Government Child labor Certification Survey

NNN Nsowah-Nuamah

NATIONAL REPRESENTATIVE SAMPLE

- National frame with unit to satisfy the demands of the sampling design
- National Frame must include all non-zero probability units of the design and exclude all zero-probability units
- Types of households : All households with at least one member working on a cocoa farm
- Cocoa frame excludes all households without at least one member working on the coca farm

Multi-stage cluster sampling

- Cocoa sampling was designed to go through 3-stages :
  - Stage1- District sampling
  - Stage 2-Cluster (EA) sampling
  - Stage 3-Household sampling
- This design was to satisfy the certification protocol of satisfying at least 50% of cocoa growing areas

STAGE ONE

- Sampling of Districts using the systematic method with probability proportion to size (level of cocoa produced in district)
- A total of 15 districts out of 46 districts were selected
- Sampling was done within regions to ensure that each region had enough sample to be a domain of the study

STAGE TWO

- Sampling of clusters using simple systematic random sampling to have an even distribution of cluster within the districts

- A total 120 clusters were selected within the 15 districts

STAGE THREE

- Sampling of households within the cluster with simple systematic method of sampling
- Selected a fixed number of households in each cluster
- In each cluster, 15 households were selected from the 120 clusters to make a total of 1,800 households nationwide
- Each child aged 5-17years was eligible for interview

COVERAGE

- Completed interview in 15 districts as planned
- Completed interview in 119 out of 120 clusters. One cluster was inaccessible
- Interviewed 1,735 households and 3,452 children nationwide

STATISTICAL SIGNIFICANCE

- Sample size was determined on the basis of the relative error of p and multiplied by the design effect

- The sample size was then estimated with 5% significance level as follows:

- $n = \{(1-p)/p\} \times \{deft / RE(p)\} 2$
- p= proportion
- deft= design effect
- Re(p)= relative error of p

LISTING OF SELECTED CLUSTERS

- Listing of structures and households in all selected clusters. The following variables were included:
  - Name of households
  - Address of household head
  - Household size
  - Number of households working on cocoa farm
  - Type of cocoa operation
  - Number of children in household

Construction of Frame

- At least one member grows cocoa in the household

- At least one child aged between 5-17years in household

WEIGHTING

- First Stage Probability:

Probability of selecting a district

- $P_1=(M_{r,d} \text{ X } n_r)/M_r$

- $M_{r,d}$ =Cocoa Production level in each district
- n_r =Number of districts sampled in each Region
- M_r=Cocoa Production level in each region

- Second Stage Probability:

Probability of selecting a cluster

- $P_{2=nr,d,e}$ / $N_{r,d,e}$

- $n_{r,d,e}$ = Number of clusters sampled from selected district

- $N_{r,d,e}$ = Total number of clusters in the selected district

- Third Stage Probability

Probability of selecting a household

- $P_3 = n_{r,d,e,h} / N_{r,d,e,h}$
- $n_{r,d,e,h}$ = Number of cocoa producing household selected in each selected cluster
- $N_{r,d,e,h}$ = Total number of cocoa producing households in each selected cluster

Overall Probability

- $P_t = P_1 \text{ X } P_2 \text{X } P_3$
- $W_t = 1/P_t$