeepers received the phone, training and technical assistance.

Fifty-one shopkeepers were surveyed approximately ten to twenty days after receiving a new phone. A follow up survey was completed eight to ten months after the initial phone delivery with 47 shopkeepers. In addition, all data generated by shopkeepers and uploaded to a Frogtek web server was used as supplemental data for the study.

Results and Policy Lessons

Tiendatek received positive feedback from shopkeepers who participated in the study, with 96 percent of them indicating that they would recommend it to their colleagues. However, most shopkeepers did not use the application fully; they did not register all business transactions through the application which in turn limited their ability to take advantage of features such as profits and inventory reports. Moreover, of the 40 shopkeepers who answered the question in the follow up survey, only 10 were still using it 10 months after receiving it.

While the application wasn't widely adopted by the study participants, it was more popular with those shopkeepers who were more diligent in their record keeping and accounting practices initially. Out of 32 shopkeepers who reported having some system of recordkeeping in the baseline survey, four adopted Tiendatek, while among the 15 who did not have a formal recordkeeping system initially, six begun using notebooks and none started using Tiendatek. Moreover, shopkeepers who had good record keeping and business practices before they received the phone, for example, keeping written records and making an inventory of products, were more likely to use Tiendatek more frequently and for a longer period of time.

Sources

[1]Diaz, Alejandro, Jorge Lacayo, and Luis Salcedo. 2007. "Selling to 'mom-and-pop' stores in emerging markets" The McKinsey Quarterly

[2]De Jacobs, Alicia. "Colombia Retail Food Sector" USDA Foreign Agricultural Services Global Agricultural Information Network Report, October 2010.

[3]United Nations Conference on Trade and Development 2010 Information Economy Report

April 22, 2014