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**ADDING A MODE AS A FINAL STEP IN THE FOLLOW-UP OF A
PANEL SURVEY**

Contributed Paper

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The views expressed in this paper are those of the authors and not necessarily those of Stockholm University or Statistics Sweden.

I. Introduction

1. Since 1968, Stockholm University has conducted the panel survey LNU (Level of Living Survey) six times. The last wave of the survey was conducted in 2010/2011. As a way of increasing the response rate of the survey an additional follow-up was made. The follow-up was done as a shortened interview – and with the addition of a new mode, a paper questionnaire.

II. About LNU 2010

A. Brief History

2. Stockholm University has conducted the panel survey LNU (Level of Living Survey) six times since 1968. Statistics Sweden has been responsible for the data collection in all the six waves of the survey. The most recent wave of the survey was conducted in 2010/2011.
3. The main interview with the respondent is about 60 minutes long. The interview is carried out as a face-to-face interview, but telephone interviews are also allowed. In addition to this, survey data is also collected from other members of the selected households (i.e. spouse/partner and children in the age of 10-18 years). In this paper the focus is the data collection from the main respondent.

4. Below are the response rates in the six waves of the survey.

TABLE 1. Response Rates in the Different Waves of LNU.

Wave	Response rate
LNU 1968	90,2%
LNU 1974	85,2%
LNU 1981	82,4%
LNU 1991	79,1%
LNU 2000	76,0%
LNU 2010 (before "extraordinary follow-up")	61,3%
LNU 2010 (after "extraordinary follow-up")	72,0%

The response rates have declined over the years and in LNU 2010 the response rate after the ordinary data collection strategy was only slightly above 61 %. After the "extraordinary" follow-up the response rate was 72,0%.

B. About the Panel Design

5. The sample in LNU 2010 consists of 8889 sample units. New sample units are added into the panel in each wave.

TABLE 2. Sample of LNU 2010.

Part of Sample	
Panel	5 555
New Panel (18-28 years old)	1 381
New Panel (Immigrants)	468
New Panel (Children in the households of the respondents in LNU 2000)	1 485
Total sample	8889

C. Ordinary Data Collection Strategy in LNU 2010

6. The ordinary data collection strategy was carried out from April 2010 to March 2011 and also included nonresponse follow-ups planned in advance. Below are the results after these planned follow-ups.

TABLE 3. Results After Ordinary Data Collection

	<i>n</i>	%
Respondents	5334	61,3
- <i>Face-to-face</i>	3953	45,4
- <i>Telephone</i>	1381	15,9
Nonrespondents	3371	38,7
- <i>Not able to participate</i>	204	2,3
- <i>Noncontacts</i>	908	10,4
- <i>Refusals</i>	2259	26,0
Ineligible Units	184	
Sample	8889	

7. At this stage of the data collection the question was raised whether something further could be done to increase the response rate. One possible reason for not wanting to participate was the interview length (>60 minutes). Therefore, a decision was made to do a final follow-up with a shorter interview. A shortening of the interview time would most certainly have a positive effect on the response rate (which is also an experience from other surveys). The interview length was quite drastically cut from about an hour to approximately 5 minutes. A few of the most crucial questions from the survey was put into a shortened interview questionnaire.
8. After the shortened interview questionnaire had been constructed, it was also discussed whether these question could be put into a paper questionnaire. This would allow for the nonrespondents to have an additional new mode to answer the survey questions. The decision was made to include a paper questionnaire in the final follow-up. (Although mode effects were discussed, the main concern at this stage for Stockholm University was the response rate).
9. The strategy of including a paper questionnaire in the final follow-up was somewhat different depending on which nonresponse group the sample person belonged to (i.e. refusals of noncontacts). These strategies are described in more detail below.

III. “Extraordinary” follow-up: Strategy and results

A. Follow-up of Refusals – Short interview and paper questionnaire

10. The group “refusals” actually consist of both refusals and those unable to participate for other reasons (i.e. health problems). In total this group consisted of 2463 (2259+204) persons. Some of these were not included in the follow-up (a decision that was made by looking at the nonresponse code at a finer level along with notes made by the interviewer). 2215 sample units were put into the final follow-up.
11. For the “refusal” group it was decided to use both the short interview and the paper questionnaire in the follow-up. The paper questionnaire was to be sent out along with a letter from Stockholm University preceding this additional follow-up. In the letter it was stated that the respondent either could fill in the paper questionnaire or wait a few days for an interviewer to call and do the short interview. A few days after the pre-notice letter and paper questionnaire was sent out, interviewers started the contact attempts.
12. In this group 801 responses were collected (449 short interviews and 352 paper questionnaires). This means an additional 9,2 % in the overall response rate (5,2 % short interviews and 4,0 % paper questionnaires). More detailed results of the follow-up in this group are given below.

B. Follow-up of Noncontacts – Paper questionnaire only

13. In our sampling frame we had addresses to all sample units. We also had listed phone numbers for the sample units. A lot of effort was put into making contact attempts at different times during the ordinary field work. In addition to this there had been follow-ups on the telephone numbers of noncontacts. Because of this it was not considered worthwhile to make further contacts over the phone in this group. Therefore, only the paper questionnaire was sent out to the noncontacts.
14. Of the 908 noncontacts 893 was included in the final follow up. A few sample units were not included because of various reasons (i.e. the address in the sample frame had proved to be wrong).
15. In this group 114 responses were collected (all paper questionnaires). This means an additional 1,3% in the overall response rate of the survey. More detailed results of the follow-up in this group are given below.

C. Total results of the follow-up

16. In this section we give more detailed results and some tables over the additional responses. Tables are given for the background variables sex, age, education and which panel group the respondent belonged too.
17. Below is the final result after the follow-up. The overall response rate increased from 61,3 % to 72,0 % (+ 10,7 %). About half of the increase in response rate was because of respondents who sent in the paper questionnaire.

TABLE 4. Result After Final Follow-up

	n	%
Respondents	6259	72,0
- <i>Face-to-Face</i>	3957	45,5
- <i>Telephone</i>	1387	16,0
- <i>Short telephone</i>	449	5,2
- <i>Questionnaire</i>	466	5,4
Nonresponse	2436	28,0
- <i>Unable to participate</i>	192	2,2
- <i>Noncontacts</i>	776	8,9
- <i>Refusals</i>	1468	16,9
Ineligible units	194	
Sample	8889	

(Note: If you compare TABLE 3 and TABLE 4 you notice that also the long interviews have increased. Ten respondents in the final follow-up actually completed long interviews).

TABLE 5. Response Rates by Sex.

SEX	Response rate	Short Interview	Response rate +short int.	Question.		Response rate + short int. + q.	Add. long interviews	Final Response rate	N
		(Refusals)		(Refusals)	(Noncontacts)				
Men	60,3%	5,9%	66,2%	3,4%	1,0%	70,6%	0,1%	70,7%	4476
Women	62,5%	4,4%	66,9%	4,8%	1,6%	73,2%	0,1%	73,3%	4219
All	61,3%	5,2%	66,5%	4,0%	1,3%	71,9%	0,1%	72,0%	8695

TABLE 6. Response Rates by Age.

AGE	Response rate	Short Interview	Response rate +short int.	Question.		Response rate + short int. + q.	Add. long interviews	Final Response rate	N
		(Refusals)		(Refusals)	(Noncontacts)				
-20	61,8%	8,3%	70,1%	2,8%	0,4%	73,3%	0,2%	73,5%	495
20-30	58,9%	5,9%	64,8%	2,3%	1,7%	68,8%	0,3%	69,1%	2532
30-40	59,8%	5,5%	65,3%	4,0%	1,6%	70,9%	0,0%	70,9%	1373
40-50	60,4%	5,7%	66,1%	4,9%	1,3%	72,3%	0,0%	72,3%	1420
50-60	62,8%	4,2%	67,0%	4,5%	1,2%	72,7%	0,0%	72,7%	1213
60-70	65,9%	3,4%	69,3%	5,9%	1,0%	76,2%	0,2%	76,3%	1243
70-	65,9%	2,1%	68,0%	6,2%	0,7%	74,9%	0,0%	74,9%	419
All	61,3%	5,2%	66,5%	4,0%	1,3%	71,9%	0,1%	72,0%	8695

TABLE 7. Response Rates by Education.

EDUCATION	Response rate	Short Interview	Response rate +short int.	Question.		Response rate + short int. + q.	Add. long interviews	Final Response rate	N
		(Refusals)		(Refusals)	(Noncontacts)				
Primary and lower secondary < 9 years	50,0%	4,2%	54,2%	5,8%	0,7%	60,6%	0,0%	60,6%	554
Primary and lower secondary 9 (10) years	56,1%	6,7%	62,8%	3,6%	0,7%	67,2%	0,2%	67,4%	1235
Upper secondary	59,3%	6,1%	65,3%	4,3%	1,1%	70,8%	0,0%	70,8%	4073
Post secondary < 2 years	67,3%	4,1%	71,4%	3,0%	2,5%	76,9%	0,2%	77,1%	559
Post secondary >= 2 years	73,5%	3,4%	76,9%	4,1%	1,7%	82,6%	0,2%	82,8%	1998
Unknown	38,0%	2,2%	40,2%	0,7%	2,5%	43,5%	0,4%	43,8%	276
All	61,3%	5,2%	66,5%	4,0%	1,3%	71,9%	0,1%	72,0%	8695

TABLE 8. Response Rate by Panel Group.

	Response rate	Short Interview	Response rate +short int.	Question.		Response rate + short int. + q.	Add. long interviews	Final Response rate	N
		(Refusals)		(Refusals)	(Noncontacts)				
Panel – latest participation 2000	73,6%	4,3%	77,9%	4,4%	1,2%	83,5%	0,0%	83,5%	4288
Panel – latest participation 1991	38,9%	6,4%	45,3%	7,2%	1,0%	53,5%	0,2%	53,7%	486
Panel – latest participation 1981 or earlier	14,0%	5,2%	19,2%	8,5%	0,0%	27,7%	0,0%	27,7%	343
Panel – never participated	20,1%	5,6%	25,7%	5,6%	1,3%	32,7%	0,0%	32,7%	373
New panel (18-28 y.o.)	55,3%	8,1%	63,4%	2,3%	0,8%	66,6%	0,4%	67,0%	1329
New panel (immigrant)	47,2%	3,5%	50,7%	3,0%	2,5%	56,2%	0,0%	56,2%	434
New panel (child in LNU 2000)	64,2%	5,1%	69,3%	2,4%	2,0%	73,7%	0,2%	73,9%	1442
All	61,3%	5,2%	66,5%	4,0%	1,3%	71,9%	0,1%	72,0%	8695

IV. Discussion

18. The result of the final follow-up strategy was that the response rate increased from 61 % to 72 %. It was not a surprise that a shorter interview time would bring some of the earlier refusals to participation of the survey. What did surprise us was the amount of paper questionnaires that was sent in. About half of the increase in response rate was respondents answering by the new mode (paper questionnaire). If we had only included the “short-interview-respondents” the response rate after the final follow-up would have been 66,5 %. (Although, it could of course be argued that at least some of the “paper-questionnaire-respondents” could also have been “short-interview-respondents” if they hadn’t been given the option of answering in the new mode.)
19. But one group that we would not have attained responses from was the “noncontacts” that given the new mode answered in the final follow up. Since a lot of effort had been put into reaching this group it was interesting to get responses also from this group when offering a paper questionnaire.
20. Presented here is only the increase in response rate after the “extraordinary” follow-up. Further studies are needed to also examine, for example, the representativeness of the respondents.
21. It would also be interesting to try this follow-up strategy in other similar surveys at Statistics Sweden.