

THE USE OF VOICE RECORDERS IN ECONOMIC RESEARCH¹

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ABSTRACT

Much of the basic statistical data for economics is collected by survey, asking people questions and writing down the answers. Real world economics also makes use of interviews with market participants, civil servants and decision makers. The use of voice recorders can improve the accuracy of what information is collected, and can ensure that very much more information is remembered from an interview.

INTRODUCTION

Much of the basic information used in economic research, from farm production costs to household consumption figures, is obtained by surveys which involve interviews. Interview techniques are often deplorably bad so the data are unreliable. The use of voice recorders can do a lot to improve the quality of the data and this technique is standard in other fields such as market research.

It has been suggested (Bucher, Fritz and Quarantelli, 1956a) that voice recorders are particularly useful in exploratory interviews, when the researcher is defining the problem, and in pretesting questionnaires, when the researcher is checking to see how interviewers and respondents react. They are also valuable for intensive, unstructured or non-directive interviews where the interviewer must concentrate on asking the right questions, and in interdisciplinary research, where two researchers are using information from the same interview. There is ample evidence that interviewers manage to record only a small proportion of the information given to them (perhaps 25 per cent) when they have to make notes during the interview (Bucher, Fritz and Quarantelli, 1956a). If a voice recorder is used, all the information can be recorded, including important information like details of sales, which the interviewer could not write down without stopping the flow of conversation

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and breaking his rapport with the respondent.

The use of a voice recorder also improves the quality of the information where the supervisor (or the researcher doing his own interviewing) checks the reports against the voices, controlling recording bias where the interviewer selects the information to record, interviewer bias where the interviewer deviates from instructions, suggests answers or invents some or all of an interview, and sampling bias where the interviewer mis-records a classification characteristic to meet his quota. It is indispensable for training in interview techniques.

In economics research, populations are often so small that a pilot survey is impossible. I have carried out several surveys where there are less than 30 firms in the population and one, a survey of large retailers in Ireland, where there were only six firms and a 100 per cent sample was taken. When starting, one does not know what to ask, what to avoid, what is relevant or whether it is the similarities or differences between respondents that are important. Often one is concerned with how each individual behaves, rather than with statistical measures for the population. If voice recorders are used in this situation, there is a greater possibility that the information collected will be valid for individuals and that it will not be necessary to revisit those in the pilot survey. One starts by interviewing someone coherent, asking him to explain the system and then asking him any questions he has not covered. From this recording one can draw up a questionnaire. After each interview the questionnaire is revised until it seems adequate. The final questionnaire is filled from the completed voices, though it may be necessary to revisit or telephone the first respondents for a few answers.

The use of voice recorders has had little or no effect on the response rate when used in social research, market research or even in marriage counseling and psycho-therapeutic interviews (Bucher, Fritz and Quarantelli, 1956a and b; Engel, 1962; Redlich, Dollard and Newman, 1950). I have found though, that, while voice recording is quite acceptable to farmers and housewives, women running small shops often refuse to have the interviews voice recorded, partly because they have never before been interviewed and partly because the subject, pricing, is a sensitive one.

Engel (1962) found, even with sensitive subjects like birth control and venereal disease, that in 82 pretest interviews there was no apparent difference between the replies when they were voiced and when the interviewer wrote them down. Bucher, Fritz and Quarantelli (1956a) report similar results. However, Belson (1967) conducted the only really rigorous test of the bias caused by taping. He voiced one in three interviews on a readership survey and followed with intensive interviews. He tested the consistency of response between the normal interviews, voiced and unvoiced, and the intensive interview (voiced). The information being tested was whether or not the respondent saw certain publications in the previous four weeks. He found that voice recording reduces overall error slightly but that there are appreciable differences in bias between different sub-groups

varying in direction and extent according to factors like the respondents' social and educational background and marital status. He speculates from this that less educated respondents 'are bluffed into making a greater effort to get their statements right whereas members of the middle and upper social sectors become characteristically more wary about what they go on record as saying.' It follows that surveys confined to one sub-group such as the CD income group may be significantly biased. One is often dealing with such sub-groups in economics and, because of the small numbers, it is impossible to determine experimentally what effect a voice recorder has. The effect would vary from survey to survey according to the subject and the type of respondent. Although there is no experimental evidence, my impressions from interviews with farmers and housewives in Ireland is that they are more willing to talk when a voice recorder is used, partly because the interviewer can give his undivided attention and does not interrupt. Some people asked me to turn off the recorder when they were making an exceptionally slanderous statement and they did so without any break in the flow of talk. One normally expects that when one closes one's notebook the respondent will come out with several uninhibited statements - this is often the most valuable part of an interview— but this does not seem to happen when one turns off the voice recorder, which suggests that the inhibiting effect is less.

One seldom considers the inhibiting effect on a respondent of traditional recording techniques but the interviewer can easily give an 'Anything you say may be used in evidence against you' air when he uses a pencil and notebook. In a loosely structured interview, too, the respondent may be allowed to explain the background to the subject before he is questioned and his statements are probed or challenged. It is unnerving if the interviewer flicks through the questionnaire to write down the points in the order they are made, or if the respondent talks for five minutes and the interviewer then puts a tick or a few words on the questionnaire, making it appear that nearly everything he said was irrelevant. Often, too, the respondent sees a minor point noted while the major point he is making is apparently ignored. There can be no doubt that this feedback affects replies.

Transcription can be most expensive in time and money so it should be kept to a minimum from the beginning. With a fully-structured questionnaire little transcription is necessary but where general impressions are most important or pauses, grunts or laughter are significant the whole voice may be transcribed. Bucher, Fritz and Quarantelli (1956a) found that for each hour of interviewing, typists spent 9.1 hours on typing and checking. In Bevis's (1949/50) survey the voices were played back again and again to identify the use of key words and there was a lot of background noise so it took an hour to transcribe a four-minute interview. It is much quicker for the interviewer to transcribe his own voices because he remembers most of what was said and can transcribe easily even when the recording is unintelligible to anyone else. It has been suggested that the interviewer could dictate an edited version of the interview, which could be more easily transcribed. The

supervisor cannot review each voice in detail but must skim through a sample of voices. The time taken in transcription emphasizes how little is recorded in a normal interview.

For interviewing, the recorder should have an automatic stop or alarm at the end of the voice otherwise some of the interview may be missed. (Alternatively the interviewer should change voices when the spool is two-thirds of the way through.) C90 cassettes with 45 minutes of recording time should be used rather than the more fragile C120 voices. The voices will be used again and again and it pays to get the best rather than risk losing an interview through faulty voices. The cost of a voice recorder and voices is only £30, a small figure in relation to the cost of a survey. Office machines are available which will play back a cassette slowly for a dicta-phone typist. They are more expensive and bulky and so would be used for office transcription of field-recorded voices rather than for fieldwork.

I always ask permission to record the interview, saying that I have trouble reading my writing and I want to concentrate on what the respondent says. Secret recording is politically and ethically unacceptable and it is unnecessary if the use of voice recorders has little effect on response. Generally it is not practical to keep voices for any length of time except in small surveys where one's results are likely to be questioned, but they should be carefully guarded.

In most surveys involving interviews, in economics as in other disciplines, a voice recorder is essential if the interview is to be satisfactorily conducted and recorded and if the data obtained are to be reliable.

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