
Editorial: The power of panels

This Editorial seeks to provide a general overview of the nature of consumer panels. It begins by differentiating consumer panels from the more usual type of sample survey and discusses the major benefits, but also the disadvantages of panels.

THE BENEFITS OF CONTINUOUS CONSUMER PANELS

The benefits of the two kinds of panels, continuous and discontinuous, are quite different from each other. For continuous consumer panels, the major benefit derives from the need to measure how actions in the marketplace change the behaviour or attitudes of consumers. The following examples illustrate some of the uses of continuous panels.

The effect of a special offer can be measured through a 'before and after' design using a panel approach. Thus, a sample of families might be interviewed initially to gather information on their purchases of soft drinks, possibly over several weeks, to obtain a good idea of their 'steady state' purchasing patterns. A special deal for a particular brand is then introduced, and the purchases of the same sample are monitored for perhaps every week for three months. In this way, sampling variation is minimised and both short-term and long-term effects of the deal are obtained.

A static consumer panel of families with young children might be set up to monitor the acceptance of a new line of toys. In this case, no type of experimental treatment is involved. Rather, information is obtained, say,

every month on the toy purchases of the families. In this way, data are compiled on the types of families that are buying any of the new toys, how soon the toys are purchased after they have been placed on the market, and how many of the toys are purchased by each family.

A dynamic consumer panel might be used to keep track of the purchases of frozen foods of one brand in relation to other brands. By obtaining such data every week for several years, very detailed information can be obtained on what sorts of families are purchasing each major brand and on the change in market shares of the different brands over time among different groups of consumers. Also, estimates can be derived of the extent to which purchasers remain loyal to different brands.

A continuous consumer panel may be used to obtain more detailed and reliable information on different types of behaviour. For example, it has been demonstrated that data on consumer financial holdings are obtained much more reliably if this information is sought over a period of time, thus allowing the respondent to build up confidence in the validity and trustworthiness of the study. Similarly, information on medical care events is obtained much more accurately from panels than from one-time surveys.

A continuous consumer panel is the only means of obtaining information on a series of events extended through time. For example, reactions to the weekly episodes of a television programme are best obtained by monitoring the viewing of the same family and at the same time getting their reactions to the different

programmes. In this way it becomes possible to measure changes in programme acceptance and to relate attitudes and behaviour at one time to viewing and attitudes toward earlier episodes.

Only through continuous consumer panels is it possible to monitor changes in the behaviour of particular cohorts. For example, the purchase habits of teenagers might be monitored over a number of years to ascertain how these purchase habits change as the subjects move into a different stage of life. By monitoring the behaviour of peers at the same time, it becomes possible to distinguish effects due to history (ie changes in economic and social conditions) from effects due to the ageing process.

THE BENEFITS OF DISCONTINUOUS CONSUMER PANELS

The benefits of discontinuous consumer panels are primarily related to reductions in the cost and time required obtaining market research information. Although these kinds of panels are used in a wide variety of ways, three uses are especially common:

- screening for special populations (especially for rare special populations)
- evaluation of new product concepts and formulations
- marketing and advertising experimentation.

The following examples illustrate some uses of discontinuous consumer panels.

The Federal Trade Commission wanted to determine whether purchasers of hearing aids were being deceived during the purchase process. Information on purchases of hearing aids had previously been obtained from respondents of one of the very large

panels, so that a sample of several thousand persons was available for surveying. To have obtained such a sample by a new screening of households would have been prohibitively expensive and would have made the study impossible.

A manufacturer of tennis racquets is considering alternative shapes for a new racquet that would make it easier to handle. Initially, sheets with pictures and a description of the new racquets might be sent by mail or e-mail to pre-screened samples of respondents who play tennis. Any one respondent would receive only one of the alternatives, but the manufacturer could determine which racquet was preferred from the different samples. Alternatively, respondents might receive pictures of two racquets with the order of the pictures randomised, and be asked for their preference. At a later stage, respondents might receive the actual racquets for use testing.

Instead of a new product, a marketer might be considering a new advertising campaign for an existing product, and might wish to choose between several alternatives that had been proposed by the advertising agency. Again, samples of each of the alternatives would be sent to relevant panel members for their evaluation. As above, they might be asked to evaluate a single advertisement or to choose from among multiple advertisements. The testing could also be done by the advertising agency before the recommendation was made to the manufacturer. Similarly, panel members could be asked to evaluate different designs or layouts for a Web page or a brochure. In all cases, the objective is to screen different ideas or executions inexpensively by having a panel evaluate them singly or side by side.

It is obvious that similar information could be obtained from one-time surveys, but with greater difficulty and at

greater expense. Two reasons for using discontinuous panels are because they can provide greater relevance and better quality. They are more relevant because respondents can be screened easily on the basis of prior questions (eg pet owners, users of denture cream, recent car purchasers). They are often better quality because respondents are experienced and can be easily prequalified as panel members on the basis of the quality of the previous survey responses. Problems with discontinuous consumer panels that sometimes make one-time surveys the better alternative are discussed next.

THE POWER OF CAUSALITY, CONTROL AND DISAGGREGATION

While one-time surveys and panel data can sometimes provide similar information to continuous consumer panels, it is with less precision and often with a great deal of additional cost. For example, brand sales can be obtained from store scanner data. This is another form of panel data, although it is not a consumer panel. While store scanner data provide excellent and efficient estimates of overall sales, these data cannot provide estimates of the types of people buying different brands nor can they provide information on brand loyalty, brand switching, consumption rate or on market segmentation unless combined with some form of consumer panel data.

To a limited extent, some of the information obtained by continuous consumer panels could be obtained by one-time retrospective surveys. Unless very carefully designed and pretested, however, such surveys would involve a great deal of strain on the memory of individuals, and the resulting data could be very unreliable. In addition, understanding how and why attitudes and preferences have changed over a long time in a retrospective interview

can be problematic. While the general direction of these changes can be estimated, their magnitude is much more accurately estimated through the repeated sampling that is only possible with continuous panels.

In a similar manner, two separate samples could be used to measure 'before-and-after' effects. Doing so could, however, introduce a considerable amount of sampling variation, with the result that any real effect due to the special deal or other treatment might be mistakenly ascribed to sampling variation. In addition, the cost of the study would usually be larger since two different samples would have to be selected and contacted.

Studying how attitudes or behaviour of a cohort change over time is impossible without the panel approach. Consider a panel study of World War II veterans which studies how their different experiences with the free samples they were given during the war influenced their subsequent buying habits. In this instance, it is essential that the same people be interviewed over time. This is also essential if information is to be obtained on the true extent of change taking place in a particular population. In this sense aggregates can be highly misleading, since stationariness of aggregates over time does not necessarily mean no change on the part of the individual members of a population.

CONSUMER PANELS AND ON-LINE BIASES

The question as to how well represented the general public is in on-line consumer panels is a contentious one. As with all surveying methods, self-selection biases are problematic. In 2001, on-line users tended to be better educated, more affluent and younger than the average

consumer. In addition, they tended to be male and to have a greater willingness to respond to the survey's questions. Some of these differences can be very problematic depending on the purpose of the panel.

Furthermore, the bias of on-line panels varies depending on the on-line method being used. Consider, for instance, e-mail panels vs. downloadable panel surveys. E-mail surveys are often the fastest and simplest of the three methods, and they require relatively little set up time and the least user sophistication. They are ideally suited for internal audiences, such as employee groups, distribution partners and beta testers. In contrast, downloadable panel surveys must be downloaded to an executable file on a panellist's own computer. These surveys result in further self-selection because of the download time and the necessary user sophistication and hardware requirements needed to download, complete and upload these surveys.

THE BEST SAMPLE FRAME FOR SOME PRODUCTS AND SOME SUBGROUPS

Yet, the representativeness of on-line panels to the general population of consumers is only important if actually interested in the general population of consumers. There are situations where the population of interest — for instance, people who purchase on the Internet — is best captured by an on-line panel. Presently, items that can be easily bought using the Internet are probably good candidates for on-line consumer panels. These items include books, compact discs, airline tickets, magazine subscriptions, home banking, investment services, computer software. In the future these categories will probably expand to include high-tech equipment, travel services, training, boilerplate legal

services, prestige real estate, mail-oriented luxury goods, specialty hobbies and crafts, technical employment services, and even some industrial equipment and parts.

Despite biases related to the general population, there are subgroups within the population that may be better represented through the Internet than through other methods. Teenagers, for instance, have been an elusive group with respect to consumer panels prior to on-line consumer panels. (The number of children on line is expected to rise from 5 million in 1998 to more than 21 million by 2002.) In addition, it is also effective with consumers who are single, affluent, and well-educated such as doctors, lawyers, professionals and working mothers.

All methods of obtaining research information have drawbacks, but there is a sizeable concern that on-line panels tend to be psychographically biased towards progressive technology innovators and demographically biased toward younger, male, professionals. Over time, as Internet services become as commonplace as telephone and television services, the self-selection biases that occur on on-line surveys will become less pronounced and the benefits more pronounced. On-line surveys are able to attract respondents from previously elusive groups such as working mothers, professionals and teenagers.

In general, successful on-line consumer panels may be possible as long as adequate representation of the target buying population can be assured. In 2001, more than 125 million people — which is about 2/3 of the worldwide users of the Internet — live in North America. In the USA, more than 50 per cent of households have Internet access and 25 per cent go on-line daily. This suggests that previous biases toward young male professionals being the main

Internet users is changing every day. As the number of Internet users increases over time, biases will decrease.

METHODS OF REDUCING ON-LINE BIASES

While it is difficult to correct the bias that might exist between on-line users and non-users, a number of methods are being experimented with to reduce the biases that might exist between those Web users who become panel members and those who refuse. For instance, to make sure that panel members are — at the very least — representative of Web users, Javascript can be used randomly to sample site visitors. It can help obtain as representative a cross-section of site visitors as possible, by avoiding over-sampling of heavy site visitors.

A panel opt-in question is commonly asked of people who complete an on-line pre-panel interview. It briefly describes the panel and asks if people would like to take part. These people are then re-contacted and asked to visit a related website. While there, all respondents are asked to complete the survey which collects their demographics, Web usage, media use and attitudinal information. The increased effort necessary to follow up and to continue

with the process helps to increase the seriousness and validity of those who ultimately become part of the panel.

A weighting process can be used to extrapolate panel members' information based upon the entire adult US Web population. Each panel member then becomes representative of a certain number of US adult web users. This is done by taking all the information from a survey and applying statistical weighting to the raw data.

In an effort to increase representativeness and to help counter concerns that on-line consumer panels are skewed, most reputable firms profile their members and send out on-line messages only to those they believe will be interested. The concern that panels are not representative of the general population, and are skewed toward young, professional males, is becoming less true as different segments of the population become better represented. As either more cable wiring is placed in rural regions of the country, or wireless technology improves, the rural population will become better represented within panels.

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