

Nicaragua - Rural Business Development Services 2007-2011

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Sampling

Sampling Procedure

The challenge of this and all impact evaluation efforts is to identify a control group that is identical to the treatment group in every way except that they have not benefitted from the intervention under evaluation. The evaluation team worked with the RBD implementation team to identify all geographic clusters that would eventually be observed RBD services. The evaluation team then selected a subset of these clusters for random assignment to either early or late treatment status. This strategy not only created a temporary conventional control group, it also randomized the duration of time in the program, a feature that will prove vital in the continuous treatment estimates presented below. In late treatment clusters, services were not initiated until approximately 18 months later, in early 2009 at the time of the midline survey. Because clusters were randomly allocated to early and late treatment conditions, we can anticipate that on average the late treatment group should function as a valid control group, identical to the early group in every way except early receipt of RBD services. The economic status of the late group in 2009 should thus be a good predictor of what the status of the early group would have been in the absence of RBD services. Both early and late treatment clusters were then surveyed again near the end of the program in 2011. Once the random assignment of early and late clusters was made, the impact evaluation team created a roster of all eligible producers in these clusters, and then randomly selected a sample of 1600 households split between early and late areas. These 1600 households were then invited to participate in the impact study, and completed a baseline survey in late 2007, just as the RBD project was beginning in the early treatment clusters. Within these clusters, 64% of the eligible households chose to participate in the RBD project. A second-round survey was applied to all 1600 households in the first quarter of 2009, just as the RBD project was rolled out in the late treatment area. While it was not clear at baseline which of the eligible households in the late treatment areas would choose to participate in the project, those households made their participation decision around the time of the second-round survey. Similar to the early treatment clusters, 57% of eligible households in late treatment clusters elected to participate. Because the timing of the surveys and project rollout allow determination of farmer type in both early and late treatment areas (participants versus non-participants), the impact evaluation has the opportunity to study impacts on both eligible households as well as impacts on participating or complier households. The evaluation here will primarily focus on the complier households as we are interested in the impact of the program on the types of self-selecting individuals who adopt it.

Deviations from Sample Design

In some cases, the number of eligible farmers within the permitted radius was insufficient for the creation of a nucleus, and these potential farmers were therefore not included in the original sample. In numerous cases, the quota of 30 farmers was difficult to reach. Combined with the fact that 4% of farmers rejected to be interviewed, and that some 10% were deemed ineligible at the moment of the baseline survey, this all resulted in slightly fewer surveys per cluster than originally planned.

Response Rate

At the end of this second sampling stage, 1600 farmers (and their households) were interviewed. There are slightly more early (treatment) farmers than late (control) farmers. Within the blocks, there is an uneven number of interviews between early and late groups, especially with the sesame activity. Some sesame areas contained fewer eligible farmers, resulting in a lower number of interviews per GU. Across departments, the largest differences are found in some bean GUs: Chinandega has twice as many bean GUs as Len. This difference is mainly explained because the GUs are spread across four municipalities in Chinandega, and only two municipalities in Len.

Questionnaires

Overview

While it was not clear at baseline which of the eligible households in the late treatment areas would choose to participate in the project, those households made their participation decision around the time of the second-round survey. Similar to the early treatment clusters, 57% of eligible households in late treatment clusters elected to participate. Because the timing of the surveys and project rollout allow determination of farmer type in both early and late treatment areas (participants versus non-participants), the impact evaluation has the opportunity to study impacts on both eligible households as well as impacts on participating or complier households. The evaluation here will primarily focus on the complier households as we are interested in the impact of the program on the types of self-selecting individuals who adopt it. From every list of clusters, we expected to randomly select 12 farmers. In practice, there were fewer eligible farmers than we initially assumed. In some cases, the number of eligible farmers within the permitted radius was insufficient for the creation of a nucleus, and these potential farmers were therefore not included in the original sample. In numerous cases, the quota of 30 farmers was difficult to reach. Combined with the fact that 4% of farmers rejected to be interviewed, and that some 10% were deemed ineligible at the moment of the baseline survey, this all resulted in slightly fewer surveys per cluster than originally planned. At the end of this second sampling stage, 1600 farmers (and their households) were interviewed (see Table 6). There are slightly more early (treatment) farmers than late (control) farmers. Within the blocks, there is an uneven number of interviews between early and late groups, especially with the sesame activity.

Data Collection

Data Collection Dates

Start	End	Cycle
2007	2007	Baseline
2009	2009	N/A
2011	2011	N/A

Data Collectors

Name	Abbreviation	Affiliation
Fundacin Internacional para el Desafio Economico Global	FIDEG	

Data Processing

Data Editing

Regarding the variables used to compute the aggregate expenditures, the evaluation team did the following task in the cleaning process:

- 1) Identification of mistyped data by finding extreme values of per capita durable and non durable aggregate expenditures growth.
- 2) Revision of every missing value to verify if it was a mistyped data.
- 3) Consistency between section 3.C, 3.CA and 3.CO to verify if there was information that was not typed.

In most cases, it was identified that the enumerator wrote an incorrect code. However, enumerators were encouraged to write observations if they had some doubt about the farmer's answer. This type of information was key for the cleaning data process.

In other cases, wrong codes of frequency or total value were evident but there was not additional information from the enumerator (e.g., a household consumes 50 pounds of sugar per day). By comparing this information with the other round survey and considering that the size of household had not changed, we concluded that household consumption was the same amount of food but the frequency or the value was not coherent.

Finally, if there was a household with only one missing value in only one round of the survey, we impute a value for this unique missing value. For example, if the missing value was a food value, we take the average of the value of the same food declared by other households living in the same municipality.

Other Processing

The Fundacin Internacional para el Desafio Economico Global (FIDEG) was the firm in charge of the data collection. Data were entered using the Census and Survey Processing System software (CSPRO 4.0). Additionally, the data gathering firm developed procedures to identify mistyped data. This preliminary version was edited by using SPSS statistical analysis software and provided to the evaluation team to do a deeper data checking. To date, the evaluation team has reviewed the data for completeness and internal consistency, and to determine if farmer's household follow-up was correctly done. There were 21 households in which the second interview failed because of rejection (12 households) or because it was not possible to find an adequate household member to answer the questionnaire. Follow-up of the farm -which information is concentrated in Section 6 of the questionnaire- is still under revision. However, preliminary results show that errors, such as interviewers' failure to follow procedures, should not have a significant effect on data quality. Most importantly, land tenure answers could be imprecise because most of the interviewed farmers do not have a formal possession of the farm.

Data Appraisal

No content available

Related Materials

Questionnaires

Round I Questionnaire

Title Round I Questionnaire
 Country Nicaragua
 Language Spanish
 Filename Questionnaire r1.pdf

Round II Questionnaire

Title Round II Questionnaire
 Country Nicaragua
 Language Spanish
 Filename Questionnaire r2.pdf

Round III Questionnaire

Title Round III Questionnaire
 Country Nicaragua
 Language Spanish
 Filename Questionnaire r3.pdf

Reports

Final Evaluation Report Package

Title Final Evaluation Report Package
 Country Nicaragua
 Language English
 Description This folder contains the following documents: (i) Independent Evaluator Final Evaluation Report, (ii) MCC Management Response, and (iii) MCC Summary of Findings with Lessons Learned.
 Filename Final Evaluation Report Package.zip

Peer Review 1

Title Peer Review 1
 Filename peerreview-nic-rbd-impact-masters-sep12.pdf

Peer Review 2

Title Peer Review 2
 Filename peerreview-nic-rbd-impact-goldstein-sep12.pdf

Technical documents

Revised Impact Evaluation Strategy for the MCA-Nicaragua Rural Business Development Program

Title Revised Impact Evaluation Strategy for the MCA-Nicaragua Rural Business Development Program
 Country Nicaragua
 Language English
 Filename design-nic-rbd-impact-mar10.pdf

Impact of Business Services on the Economic Wellbeing of Small Farmers in Nicaragua (Issue Brief)

Title Impact of Business Services on the Economic Wellbeing of Small Farmers in Nicaragua (Issue Brief)
 Author(s) University of Wisconsin and UC Davis
 Date 2010-03-01
 Country Nicaragua
 Language English
 Filename amabrief10-01.pdf

Investing in Small Farm Productivity: The Nicaragua MCC Compact (Issue Brief)

Title Investing in Small Farm Productivity: The Nicaragua MCC Compact (Issue Brief)
 Author(s) University of Wisconsin and UC Davis
 Date 2013-12-01
 Country Nicaragua
 Language English
 Filename Nicaragua_FINAL2.pdf

Inversión en la productividad de pequeños productores - El acuerdo CRM de Nicaragua (Issue Brief)

Title Inversión en la productividad de pequeños productores - El acuerdo CRM de Nicaragua (Issue Brief)
 Author(s) University of Wisconsin and UC Davis
 Date 2013-12-01
 Country Nicaragua
 Language Spanish
 Filename Nicaragua_Spanish_FINAL1.pdf

Other materials

Summary of Results

Title Summary of Results
 Author(s) MCC
 Date 2012-10-23
 Country Nicaragua
 Filename <https://www.mcc.gov/docs/doc/summary-measuring-results-of-the-nicaragua-rbd>

MCC Management Response

Title MCC Management Response

Author(s) MCC

Date 2012-10-01

Country Nicaragua

Filename <https://www.mcc.gov/docs/doc/statement-mcc-management-response-to-the-impact-of-rural-business-services>
