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## QUALITY ALERT: HOW TO ENSURE YOUR SOCIAL AND MARKET RESEARCH IS SIGNIFICANT, MEANINGFUL AND CREDIBLE.

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Policy makers in Government and social service agencies are being warned to stick to best practices when commissioning social and market research. The warning comes amidst a slumping standard in reported research studies that is bringing the credibility of the social agencies into question.

Professional researchers point to several reasons for the falling standards. These include:

- Lack of adequate knowledge and training of those who commission research.
- A shift to the online environment for surveys without adequate understanding of the drawbacks of the online medium.
- Budget-driven cutbacks on research spend, often resulting in smaller survey sample sizes or compromised methodologies. Today, 500 appears to be the new 1000 – and the consequences can be quite dramatic.
- Increase in the number of studies paid for by special interest groups – often lacking basic standards of independent, scientific research.
- Poor reporting standards both amongst report writers and amongst journalists.

The result is an environment where more studies are published, yet where the credibility of research studies is falling. Serious research needs especial attention to design quality to ensure that it is not dismissed.

For those commissioning meaningful research, several steps are necessary.

1. **Get the basics right with survey sampling.** This means getting a truly random sample of people. If you want social opinion of adult New Zealanders, then best practice suggests using telephone or face to face rather than online interviewing.

Currently in New Zealand more than 90% of New Zealanders are accessible by land-line telephone, whereas the reach to those with internet access is, at best, 75%. However this disguises a more serious sampling problem: the ability to randomly reach these households.

Quality approved centres dedicated to computer assisted telephone Interviewing (CATI) are able to reach practically all households with a telephone. Phone numbers are accessible. Not so email addresses, so that even though three quarters of New Zealanders have email or internet access, (and this sample is biased somewhat to higher income households and households with school aged children) the access is not a twoway thing. Email users are out there, but unless they have agreed to sign up for a panel, permitting access, then they cannot be reached. Only a small percentage of adult New Zealanders have availed themselves to be contacted in this manner. So this really makes a true scientific random sample impossible for online surveys.



By contrast Computer Assisted Telephone Interviews (CATI) use random diallers to reach a truly random audience. In fact researchers are expressly permitted to do this under the Privacy Act, with the proviso being that once invited, a member of the public is free to give their permission or otherwise to be interviewed.

The quality of survey sampling methodology governs the overall veracity of your social or market research. Unless you can point to a truly random selection of respondents – a representative sample from the overall population – then your research can be called into question.

## 2. Ensure adequate sample sizes. Don't just look at overall sample size, but at the size of subsamples.

Up until the late 1990s the usual sample size for social and market research surveys was 1,000 randomly selected respondents. Frequently, studies were more extensive, with 1,500 or even 2,000 respondents. In the past decade there has been a sharp fall-off, with many organisations conducting decision-critical research studies on the basis of 500 or fewer respondents.

There are two statistical reasons for interviewing 1,000 respondents. The first is to do with overall “margin of error” and the second is to do with confidence in analysing subsets of the data: just the males for example, or just one or two cultural groups

Margin of error is the *vital statistic* that indicates the degree to which the sample is a good but not perfect reflection of the overall population. Imagine you had a coin which was perfectly balanced. Over a million throws, the result is 50% heads and 50% tails. However if you confined yourself to just a few throws, just eight for example, there's a high likelihood that you won't throw four heads and four tails, but 3 heads and 5 tails or vice versa, or perhaps 2 heads or tails, or even no heads. With a small sample we should expect this kind of variance. The margin of error reflects this same idea.

Margin of Error is greatest when a result is 50/50, and reduces if the result is closer to 80:20, or 90:10. For a survey of 1,000 people the expected maximum margin of error is  $\pm 3.1\%$  while for a sample of 500 this spreads out to  $\pm 4.4\%$  which means that a 50% result may mean anything between 45.6% to 54.4%

At first glance this doesn't seem such a serious compromise however the problem really occurs when you deal with subsamples. Suppose you conducted a survey of 500 people to test smoking attitudes. Imagine this survey has 250 males and 250 females aged 18+. Now we wish to investigate what the females think about cigarettes. Imagine 50% of females say they will consider taking up smoking. On a sample this size the margin of error starts to expand alarmingly to  $\pm 6.2\%$ . Or suppose we examined the 25% of the sample who are Maori or Pasifika. Based on a total of 500 in the survey we have just 125 in this subset – with a margin of error of  $\pm 8.8\%$ : in other words a 50% result could fall anywhere between 41% and 59%. So how reliable or credible are these numbers?

A survey of 1,000 or more people gives a stronger starting point, and enables subsets to be drawn and analysed with much more confidence.

Note: margin of error is expressed as “maximum margin of error with a 95% level of confidence.” The fact is, the Margin of Error statistic applies, statistically, to 95 out of every 100 surveys. In 5% of surveys the result may – just may – lie outside the reported margin of error.

Note also: a huge sample will not overcome a poor sampling technique. If the sampling is biased, then the credibility of the results will suffer.



### **3. Ensure questions are fair, clear and unbiased.**

One product of the internet age is the propensity of special interest groups and media to run all kinds of surveys which either have little or no regard for scientific random sampling, or have scant regard for even the basics of fair, unbiased questioning. For professional market and social researchers, the questionnaire is a potential minefield. The way questions are asked needs to be unbiased, and the options given to respondents for their answers need to be open and fair also – without forcing anyone into a response that does not reflect their honest opinion. A good practice for social researchers is to have questionnaires peer reviewed.<sup>1</sup>

A few main tips for good questionnaire design include:

- Zoom in on the subject matter – ask about the general topic and then move towards the specifics of the issue in question.
- Diligently avoid leading questions or other forms of bias.
- Avoid long batteries of questions – they tend to produce “bored data” which is less discriminant.
- Conduct Question Testing on at least the key questions.
- Test, test and test questionnaires before going into field. You will be surprised how quite innocuous statements or questions may lead to confusion or misinterpretation.

### **4. Ensure fair, accurate reporting of the results.**

Social and marketing researchers need to be particularly watchful that their research is reported accurately and fairly. All research should report the sampling method and the sample size. The maximum margin of error needs to be reported, and where public opinion is being reported, a good report will also include the actual questions asked. All these steps are fundamental. They put on the table, for the reader to assess, the fairness, accuracy and trustworthiness of the research. Without these details the research is open to question.

Another common error is for report writers (and reporters) to make a leap in logic between the findings (a sizeable percentage of males say they are tempted to try smoking,) and the conclusions (Government needs to raise taxes on cigarettes.) Writers need to make the distinction between the factual result and the matters of opinion about these results signify.

Likewise social researchers need to be very careful about their use of statistics. Reporters frequently get in a tangle when citing figures and the result can damage the credibility of what may otherwise be excellent research work.

Research is a chain of processes, and good research will be let down by the weakest link.

### **Summary.**

The need for good Social and Marketing Researcher has never been greater. But the assessment of public attitudes and behaviours needs to be accurate, fair and trustworthy. In recent years there has been a noticeable

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<sup>1</sup> We have much more advice about unbiased questionnaire design in a second White Paper.



general decline in the standards of research quality due to poor science, biased techniques (or simply poor training) as well as the shift to cheaper budgets and the use of field alternatives such as online research.

Online has a very good role to play, and is fine for “snapshot” opinion gathering, but it remains a poor substitute for carefully designed, scientifically valid opinion gathering.

Social and Marketing researchers are reminded of the basics of best practice to ensure trustworthy, credible work.

- Scientific random sampling is essential. Telephone or randomly selected face to face interviews are the best way to achieve this.
- Sample sizes need to be robust in order to produce confident results.
- Questionnaires need to be unimpeachably bias-free. They need careful design that can withstand scrutiny.
- Research reporting needs to include the background measures that enable the reader to assess for themselves the research credibility.

Research is used by public and private sector organisations as the basis for making important social and marketing decisions and strategies. Good research helps reveal opportunities and helps reduce the risks that accompany such decisions. Any compromise to the research quality is going to make those decisions less certain and more risky. Do decision makers want that?

*The Reid Research Methodology White Papers are prepared in the interests of higher quality research. They have been prepared by Duncan Stuart FMRSNZ, a life member of the Market Research Society of New Zealand.*

*White Papers include:*

- 1. Quality alert: How to ensure your social and market research is significant, meaningful and credible.**
- 2. NZ demographic profile. A reference point for the design of sampling frameworks.**
- 3. Improving your Questionnaire design. Ten guidelines.**



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