

Management of CAPI and CATI at the Labor Force Survey

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1. Introduction

The Labor Force Survey (LFS) in Israel is a quarterly survey that tracks fluctuations in the Israeli labor force, its size, and its various characteristics.

The LFS is a panel survey comprised of 12,000 dwellings, which are surveyed four times over a period of one and a half years.

To this end, households are interviewed twice through CAPI and twice through CATI.

Most of the cases in the first and fourth waves are interviewed through CAPI, and most of the cases in the second and third waves are interviewed through CATI.

There are special cases in which there is a need to change the data collection mode during the investigation period of the same wave.

In the past, in cases where CAPI was problematic, cases were converted to a phone interview according to CAPI procedure. The field interviewers were allowed to conduct these interviews using their home phone. After reexamination of the process, a decision was made to introduce a new practice, where such cases are reassigned to the Data Collection Center using the CATI management system.

This paper presents the overall case management which made it feasible to change the mode of investigation in a short period of time. The focus will be on the process employed during the first wave of the survey.

We will discuss the considerations for using CAPI or CATI during the same wave. We will also describe the different steps and activities that were taken by the interviewer, the CAPI manager, and the system as a whole, in order to change the mode of investigation from CAPI to CATI.

2. The computerized data collection system in LFS

Computerizing the data collection system of LFS began in 1999. First, telephone interviews which were conducted during the second and third wave were moved to the Blaise Cati management system, which was conducted from the Data Collection Center located in Jerusalem. The transition to CAPI mode for the first and the fourth waves, as well as the overall management system for both modes, was completed in 2008.

2.1 Data collection facilities

The system is able to combine several tools, and by doing so to enhance their efficiency of use. This is done as follows:

The questionnaire is written using Blaise4.6.

The interviewer's management on the laptop computer is written in Maniplus.

The CAPI and CATI supervisor management system is written using .Net.

Management of CATI interviewing is done by Blaise CATI Management.

The questionnaire data is stored in the Blaise database, and the survey management data is stored in an SQL2005 server.

The overall management system is written in .Net, combining Blaise and .Net in two ways: from data entry program (Dep) to .Net and from .Net to Dep. (For more details see: Har & Luskin, 2009).

2.2 Main functions of the Survey Management System

The survey management system allows:

- Assignment of cases for mode of interviewing in accordance with predetermined criteria, such as the wave number.
- Assignment of cases to interviewers by CAPI supervisor.
- Transmission of data.
- Keeping track of non-response cases and contact trials.
- Moving cases from CAPI to CATI and vice versa.
- Managing the response status for each case.
- Producing follow-up reports on response rates and outputs.

3. Field work process in LFS

3.1 General

The sample drawn each year is divided into four panels, each allocated to the field work, one after the other.

Each panel is investigated four times according to the following pattern: The first quarter of the investigation (wave no 1), the following quarter (wave no 2) a break of two quarters and two more investigations in the following two quarters (wave 3 and 4 respectively) that are parallel to those of the first two investigations.

The survey is carried out continuously each and every week for the entire three months of the investigation period of each wave. Each week about 1/13 of the households included in the survey are interviewed.

The entire period devoted to the investigation of each case is one pre-determined week, plus three additional weeks which are allocated for unresolved cases (a total of four weeks).

3.2 Data collection methods

The investigations are conducted in two major methods: face to face interviewing using CAPI is conducted in the first and the fourth waves, telephone interviewing using CATI is conducted in the second and the third waves.

Although face to face interviewing is the most expensive method for data collection, it is essential to use it in the first wave for the following reasons:

- Correct identification of the sample unit (the dwelling).

- Exclusion of ineligible cases, such as unoccupied or non-residential dwellings.
- Finding solutions to tracing problems.
- The need to verify personal demographic data through personal documents such as identification cards.
- Reducing refusals to cooperate by using personal contact and reassuring respondents as to the importance of the survey.
- Developing rapport with respondents improves cooperation in future contacts during the next wave.

The forth wave is conducted by CAPI because it includes an income survey and there is a need to present supporting documentation, like salary slips, and financial reports.

The second and the third waves are conducted by CATI in order to save costs. The cost of one case conducted through CATI is about 13 percent of that of CAPI.

While each wave has a preplanned mode, there are special cases in which an additional mode is required in order to maximize response rates. Following are some of the reasons for using the different investigation modes:

In waves conducted by face to face interviewing: limited number of interviewers, lack of time, remoteness and security problems makes it impossible to send interviewers in some cases. These cases are transferred to phone interviewing.

In waves conducted by telephone interviewing: At times, personal visits are needed because there's a lack of correct phone number.

4. Data collection procedure before transition

4.1 The collection process

Steps taken at the first wave start at the overall management system, continue to the management system of the CAPI supervisor, and than to the management system of the field interviewer using his/her laptop.

This is done as follows:

- Assignment of all cases in the first wave to three different regional centers;
- Capi supervisor assigns a workload of about 12 cases to each interviewer;
- CAPI interviewer makes personal visits to his assigned cases;
- Data of each visit is recorded in the Blaise questionnaire on the laptop;
- The interviewer indicates all the non-response cases that require supervisor intervention;
- CAPI interviewer transmits data each night through his home telephone line;
- According to supervisor's guidance and authorization, the field interviewer makes more contact attempts to selected non-response cases, using his personal home phone;

- Completed cases are transferred to the main office for processing;
- At the end of the four weeks (section 3.1), non-response cases attain final status according to the information provided by CAPI interviewers.

4.2 Disadvantages and advantages of phone attempts using the CAPI system

While most of the cases in the first wave are conducted face to face, the need to meet a tight schedule sometimes requires the use of the telephone method. It was found that 18% of all cases in the first wave were transferred to telephone interviewing.

When CAPI was first introduced to the LFS in 2008, when there was a need, a case was converted to a phone interview according to CAPI procedure. As mentioned earlier, field interviewers were allowed to conduct these interviews using their home phone.

4.2.1 Disadvantages

- The interviewer's main assignment is the personal visit; therefore s/he has only a limited amount of time in which to make contact attempts by phone.
- Administrative details such as time invested and number of phone attempts are provided by the interviewer. As such, they are less reliable than if they were automatically recorded.
- It is not possible to monitor the interviews in real time in order to assess their quality.

4.2.2 Advantages

- The CAPI interviewer is fully in charge of all efforts made to interview all assigned cases within the allocated four weeks.
- Since the CAPI interviewer visits the dwelling in person, s/he has detailed information on the dwelling and on the respondents. This information is very important for future further contacts.

5. Transition to the new procedure

The transition to the new process was encouraged mainly because of the disadvantages of the previous procedure. Moreover, the use of an overall management system allowing a combination of CATI and CAPI procedures has driven us to issue a new approach.

In April 2009 we introduced a new procedure, where non-response cases of the first wave were reassigned to the Data Collection Center using the CATI management system.

Interviewers working in the Data Collection Center were responsible for conducting telephone interviews in the 2nd and 3rd waves of the LFS. The same interviewers are now also responsible for conducting telephone interviews in the 1st wave.

5.1 Advantages of the new procedure

The CATI management system has several advantages which improve the efficiency of data collection and the reliability of the data:

- The investigations are conducted from one Central Collection Center by a group of CATI interviewers.

- The interviewers use an automatic call scheduler with an option for making appointments and prioritizing urgent cases.
- Assigning special cases to appropriate interviewers, such as bilingual interviewers.
- Monitoring of the interviews by supervisors and giving immediate feedback in real time.
- The CATI management system tracks administrative information, including dates and times of interviews, as well as the duration of each interview.

5.2 Disadvantages of the new procedure

- CAPI interviewers were previously used to have full responsibility for the process of making contacts attempts and interviewing during the whole investigation period. In the new procedure, responsibility for some of the cases is divided between CAPI interviewers and CATI interviewers.
- A second problem could arise concerning the information CAPI interviewers supply as to the contact attempts.

5.3 Steps of the new procedure

Similarly to the previous procedure, all cases of the first wave are assigned to the regional centers, and then assigned by the supervisor to each CAPI interviewer. Unlike the previous procedure, unresolved cases in which it was decided not to make any more face to face contact attempts are transferred to the CATI management system. This involves the following steps:

- Before transferring a case to the CATI management system, the CAPI supervisor verifies that there is a valid telephone number in the questionnaire.
- In his management system the CAPI supervisor indicates the case as suitable to move to CATI.
- The overall management system creates new questionnaires for the above cases.
- The new questionnaires are included in the "day batch" created by the CATI supervisor and delivered to the CATI interviewers.

5.4 Special considerations

When we redesigned the process special attention had been paid to certain factors:

5.4.1 Keeping detailed information

The CAPI interviewer can record detailed information obtained during up to 8 visits.

For each visit s/he can record the date, the time of visit, the response status, the non-response reason and remarks.

The remarks are very important for further attempts, especially when another interviewer will handle the case, for example:

"I met only young children, the parents usually return after 8 pm."

"I met an old man who speaks only Russian."

All this information has to be fully recorded and available in the overall management system.

5.4.2 Using CAPI recorded information in CATI investigation:

The first screen of the CATI questionnaire was designed to include the latest remarks recorded by the CAPI Interviewer. Also presented are the last reason for non-response recorded in the CAPI questionnaire and the CAPI supervisor's remarks.

5.4.3 Time table consideration

Special attention is given to managing the case by CAPI interviewers within the first 2 weeks of the wave. This done so that, if necessary, enough time will be left in order to the transfer to CATI for phone attempts.

5.4.4 Final status

In non-response cases, the final status is determined by combining information from both CAPI and CATI recorded details. For example:

If the CAPI interviewer recorded "language problem" on his last visit, and the result of all the calls in CATI were "no answer", the final non-response reason will be "language problem" ("no answer" is secondary to "language problem").

5.4.5 Monitoring tools

The monitoring tools after transition have to allow control on both CAPI and CATI systems. These include:

- Lists containing all cases that have been relocated to CATI, the date of relocation and the current status of the case.
- Tables containing the response rate of each mode.
- CATI history files which permit viewing the number of call attempts and the results.

These monitoring tools allow the Center office supervisors to check the case status and to avoid duplication and missing cases.

6. Summary of operating the new first wave procedure

Looking back, it seems that, altogether, the transition to the new procedure was successful.

Cases were transferred to CATI rapidly and efficiently, and CATI interviewers handled the cases successfully and achieved a good rate of response. Most importantly, there were no "missing" cases or duplicates.

However, some issues were problematic: adjusting to the new procedure was difficult on CAPI and CATI interviewers and on their supervisors. CAPI interviewers found it difficult not to be allowed to complete handling a case in which they have invested a lot of efforts. CATI interviewers complained that the information transferred from CAPI was incomplete, and not presented in a user friendly way. Moreover, they complained that they now had to deal with extra problematic cases.

7. Conclusions

Utilizing the new procedure successfully convinced us that our overall managing system is flexible enough to adjust to the use of the new procedure in the LFS.

New means of training are to be designed to improve the cooperation between the CAPI and CATI personnel. Also we are looking for better ways to present relevant information to the CATI interviewers.

8. Future plans

At the beginning of 2012 the LFS will change to be a monthly survey. The investigation period will be shorter (two weeks instead of four), and there will be eight waves instead of four.

We intend to employ the new procedure of the first wave in the monthly survey. This will be done within a new management system planned using Blaise 4.8, which will replace our current Blaise 4.6.

Reference

Shifra Har and Evgenia Luskin, *Different Methods of Working with Blaise in the Israel Central Bureau of Statistics*, Proceeding of the 12 international Blaise Users Conference 2009, Riga, Latvia.