

Ghana - Feeder Roads 2009

NORC at the University of Chicago, Pentax Management Consultancy Services

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Overview

Identification

ID NUMBER

GHA_2009_FR_v01_EN_M_v01_A_OCS

Overview

ABSTRACT

The Ghana Millennium Development Authority's (MiDA) Agriculture Project within the Government of Ghana's Compact with the Millennium Challenge Corporation is design to improve farming in a number of areas. Under the Agricultural Project being implemented by (MiDA) some feeder roads are to be rehabilitated or reconstructed to promote development in the sector. In the first phase, about 336 km of feeder roads in eight (8) districts in two intervention zones are to be rehabilitated to reduce transportation costs and time and increase access to major domestic and international markets. The feeder roads activity will also facilitate transportation linkages from rural areas to social service networks (including hospitals, clinics and schools). The purpose of this project is to conduct an impact evaluation of the MiDA's Feeder Roads Activity. As stated in the Terms of Reference of the request for proposals, "the primary data for the impact evaluation will be a series of surveys similar in scope to the Consumer Price Index (CPI) survey, examining changes in prices over time Findings from the market surveys will contribute to the overall impact evaluation conducted by the Institute of Statistical, Social and Economic Research (ISSER). The Ghana Living Standards Survey (GLSS) 5+ is the primary instrument used in the overall evaluation, and 'Difference in Difference' is the proposed method of evaluation of data.

Thus, this study focuses on how prices of goods sold at local markets (that are transported on improved roads) change over time. It is also to document the changes in goods transport tariffs and passenger fares to marketplaces served by the feeder roads. The sample design uses a carefully tailored algorithm employed to match 154 localities that will benefit from the road improvements with an identical number of control localities that are comparatively far from the improvements. The sample size is sufficient to provide robust estimates of price effects associated with the road improvements. The minimum population for a locality to be included in the sample is 1,000, a condition imposed to help ensure that most designated items could be found in most localities.

Beginning in August 2009 interviewers visited the sample localities to obtain three price observations for each item in the defined "basket" of goods and transportation services. The final "basket" contains 39 fresh food items, 24 packaged food items, 19 non-food items and 6 transportation tariffs-3 for the locality's residents' most frequent passenger destinations and 3 for the most frequent freight destinations.

KIND OF DATA

Sample survey data [ssd]

UNITS OF ANALYSIS

Households

Scope

NOTES

The scope of the survey includes:

- Market/vendor information
- Prices of different type of goods
- Fresh food items
- Packaged food items
- Non-food items

- Transportation tariffs

TOPICS

| Topic | Vocabulary | URI |
|--|------------|-----|
| Agriculture & Rural Development | FAO | |
| Food (production, crisis) | FAO | |
| Prices statistics | FAO | |
| Financial Market Integrity (Anti-Money Laundering) | FAO | |

Coverage

GEOGRAPHIC COVERAGE

Regional

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

| Name | Affiliation |
|--|-------------|
| NORC at the University of Chicago | |
| Pentax Management Consultancy Services | |

OTHER PRODUCER(S)

| Name | Affiliation | Role |
|---------------------------------|-------------|----------------------|
| Millenium Development Authority | | Technical assistance |

FUNDING

| Name | Abbreviation | Role |
|---------------------------------|--------------|----------------------------------|
| Millenium Development Authority | MiDA | Provided funding for the project |

Metadata Production

METADATA PRODUCED BY

| Name | Abbreviation | Affiliation | Role |
|------------------------------|--------------|-----------------------------------|------------------------------|
| Office of Chief Statistician | OCS | Food and Agriculture Organization | Adoption of metadata for FAM |
| Sam Haddaway | | NORC at the University of Chicago | Documentation of the study |

DDI DOCUMENT VERSION

GHA_2009_FR_v01_EN_M_v01_A_OCS_v01

DDI DOCUMENT ID

DDI_GHA_2009_FR_v01_EN_M_v01_A_OCS_FAO

Sampling

Sampling Procedure

In the present application, the approach that is being used, in lieu of randomization, to select a control sample is statistical matching. A matched-pairs design was used, matching 174 (154 plus 20 replacements) treatment localities to 174 control localities using nearest-neighbour matching. Sampling was restricted, as mentioned earlier, to localities having population 1,000 or more (according to the 2000 Census) and to the 20 largest localities in each district. The treatment population included all localities within 120 minutes estimated travel time of the nearest MiDA program road, and the control population included all localities located more than 120 minutes estimated travel time from the nearest MiDA program road. (The estimated travel times were calculated using a GIS model of the Ghana road network (documented separately).) This resulted in population sizes of 675 treatment units and 848 control units. Sampling was restricted to all of the country except Western Region. Matching was based on a number of variables, including population, travel time to Accra, travel time to the nearest MiDA feeder road, and physiographic data. The sample localities occur at all distances from the program roads, since it was desired to have substantial variation in the travel time to the program roads. Because of the sample design process, the sample has reasonable spread, balance and orthogonality for a large number of design variables. Also, the sample includes a control sample for which the units are individually matched to units in the treatment sample. The sample will be a very good one for use in estimating an analytical model showing the relationship of program impact (price changes) to the Ghana MiDA feeder-road improvements, and for estimating a double-difference estimate of program impact.

Deviations from Sample Design

Of the 308 sampled localities only one locality was removed from the sample because we were unable to locate it. This locality, Choo #0155, was not located and was removed along with its matching pair, Sabiye #0159. These localities were replaced with Suame #0812 and Ogbodzo #1264. All other localities were located and surveyed.

Weighting

No weighting is used in the dataset.

Questionnaires

No content available

Data Collection

Data Collection Dates

| Start | End | Cycle |
|------------|------------|-------|
| 2009-08-12 | 2009-09-07 | N/A |

Data Collection Mode

Face-to-face [f2f]

Data Processing

Data Editing

Data editing was done in the field by supervisors, and double data entry was carried out by Pentax. After receiving data from Pentax, NORC assisted with reconciliation between the first and second entries. After reconciling the data, NORC carried out significant data cleaning, including some imputation of values for missing observations. For a detailed explanation of data editing and cleaning, please refer to the attached "Phase 1, Baseline Findings" report. For the raw dataset received by NORC from Pentax, see the attached "Raw Data". For SPSS scripts detailing cleaning done on the dataset, see "SPSS Scripts".

Data Appraisal

No content available