Cambodia - Cambodia Socio-Economic Survey 2010

National Institute of Statistics

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Overview

Identification

ID NUMBER
KHM_2010_CSES_v01_EN_M_v01_A_OCS

Overview

ABSTRACT
The CSES is a household survey with questions to households and the household members. In the household questionnaire there are a number of modules with questions relating to the living conditions, e.g. housing conditions, education, health, expenditure/income and labour force. It is designed to provide information on social and economic conditions of households for policy studies on poverty, household production and final consumption for the National Accounts and weights for the CPI.

The main objective of the survey is to collect statistical information about living standards of the population and the extent of poverty. Essential areas as household production and cash income, household level and structure of consumption including poverty and nutrition, education and access to schooling, health and access to medical care, transport and communication, housing and amenities and family and social relations. For recording expenditure, consumption and income the Diary Method was applied for the first time. The survey also included a Time Use Form detailing activities of household members during a 24-hour period.

Another main objective of the survey is also to collect accurate statistical information about living standards of the population and the extent of poverty as an essential instrument to assist the government in diagnosing the problems and designing effective policies for reducing poverty, and in evaluating the progress of poverty reduction which are the main priorities in the "Rectangular Strategy" of the Royal Government of Cambodia.

KIND OF DATA
Sample survey data [ssd]

UNITS OF ANALYSIS
Households

Scope

NOTES
Poverty reduction is a major commitment by the Royal Government of Cambodia. Accurate statistical information about the living standards of the population and the extent of poverty is an essential instrument to assist the Government in diagnosing the problems, in designing effective policies for reducing poverty and in monitoring and evaluating the progress of poverty reduction. The Millennium Development Goals (MDG) has been adopted by the Royal Government of Cambodia and a National Strategic Development Plan (NSDP) has been developed. The MDGs are also incorporated into the "Rectangular Strategy of Cambodia".

Cambodia is still a predominantly rural and agricultural society. The vast majority of the population get their subsistence in households as self-employed in agriculture. The level of living is determined by the household's command over labour and resources for own-production in terms of land and livestock for agricultural activities, equipments and tools for fishing, forestry and construction activities and income-earning activities in the informal and formal sector. Data to calculate household production were obtained from the household questionnaire and the diaries as well as data from the labour force module.

Briefly the four earlier CSES rounds have all made it possible to report sets of indicators on 8 main areas of social concern:

1. Demographic characteristics

2. Housing

3. Agriculture

4. Education

5. Labour Force

6. Health and Nutrition

7. Victimization

8. Household Income and Consumption

These 8 areas were also covered by corresponding modules in the CSES 2009, together with a diary method as well as a recall method, the other following the module design and variable content of previous

TOPICS

Topic	Vocabulary	URI
Agriculture & Rural Development	World Bank	
Food (production, crisis)	World Bank	
Land (policy, resource management)	World Bank	
Coal	World Bank	
Electricity	World Bank	
Oil & Gas	World Bank	
Migration & Remittances	World Bank	
Health	World Bank	
HIV/AIDS	World Bank	
Malaria	World Bank	
Mental Health	World Bank	
Nutrition	World Bank	
Tuberculosis	World Bank	
Infrastructure	World Bank	
Transport	World Bank	
Water	World Bank	
Poverty	World Bank	
Private Sector Development	World Bank	
Public Sector	World Bank	
Children & Youth	World Bank	
Gender	World Bank	
Urban Development	World Bank	

Coverage

GEOGRAPHIC UNIT

14 Domains:

11 individual provinces:

Bantey Meanchy

Battambang

Kampong Cham

Kampong Speu

Kampong Thom

Kanda

Phnom Penh

Prey Veng

Siem Reap

Svay Rieng

Takeo

3 groups of provinces:

Group 1: Kampong Chhnang, and Pursat; Tonle Sap provinces

Group 2: Kampot, Sihanouk Ville, Kaoh Kong, and Krong Keb; Coastal provinces

Group 3: Kratie, Steung Treng, Rattanakiri, Mondol Kiri, Preah Vihear, Oddor Meanchey, and Krong Pailin; Mountain provinces

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
National Institute of Statistics	Ministry of Planning

FUNDING

Name	Abbreviation	Role
Swedish International Development Agency	SIDA	Funding

OTHER ACKNOWLEDGEMENTS

Name	Affiliation	Role
Statistics Sweden	SCB	Technical Assistance (TA)

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Bou Sreylun	BS	National Institue of Statistics	Archivist
Saint Lundy	SLD	National Institue of Statistics	Archivist
Office of Chief Statistician	OCS	Food and Agriculture Organization	Metadata adapted for FAM

DDI DOCUMENT VERSION
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DDI DOCUMENT ID

DDI_KHM_2010_CSES_v01_EN_M_v01_A_OCS_FAO

Sampling

Response Rate

The CSES 2010 enjoyed almost a 100 percent response rate. The high response rate together with close and systematic fieldwork supervision by the core group members were a major contribution for achieving high quality survey results.

Weighting

The design weights are used to compensate for differences in the selection probabilities. The weight for the PSU is inversely proportional to its selection probability.

A further adjustment of the weights was done in order to calibrate the weights so that estimates of population totals would agree with projections based on the 1998 Population Census. Weights for households in the household file were adjusted so that estimated number of households agreed with census projections for each zone, urban and rural. Weights for individuals in the person file were adjusted so that the estimated number agreed with the projected number in each sex and age group in each zone (urban and rural).

Some of the villages are very large. The best procedure would have been to put the very large villages (villages with a size Mhi larger than Mh/nh) in a separate stratum. This was not done. As a result there are a few villages where the inclusion probability exceeds 1.00 and consequently the first stage sampling weight is below 1.00. To rectify this we set the first stage sampling weight (W1) equal to 1.00 for these villages. When doing so we had to adjust the weights downwards for the other villages in the stratum in order to have the same sum of weights for the stratum as before the adjustment.

The second stage sampling weights W2 are calculated as the number of households in the village (according to the chairman) over the number of sampled households (10 or 20). There were actually two variables indicating the number of households in the village, one was the number obtained by the interviewer (variable E_HHs) and the other was the number obtained by the supervisor (HHs_Vill).

The household sampling weights (Wprel) are calculated by multiplying W1 by W2. All the sampled households in the village get the same household weight. A check of the weights revealed that there were a few extremely low and high weights. These “outliers” will tend to inflate the variance for some estimates. We decided to trim the weights by adjusting the extreme weights towards the center. Weights above 300 were adjusted downwards to 300 and weights below 30 were adjusted upwards to 30. In all only six weights were adjusted. The variation of the weights reflects changes in village sizes between the Census 1998 and the time of the survey. If the current number of households were the same as during the census in all the sample villages there would be no variation at all in the weights. The rather large variation in the weights is by and large a consequence of the long time lag between the census and the survey.

The distribution of the weights for the urban households shows a tendency towards bimodality. Most of the weights are centered around 100 - 120 but there is a cluster of weights around 200 - 220. The reason for this slight abnormality is that the proportional allocation of the sample to strata was not strictly followed. In two urban strata, the sample size was below proportion, resulting in substantially larger sampling weights.

Questionnaires

Overview

Four different questionnaires or forms were used in the survey:
Form 1: Household listing sheets to be used in the sampling procedure in the enumeration areas.
Form 2: Village questionnaire answered by the village leader about economy and infrastructure, crop production, health, education, retail prices and sales prices of agriculture, employment and wages, and recruitment of children for work outside the village.
Form 3: Household questionnaire with questions for each household member, including modules on migration, education and literacy, housing conditions, crop production, household liabilities, durable goods, construction activities, nutrition, fertility and child care, child feeding and vaccination, health of children, mortality, current economic activity, health and illness, smoking, HIV/AIDS awareness, and victimization.
Form 4: Diary form on daily household expenditure and income

Data Collection

Data Collection Dates

Start	End	Cycle
2010-01-01	2010-12-01	N/A

Data Collection Mode

Face-to-face [f2f]

Data Collection Notes

Interviewers and supervisors were initially divided into teams of five persons (one supervisor and four interviewers), making in total 50 teams for the fieldwork. Each month, 25 teams were working in the field with a workload of 10 households per interviewer. In urban areas, 4 PSUs were allocated to one team while in rural areas, 2 PSUs were allocated. The fieldwork plan was designed in order to gather around 60 households monthly per team.

For a given month, the team arrived in the village three days before the first day of the month to tend to preparatory tasks like discussing with village authorities, filling out the Household Listing Form, and thereafter sample those households to be interviewed. The Village Form was filled out by the supervisor.

The Household Questionnaire had 16 sections that were filled out by the interviewer during the first visit to the household, and in the following four weeks according to the following scheme:
FIRST VISIT: Initial visit
WEEK 1: Education and literacy, Housing
WEEK 2: Household economic activities, Household liabilities, Household income from other sources, and other expenditures (partial non-food recall)
WEEK 3: Durable goods and other expenses, Construction activities in the past 12 months, Nutrition, Fertility and child care, Mortality
WEEK 4: Health check of children, Current economic activity, Health, HIV/AIDS, Victimization

Once the month ended, the team went back to the NIS headquarters in Phnom Penh. Questionnaires from the same PSU was delivered to the Data Management team by the supervisor in a packet including all of the documents used and produced in the fieldwork, including maps, enumeration lists, questionnaires, diaries, etc. Before going to the villages, teams were briefed and introduced to minor adjustments of the interviewing procedure that had to be made as a result of monitoring activities and feed-back from the data processing.
The fieldwork started in Janury 2010 and was scheduled to end in December 2010. Fifty (50) supervisors and 200 enumerators were recruited by NIS and trained for the fieldwork. The training took place in Phnom Penh and lasted three weeks for supervisors and two weeks for enumerators. Before the start of each fieldwork month, there were briefing and retraining sessions. Each fieldwork team included one supervisor and four enumerators. In urban areas one enumerator was responsible for one PSU and for interviewing 10 households, while in rural areas two enumerators were responsible for one PSU and for interviewing 20 households. In all, 125 enumerators and supervisors, divided into 25 teams, were carrying out the fieldwork at the same time. Two such team groups were formed and each team group alternated monthly.

Enumerator and Supervisor training
Initial training was provided during nine days for a group of 20-30 staff (not all were attending all the time). This training included a translation into Khmer of selected parts of the questionnaire, and a field test in a village outside Phnom Penh where the participants performed test interviews in 16 households. The experiences from this exercise were followed up during the course. The course also included general aspects on survey methodology and ways of controlling for errors. Many of the findings from this training served as input to later stages. Prior to the start of the fieldwork intensive interviewer and supervisor training was carried out. The 200 interviewers and 50 supervisors recruited were split into two groups, each consisting of 100 interviewers and 25 supervisors. The two groups later alternated so that the first group did their fieldwork during odd survey months (i.e. November, January, March …) while the second group covered the even survey months (i.e. February, April …).

The training was designed with this in mind. Training of the first group was provided in English by a WB consultant and simultaneously interpreted in Khmer by the appointed NIS officer. The second group was trained by NIS only. The supervisors were first trained during one week, and then jointly with their interviewers for two weeks. Before all fieldwork months the group in

turn was gathered at the NIS to walk through the questionnaire and manuals in order to correct errors that were detected during the briefing sessions or the monitoring operations, and to learn how to handle any changes that were introduced to the survey instruments.

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Data Collectors

Name	Abbreviation	Affiliation
National Institute of Statistics	NIS	Ministry of Planning

Supervision

Any survey of the CSES dimensions needs a comprehensive system for quality management and monitoring. Only then can deviations from the target be tended to in time to avoid shortfalls. Interviewers and supervisors were initially divided into teams of five persons (one supervisor and four interviewers), making in total 50 teams for the fieldwork.

The CSES management group within NIS therefore set up a meticulous monitoring scheme to be implemented from the very beginning. The monitoring team did include at least five NIS staff. Commonly the DG of NIS has spent one week monthly while other top ranked NIS officers have been out for two weeks on average. At times other officials from NIS or the Ministry have participated.

Inspections entailed both announced and unannounced visits. Every team was visited at least twice during their fieldwork periods. The purposes of these visits were several. One important purpose was to get a disciplinary effect on supervisors and enumerators from their knowledge that such inspections must be expected throughout the fieldwork month, including also at the very end of the diary month. Also important was to give feedback and encouragement to fieldworkers and to complement training by advice and suggestions and to sort out any problem that had arisen in the course of fieldwork in the village. Another area of concern was to ensure that the household listing and sampling was done in accordance with the procedures that were devised. Please refer to Technical Douments for details.

Data Processing

Data Editing

The NIS team commenced their work of checking and coding in begining of February after the first month of fieldwork was completed. Supervisors from the field delivered questionaires to NIS. Sida project expert and NIS Survey Manager helped in solving relevant matters that become apparent when reviewing questionires on delivery.

Other Processing

In late 2006 and begining of 2007 a new system for data processing and storage were introduced for the Cambodia Socio Econonic Survey (CSES). It includes a relational database system for storing CSES data in SQL format and application fromework developed in-house for data-entry. Since NIS staff already was familiar with Visual Basic and Microsoft SQL Server data base software the tranisition from previous data processing was also implemented to host the new CSES system and facilitate for concurrent data-entry.
The application and storage platform developed in 2006 and supervised by stastistics Sewden consultancy has since been used consecutively for all CSES data processing from 2007 and onwards.

Data Appraisal

Estimates of Sampling Error

In order to provide a basis for assessing the reliability or precision of CSES estimates, the estimation of the magnitude of sampling error in the survey data were computed. Since most of the estimates from the survey are in the form of weighted ratios, thus variances for ratio estimates are computed.

The Coefficients of Variation (CV) on national level estimates are generally below 4 percent. The exception is the CV for total value of assets where there are rather high CVs especially in the urban areas, which should be expected. The CVs are somewhat higher in the urban and rural domains but still generally below 7 percent. For the five zones, the average CVs are in the range 5 to 13 percent with a few exceptions where the CVs are above 20 percent. For provinces the CVs for food consumption are 9 percent on average.

The sample take within Primary Sampling Units (PSU) was set to 10 households per PSU in the CSES 1999. When data on variances became available, it was possible to make crude calculations of the optimal sample take within PSU. Calculations on some of the central estimates in the CSES 1999 show that the design effects in most cases are in the range 1 to 5.

Intra-cluster correlation coefficients have been calculated based on the design effects. These correlation coefficients are somewhat high. The reason is that the characteristics that are measured tend to be concentrated (clustered) within the PSUs. The optimal sample size within PSUs under different assumptions on cost ratios and intra-cluster correlation coefficients was then calculated. The cost ratio is the average cost for adding a village to the sample divided by the average cost of including an extra household in the sample. In the CSES, it was chosen to adopt a fairly low cost ratio due to the fact that the interview time per household is long. Under this assumption the optimal sample size is probably around 10 households per village for many of the CSES indicators.