TRUCKING SURVEY IN BURKINA FASO
SAMPLE SURVEY DESIGN AND DATA QUALITY CONTROL

1. Survey coverage

The Trucking Survey in Burkina Faso targeted trucking companies and companies conducting their own transportation, as well as individual truckers.

For the purpose of this survey, trucking companies and companies conducting their own transport constituted the first sampling stratum. A trucking company was defined as a business conducting trucking as its main operation and employing five or more full-time paid permanent persons. A company conducting its own transportation was defined as a business, employing five of more full-time paid persons, for which trucking was not the main operation but which was conducting the majority of its own transportation.

The second sampling stratum consisted of individual truckers. A trucker was defined as someone conducting trucking as his/her main business operation and employing less than 5 full-time paid permanent persons.

All companies and truckers surveyed serve at least a portion of the following routes:

- Ouagadougou – Bobo-dioulasso
- Ouagadougou – Wa
- Ouagadougou – Accra
- Ouagadougou – Bolgatanga
- Ouagadougou – Lomé
- Ouagadougou – Abidjan

Companies with five or more full-time paid permanent employees

A list of Burkina's trucking operators with 5 or more full-time paid permanent employees was obtained from national sources and was completed and updated during the pilot phase of the survey. The EEC team validated the list by drawing a random sample of establishments from it and attempting to contact them. This also allowed classifying the establishments according to size. Following the list validation process, the sample frame consisted of a population of 55 establishments.

Attempts were then made to contact each of these 55 establishments to participate in the survey, with final statuses as follows:

- ➢ 6 closed
- ➢ 21 unreachable despite repeated attempts by phone
- ➢ 10 refused to participate
- ➢ 18 agreed to participate

Thus eighteen trucking interviews were carried out, amongst which two with trucking companies conducting their own transportation.

Truckers

EEC Canada selected an aerial sampling approach to estimate the population of establishments and select the sample in this stratum according to the routes to be covered for several reasons, the most important being the size of the operators falling under this category. Since they must be employing less than five full-time permanent employees, they are small establishments. Hence it is expected that these businesses face high rate of turnovers as well as a high level of "informality". Consequently, it becomes difficult to obtain trustworthy information from official sources.

EEC Canada randomly selected individual truckers to survey by using the following procedure:

i. Selection of *districts and specific zones* in each area where lorry parks are found or where truckers usually off-load;

ii. *Count of all truckers* who generally stop in these specific locations;

iii. Based on this count, creation of a virtual list and selection of truckers at random from that virtual list; and

iv. Based on the ratio between the number selected in each specific district or zone and the total population in that zone, creation and application of a skip rule for selecting establishments in each specific district or zone.

The districts and the specific zones were selected at first according to national sources. The EEC team then went in the field to verify these national sources as well as to count the number of truckers. Once the count for each zone was completed, the numbers were sent back to EEC head office in Montreal.

At the head office, the count by zone was converted into a list of sequential numbers for the whole survey region. A computer program then performed a random selection of a determined number of establishments from the list. Based on the number of truckers that the computer selected in every specific district or zone, a skip rule was defined to select truckers to survey in each.

The skip rules were sent back to the EEC field team. Enumerators were sent to each district or zone with instructions as to how to apply the different skip rules defined for the districts or zones they were covering as well as how to select replacements in the event of a refusal or other cause of non-participation.

2. Population and sample size

Table 1

Population of trucking operators in Burkina Faso by city

City	Size
Bobo-dioulasso	32
Kaya	2
Koudougou	1
Koupela	1
Ouagadougou	46
Ouahigouya	1
Pouytenga	1
Tenkodogo	1
Total	**85**

Table 2

Population of truckers by specific zone in Ouagadougou

Location	Size
Ouaga inter (patte d'oie)	150
Ouagadougou area 2	60
Ouagadougou area 4	80
Total	**290**

Table 3

Final sample size by stratum

	Burkina
Trucking companies	18
Truckers	45
Total	**63**

3. Data quality control

A management policy for the enumerators was established and the following procedures were followed during the execution of the survey:

A) Daily meetings with each interviewer at the end of the day for the first revision of their questionnaire(s). The objectives of this first pass through the questionnaire were:

1) To verify that all questions had been answered and that basic constraints had been respected, more specifically that:
   i. No fields had been left empty (other than explicitly skipped fields),
   ii. No fields had been filled in ambiguously (i.e. with a dash, slash, or squiggle),
   iii. Coded responses of DK (Don't Know), NA (Not Applicable), and R (refused to answer) seemed plausible for the field in question
   iv. Percentages, where required, added up to 100%, and
   v. Fields with known relationships to adjacent fields respected those relationships (e.g. the year of manufacturing a vehicle is smaller than the year of purchasing that vehicle).

   If the questionnaire failed this aspect of the review, it was returned to the enumerator for completion through a phone call to the respondent or a return visit.

2) To take the opportunity to reinforce the enumerators' awareness of the logical links between questions by quickly checking the more obvious ones, highlighting any inconsistencies found in the questionnaire and asking for explanations. Some of the consistency checks included the following:

   vi. If the establishment did perform cross border operations, the main point of exit that the establishment used should be listed;
   vii. If the establishment owned light weight vehicles, there should be a total cost of maintenance and an average fuel consumption for this type of vehicle;
   viii. If an establishment had overload fines on certain routes, there should be an amount of overload fines per trip.

3) To assess the enumerator's ability to correctly fill out the questionnaire and to clarify, if necessary, their understanding of the questionnaire.

B) Following this review, all accepted questionnaires were retained by EEC for data entry and the administration of coherence and completion tests Within a short time frame (one or two days after the first meeting), the questionnaire was entered, and the coherence and completion tests for each questionnaire run. The coherence and completion tests were carried out in the following way:

1) At the end of each day, for every type of questionnaire for which additional cases were entered or existing cases were updated, the data files were exported to SPSS format using the provided export utility.

2) SPSS scripts were run to open the data in SPSS.

3) The consistency and completion tests scripts were run in order to generate a report detailing the coherence tests results and the completion status of each case with respect to these checks, as well as to generate the completion status of the whole sample with respect to sales

   i) A questionnaire was considered "final" when it had answers from respondents to at least 85% of the questions in each section. In addition, across the entire set of completed questionnaires, each variable was submitted to an 85% completion test. Finally, all information pertaining to the screener portion of the questionnaire had to be completed.

4) These results were printed out in order to review issues with the enumerators and to possibly return questionnaires in the morning.

C) A second meeting with each enumerator was held in order to go over the results of the coherence and completion tests. Any questionnaire failing these tests was returned to the enumerator for further completion/verification. Once a questionnaire was returned back to the EEC team, all tasks in B) above were redone until the questionnaire passed all tests.