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LFS workshop on methodology, Budapest

Main results from multimode Swiss LFS pilot, 1st wave

1 Introduction

An assessment of the Swiss Labour Force Survey (SLFS) conducted in 2016¹, concluded that the current method used for the survey (CATI interviews CATI) was no longer the best solution and that we should adopt a multimode CAWI/CATI method, giving preference to the CAWI method (“CAWI first” method). Our aim was to increase the response rate and at the same time improve the coverage rate. We therefore went to great lengths to improve the design and the questionnaire before proceeding with a pilot survey in order to test certain elements. These notes focus on the results of that pilot.

2 Background

This pilot forms part of the project to revise the method of the SLFS survey. It was carried out in several stages. The first stage was to develop a good online version of the questionnaire. The wording of questions was adapted to smart phones. At the same time, the layout of the online questionnaire was also discussed. This phase was completed by usability tests² in French and German. We then proceeded to conduct internal tests within the Population and Education Division, on smart phones only, in order to increase the panel of smart phones used. During the second stage, we used the new CAWI questionnaire as a basis for formulating the CATI questions. This stage was more time-consuming for the German questionnaire, as all the CATI questions had to be rephrased in Swiss-German. We also established principles to determine which parts of the CATI questionnaire were to be read (or not) by the interviewers. Following this, tests were carried out on the CATI questionnaire in French and German. These tests enabled us to check various aspects related to technical issues, as well as to the presentation and content³. After these initial tests we were at last able to launch the pilot with the aim of measuring the following elements:

1. Contact procedures
2. Response rate, partial non-response rate and impact of reminder letters
3. Proportion of CAWI and CATI by various characteristics

¹ cf. Discussion document, “SLFS revision, changeover to multimode”, April 2016

² cf. Usability test, SLFS MM-CAWI 2018 questionnaire

³ cf. Pre-test, SLFS MM CATI 2018 questionnaire, pre-test report, study no. 180062

4. Sending introductory and reminder letters
5. General survey organisation (training and address management)
6. Running the hotline at LINK⁴ and reasons for calls
7. Reporting
8. Performance of LINK IT system
9. Efficiency of external databases (businesses and occupations)
10. Receiving crude data and data protection⁵
11. Effects of an emerging trend⁶

3 Sample and contact strategy

3.1 Sample

We activated the addresses of **1622 persons aged 15 to 89**, including 4 belonging to section staff members. The addresses were drawn from our official sampling frame according to the usual LFS sampling method, i.e. stratified by canton, but persons residing in Ticino were eliminated if their contact language was Italian (which was the case for the majority), since the survey pilot was only conducted in German and French. We did not activate an oversample for foreigners. Of the 1622 persons selected, 414 had no telephone number.

3.2. Contact strategy

The pilot took place from Monday 29.10.18 to Sunday 16.12.18. The addresses were thus activated for 7 weeks. The contact procedure was as follows:

- The selected persons received an **introductory letter**, sent by A post, inviting them to take part in the online survey. However, the letter indicated that it was possible to call the hotline if they preferred to do the survey by phone (CATI inbound). People were given a period of nine days to complete the questionnaire.
- If people had not answered by this time, a first reminder letter was sent, also by A post and with the same instructions as the introductory letter as well as a 9 day period to complete the questionnaire.
- After this second period, a **second reminder letter** was sent, by A post, with a 6-day period to complete the questionnaire. If a response was still lacking after this, LINK would call the persons concerned to conduct the interview.
- After this third period, **reminders by telephone** were started for people with a telephone number.

⁴ Call center and market research institute, which is commissioned by the Federal Statistical Office to conduct the survey

⁵ Item currently being assessed

⁶ Item currently being assessed

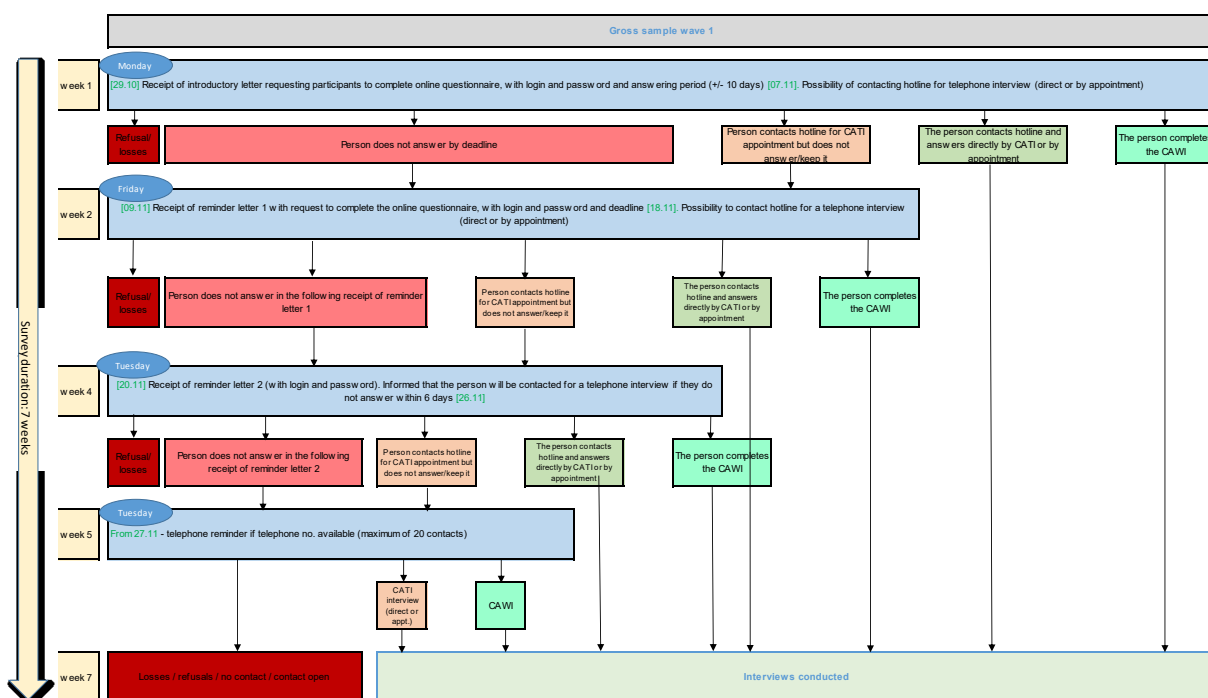


Diagram 1: Contact procedure

4 Response rate

4.1 Overall response rate

The gross response rate (no. of interviews conducted/addresses activated) was 66.3% (1075/1622). This rate is much higher than the last rate measured in wave 1 of the CATI survey in the 4th quarter 2018, which was 57.9% (rate calculated in relation to gross number of addresses including those without a telephone number but who had answered to a first letter asking to give their phone number⁷). This shows the positive effect of the multimode method on the response rate for the first interview.

The proportion of CAWI (868) was 80.7% and that of CATI (207) 19.3%. Over a third of the CAWI/CATI interviews (36%) had already been conducted prior to reception of the first reminder letter; this seems particularly high when compared with the standard results of multimode surveys according to LINK. After the first reminder letter, a cumulative total of more than 77% of the CAWI/CATI interviews had been carried out and after the second, over 87%. The remainder took place after the reminder by telephone.

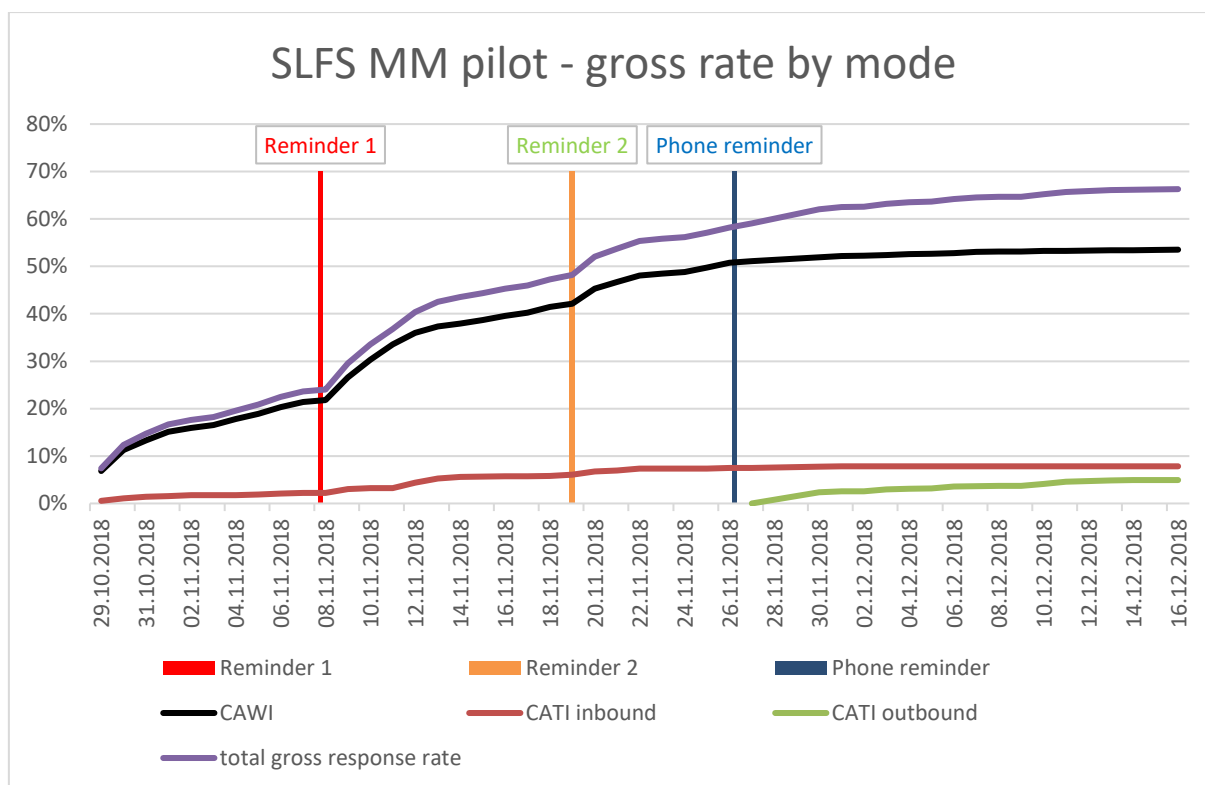
| | CAWI | CATI | TOTAL | % |
|--|------|------|-------|--------|
| No. of interviews before reminder | 354 | 36 | 390 | 36.3% |
| No. of interviews after reminder 1 | 329 | 63 | 392 | 36.5% |
| No. of interviews after reminder 2 | 140 | 22 | 162 | 15.1% |
| No. of interviews after telephone reminder | 45 | 86 | 131 | 12.2% |
| Total | 868 | 207 | 1075 | 100.0% |

Table 1: Number of interviews in relation to reminders

Losses due to invalid addresses (40) amounted to 2.5%, losses due to refusals, language or health problems (128) 8.1%, and the number of persons who did not contact us or did not answer the telephone reminder (open contacts) came to 379 addresses (24%), of whom 155 persons with no telephone number. In contrast, the participation rate for addresses with no telephone number was very satisfactory at 62.6%, a much higher percentage than usually

⁷ called « ALTEL Procedure »

obtained with the ALTEL procedure.

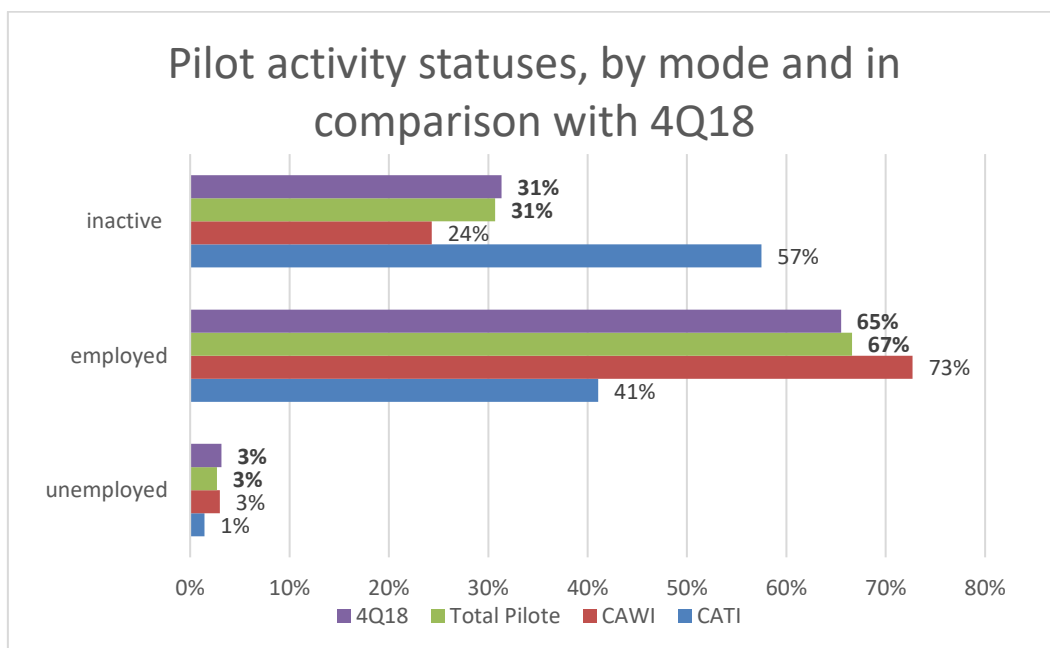


Graph 1: Gross rate of SLFS MM pilot 1, by response mode

Graph 1 highlights the positive effect of the reminder letters. The reminder by telephone also seems to have been effective. Being active for seven weeks, the sample may seem well saturated, although we will see below that a different strategy for the telephone reminders could increase the response rate.

Concerning duration, the survey takes longer on average in CAWI (22.51 mins) than in CATI (19.32 mins). However, the shorter time for CATI may be because a large majority of the CATI were economically inactive persons, with a shorter questionnaire.

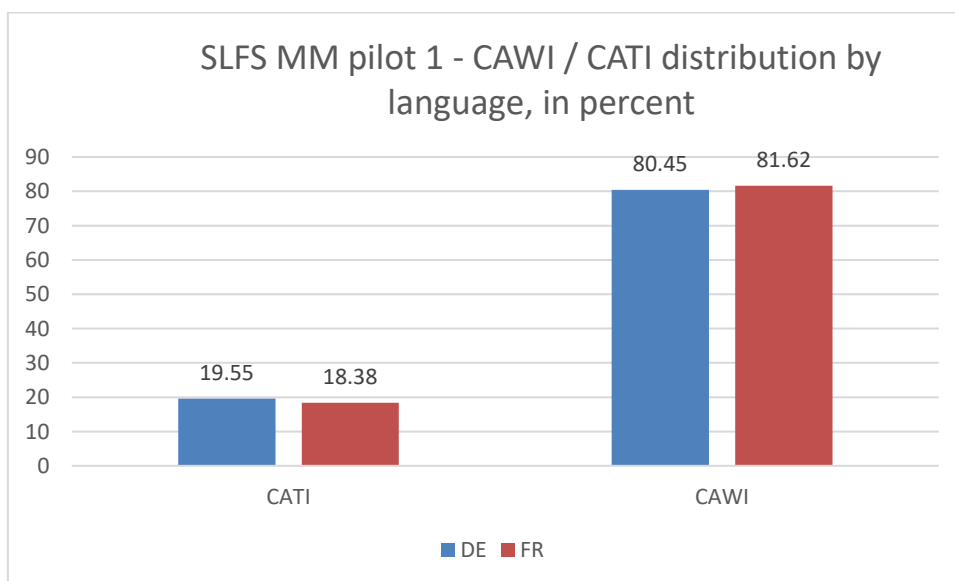
Graph 2 compares the activity statuses from the pilot with the weighted results of the survey from the 4th quarter 2018. Considered as a whole, the pilot data show an almost identical distribution of activity statuses. It is highly likely that the differences observed would be even fewer had the pilot been weighted. This is not, however, conceivable, as it is impossible to reproduce the current methods on a very small scale.



Graph 2: Comparison of activity statuses between the pilot and the 4th quarter 2018

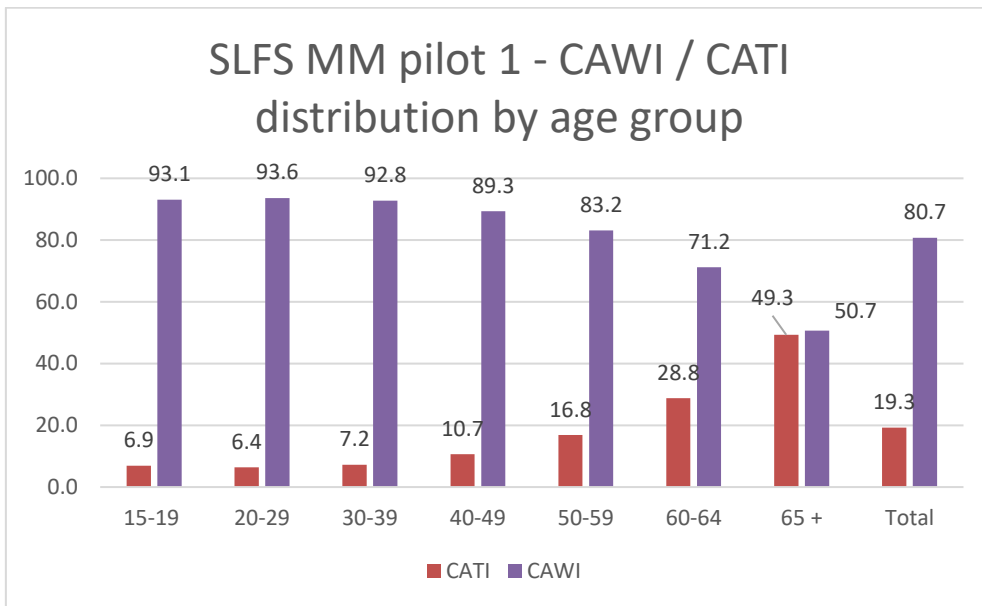
4.2 Respondents' characteristics

75% of persons in the activated sample spoke German and 25% French. The same percentages are found among the respondents and graph 3 shows that the two groups are distributed in the same way between the survey modes.



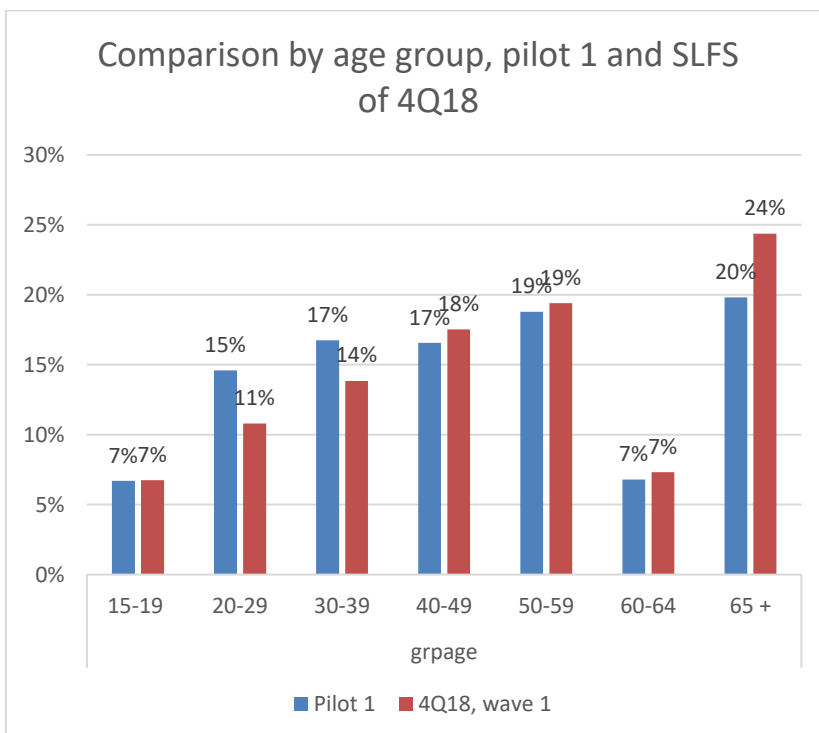
Graph 3: Survey mode by language

With regard to the different age groups, we observed that people aged 65 and over preferred the CAWI survey mode.



Graph 4: Survey mode by age group

In comparison with a current SLFL survey (graph 5), we can see that the proportion of persons aged 15-19, 50-59 and 60-64 is the same in both surveys, whereas the proportion of persons aged 20-29 and 30-39 is 4 and 3 percentage-points higher respectively for the pilot and that the reverse holds true for persons aged 65 and over.

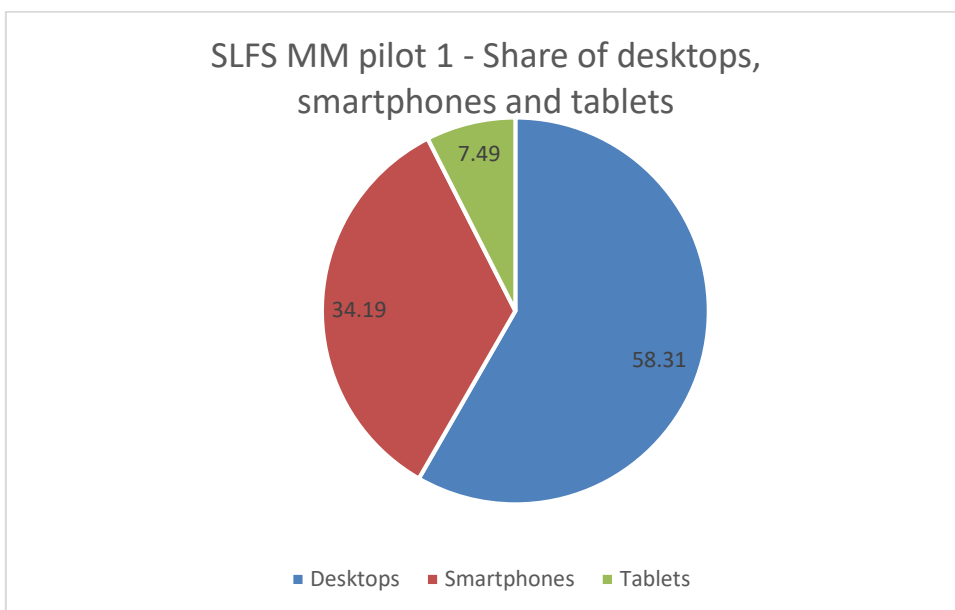


Graph 5: Comparison of respondents by age group, pilot 1 and SLFS of 4Q18

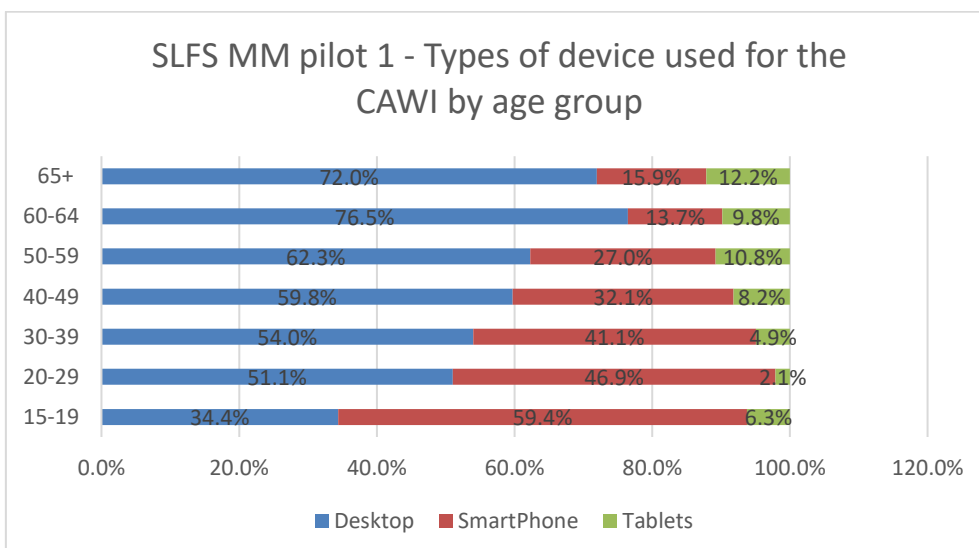
4.3 The CAWI interviews

For the CAWI interviews, we noticed that more than a third of participants used their smart phone. This significant percentage demonstrates that the questionnaire was well adapted to this mode.

It comes as no surprise that the majority of the 15-19 age group used their smart phone.



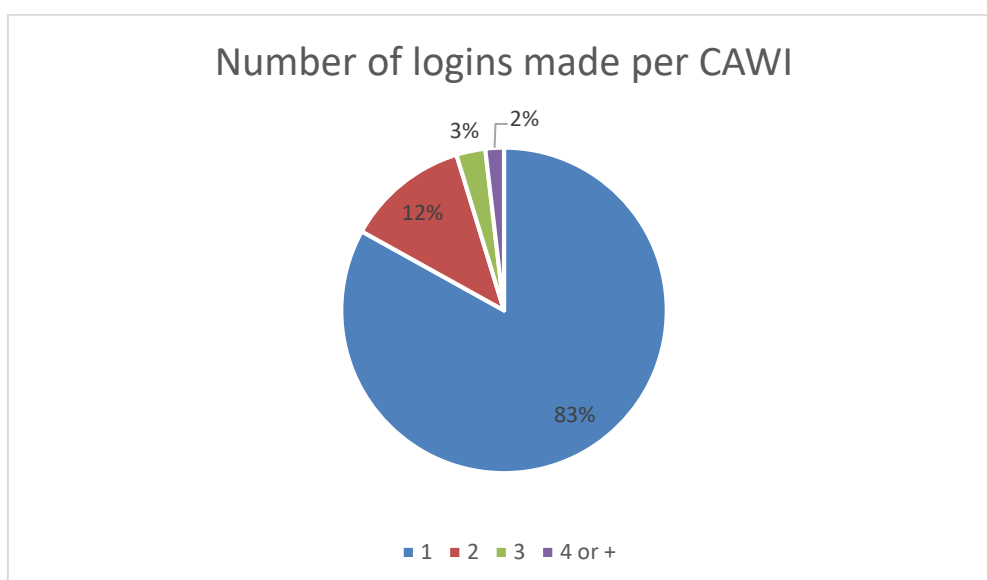
Graph 6: Distribution of CAWI by type of device



Graph 7: Types of device used for the CAWI by age group

83% of CAWI interviews were carried out in one go, 12% of participants took two goes to complete the survey and 5% 3 or more goes. Sixty-nine persons started the CAWI but never finished it. However, 16 of them did reply in a CATI. Fourteen of the 53 people who never finished the survey stopped before the first question. The remaining people stopped at different stages of the questionnaire, which leads us to think that there is not one particular question posing a problem.

After the CAWI pre-tests, we simplified the internet address: www.eLabour.ch. We were, however, able to ascertain that it was not necessarily the name of the website that was causing people difficulty but how they were looking for it. People who used a search engine (Google for example) were unable to come up with a result. We had asked LINK to index the site very early on but despite their efforts, this was unsuccessful. According to research conducted by LINK, the lack of indexing is because the page has insufficient content. We therefore prepared a version with more content for the second pilot to overcome this problem.



Graph 8: Number of logins made per CAWI

4.4 The CATI interviews

CATI interviews are grouped into two categories depending on whether the calls are inbound or outbound. 16 of the 207 CATI interviews began as CAWI. With regard to the contact procedure, participants could be contacted by telephone a maximum of 20 times. This limit seems reasonable to us. In our opinion, however, the 20 calls were too close together and a different strategy should be adopted to try to increase the number of outbound CATI.

| | Before reminder 1 | After reminder 1 | After reminder 2 | After telephone reminder | Total |
|--|-------------------|------------------|------------------|--------------------------|-------|
| Outbound CATI | 0 | 0 | 0 | 80 | 80 |
| Inbound CATI (= the participants call) | 36 | 62 | 29 | 0 | 127 |

Table 2: Share of outbound and inbound CATI

5 Assessing specific questions

Special analysis was made of two questions using external databases. The questions concerned occupation (learnt and current) and employer (business establishment). In principle, external databases are used by experienced interviewers. In the CAWI, we aimed to make the search easy and intuitive so that most participants could find an answer. It should be noted that a technical failure prevented searches in the databases for one day (the establishments and occupations that could not be found that day concerned 34 CAWI and 6 CATI).

5.1 Questions on occupations

| | Occupation, main job | | | Occupation learnt | | | TOTAL |
|--|----------------------|------------|------------|-------------------|------------|------------|------------|
| | CATI | CAWI | Total | CATI | CAWI | Total | |
| I do not wish to answer | 1 | 10 | 11 | 2 | 25 | 27 | 38 |
| Occupation found in the occupation database | 80 | 496 | 576 | 136 | 548 | 684 | 1260 |
| % of occupations found in the occupation database | 96% | 83% | 85% | 95% | 83% | 85% | 87% |
| Occupation not found | 2 | 90 | 92 | 5 | 86 | 91 | 183 |
| Text entered manually | 2 | 89 | 91 | 5 | 86 | 91 | 182 |
| % of occupations coded at the end | 99% | 98% | 98% | 99% | 96% | 97% | 97% |

Table 3: Percentage of automatic coding and manual coding for questions on occupation and main job and occupation learnt.

Persons answering a CAWI were able to write their occupation in a field and then start an automatic search in the occupation database. In total, 83% of people responding by CAWI found their current occupation in the database. When they were unable to find their occupation, all but one of the CAWI participants entered text manually. At the end of the survey, after complementary coding conducted at the FSO based on manually entered texts, 90% of current occupations were coded, which is an excellent result. The remaining 2% were people who did not wish to answer the question. It appears to be difficult to get them to change their mind.

5.2 Questions on the establishment

| | Establishment, main job | | |
|---|-------------------------|------------|------------|
| | CATI | CAWI | Total |
| I do not wish to answer | 2 | 98 | 100 |
| Establishments found in the business and enterprise database | 66 | 374 | 440 |
| % of establishments found in the list | 81% | 65% | 67% |
| Establishment not found | 13 | 103 | 116 |
| Text entered manually | 13 | 85 | 98 |
| % of establishments coded at the end | 98% | 80% | 82% |

Table 4: Percentage of automatic coding and manual coding for questions on establishment and main and ancillary jobs.

With regard to the establishment, the search system is comparable to the occupation system, only more complicated: participants enter the name of the establishment, followed (or not) by the town and even the address of the establishment in which they work. For their main job, 65% of persons interviewed by CAWI found their establishment in the database. Among the 103 persons who did not find their establishment, 85 entered a text manually and we were able to find the establishment for every case. At the end, 80% of establishments were coded. The main problem here is people not wishing to answer. To reduce the risk of non-response, we have decided in future to add a comment explaining that this information “will be used to ascertain the economic activity and the size of the establishment. Your anonymity is guaranteed”.

6 Hotlines

In the current survey, we have an in-house hotline enabling us to handle participants' questions, changes of address, make appointments and deal with refusals or other losses. This hotline is open from 10.00 to 11.30 and from 14.00 to 16.00 pm, Monday to Friday. The introduction of the CAWI option and inbound CATI meant that the time slots had to be extended and that interviewers had to be available sooner. We therefore defined two types of hotline with first and second level support.

| LINK - 1st level support – telephone no. written on the letter | FSO - 2nd level support – telephone no. given to participants by LINK |
|--|---|
| <p>Telephone hotline only</p> <ul style="list-style-type: none"> - Generous time slots: Mon-Fri: 8.30-11.30 13.30-20.30 / 9.30-13.00 15.00-18.00 / Sun: 10.00-13.00 16.00-19.00 - Calls dealing with: CATI or CATI appts., connection problems, questions about completing CAWI - changes - refusals | <p>Hotline treating letters as a priority</p> <ul style="list-style-type: none"> - Hours the same as current ones (10.00-11.30 / 14.00-16.00) - Dealing with questions specific to the survey or to the FSO - Dealing with emails - Dealing with letters (returned letters / complaints) - Dealing with refusals |

Table 5: Description of the two SLFS multimode hotlines

6.1 LINK hotline - 1st level support

The LINK hotline dealt with 298 calls, 48 of which were made on the day the first reminder letter was received. 82% of calls were made during the hotline's opening hours, which were not mentioned in the letter. Two-thirds of people calling outside the hotline's hours called back during the opening hours. The remaining third (17 persons) did not call back. We do not know whether these persons completed the survey or not. To avoid this happening, LINK suggested an option allowing them to call back if people so wished.

98% of calls were answered within the first minute and the average time was 16.4 seconds. In most cases the caller was requesting an appointment or a direct interview.

6.2 FSO hotline - 1st level support

The FSO hotline received very few calls as the number was given to participants only on request. In contrast, many emails were received and at the beginning mainly concerned technical questions, which quickly alerted us to some errors. A particular problem was the www.elabour.ch page that had never been indexed (despite our insistence) or that some people preferred not to visit as it seemed unsafe.

We also noticed that many people preferred to send an email rather than call, especially to make changes or refusals.

We consider it essential that the FSO keeps in contact with participants by email. It is not that we have doubts about the LINK hotline but we think it can help us to detect any technical problems faster.

7 Other items tested

7.1 Address management and the performance of LINK's system

LINK's address management system worked perfectly. Appointments were carried out on time and there was no clashing between the CAWI and CATI surveys. The interviewers and hotline supervisors were well prepared thanks to suitable training beforehand.

LINK's IT system worked well in the production phase and no overload was observed. This aspect will need to be reconfirmed when a sample 30 times larger is activated. The system also remained stable and the rare incidents that occurred were due to programming omissions, most of which were rapidly rectified. The system was blocked for one day due to a problem accessing the external database. Access was quickly re-established.

7.2 Sending letters and reporting

LINK was commissioned to send the various letters for the multimode survey (introduction, reminders 1 and 2). This point was crucial to the smooth running of the survey and was handled correctly. We were able to check it by adding the addresses of four staff members to the sample.

Reporting of the survey could have been better, but the main results were supplied quickly. "Live" reporting is expected for the second pilot.

8 Conclusion

The main focus of the pilot survey was to test the quantitative aspects: length of interviews, response rate, share of CAWI and CATI and to understand respondents' support for and acceptance of the model they chose. We also experimented with the organisation of the survey, sending letters, address management and sampling, the written and telephone procedure when handing over to another team, the management and operation of direct lines, weekly reports and the entire IT performance.

As the result show, the first SLFS pilot multimode survey was a success. Not only was participation greater than widely expected, but the whole organisation of the survey worked perfectly.

Thanks to the contact strategy, the percentage of 80.7% for the CAWI was greater than the figure of around 75% that we had anticipated in the call to tender. These results confirm not only that online surveys are widely accepted, but also that the new SLFS questionnaire works well and is easily understood. This is borne out by the fact that 8 out of 10 people completed the online questionnaire in one go (1 login). Smartphone participation of almost 35% also proves that work on the questionnaire was successful in adapting it to a small screen. Most of the CATI were carried out in the first four weeks of the survey, i.e. as inbound CATI. This phenomenon is interesting as it shows for both the CAWI and the CATI, the population's willingness to participate in FSO surveys.