

## HOUSEHOLD TELEPHONE SURVEYS IN HONG KONG

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### BACKGROUND

Because of its high population density (5.8 M people in 1000 square kilometres), door-to-door interviews have remained very popular in Hong Kong. It is only in the last few years that the rapidly increasing cost of hiring interviewers has forced researchers to consider telephone interviews. The high rate of household penetration of telephones (>90%, 1.54M residential lines and 1.62M permanent living quarters), lower interviewing cost and rapid response (often interviewing is done in one night) have served to make telephone interviewing increasingly popular. However, the lack of basic methodological research in Hong Kong has meant that face-to-face interviews are still perceived as the only 'safe' methodology. While the Government has looked at the use of telephone interviewing, this has been in the context of pre-selected businesses or callbacks for previously contacted households.

### BASIC QUESTIONS

In the study being done at the University of Hong Kong, focus was directed to these basic questions:

Firstly, what is an efficient and representative sample frame for use in Hong Kong?

Secondly, how serious is the effect of failing to use the Kish grid (or some similar mechanism) for selecting individual respondents and instead choosing the first adult to answer the phone?

Thirdly, how much does the relative comparison of face-to-face and telephone interviewing in Hong Kong depend on the type of questions asked, i.e. whether factual or opinion?

The reason for focusing on these particular questions is that they are three of the most basic questions, and also because they are questions which cannot be answered simply by looking at the methodological studies done in other countries. The large amount of research done elsewhere has, however, been crucial in determining the form of our study.

## TELEPHONE NUMBER SAMPLE FRAME

### Directories

Hong Kong is, at least officially, a bilingual country with the Cantonese dialect of Chinese being the dominant language of daily use, and English the dominant language of education and business. The domestic telephone system is run currently by one company, Hong Kong Telephone, who provide all the telephone directories in either English or Chinese, according to the subscriber's preference. As 90% of the population are Cantonese - speaking, and a much smaller proportion are English speaking, researchers have usually assumed that the Chinese language directories should provide better coverage of population, at least of the Chinese-speaking majority. However, it turns out that the administrative procedures of the telephone company mean that, with the exception of the small percentage of unlisted numbers (less than 3%), all residential numbers are listed in the English directory and only about 70% are in the Chinese directory. Thus, clearly, even the coverage of Chinese speaking households in the Chinese directory must be less than 80%.

### Random Digit Dialling

One way of avoiding the problem of the directories and unlisted numbers is to use random digit dialling. However, business and residential voice, data and fax lines are all intermingled in the allocation of telephone numbers. Out of the approximately 7 million numbers available for allocation (7 digit numbers with 3-9 as the first digit), 2.2 million have been allocated, of which 70% are residential voice lines. The telephone company has been very helpful in providing maps relating 3 digit prefixes to geographic areas. However because of the threat of losing their monopoly, they are unwilling to provide figures regarding the number of residential lines for each prefix, as they regard this as commercial information.

### Methodology

In order to investigate the questions mentioned above, a study was designed that takes samples of 500 drawn from the English directory 500 generated by directory number plus a random digit and 500 more generated from random numbers stratified by prefix. By collecting demographic and socio-economic data from each household, it is hoped to assess the extent of frame bias for the different frames. Ideally, it would have been sufficient to obtain information on the number of telephone lines and directory inclusion from the random number sample, and drop the directory samples. Unfortunately, many households are unsure of which directories they are in, and in particular, many households are unaware of appearing in the English directory! Further, there appears to be some logistic difficulties in getting the telephone company to check occurrence of numbers in the directories.

## INDIVIDUAL SELECTION

Many researchers in Hong Kong do not do proper selection of individuals within households for telephone interviews, but rather accept the first adult respondent. As they often are concerned only with household attitudes or buying, this may not be a serious problem, and given the time constraints, is often accepted as an unavoidable bias. This study investigates the size of the bias and also the implications for increased cost and time required for call-backs. With the current practice, the bias is being accepted without any evaluation of its effect or the cost of removing the bias. Although this issue has been looked at elsewhere, it may well be that the social structure of Hong Kong families and the place of the telephone within that structure affect the size of this bias.

## QUESTION TYPE

In studies done elsewhere, it has been recognized that the relative benefits and disadvantages of telephone interviews depend on the type of questions asked. A modest investigation of this effect is done in this study by including a small number of topical opinion questions. Both the factual and opinion responses will be compared with other concurrent surveys using the face-to-face mode of interviewing.

## IMPLEMENTATION

Ten telephone lines have been installed, following a generous donation from Hong Kong Telephone and a team of 12 students have been carefully trained in telephone interviewing by a research assistant with a degree in Sociology and training in Statistics. Another graduate student is responsible for doing quality checking, initially of 50%, but decreasing as the quality becomes assured. At present, computer aided telephone interviewing is not available, because of the difficulties in a bilingual implementation, but a solution will be available before subsequent studies get underway.

## CONCLUSION

The special demography, socio-linguistics and culture of Hong Kong make it necessary to investigate the basic methodology of telephone interviewing in Hong Kong. This study will of course only answer a few of the many questions regarding the use of telephone interviewing in Hong Kong and should be seen only as a start in a program of investigation. By publicising the findings, it is hoped to raise the standard of telephone survey research in Hong Kong and make researchers aware of some of the dangers.