The Science Behind Surveys

It is a common trend that many people would doubt about the results of a survey, unless they find proof that the survey was done “scientifically” [3]. Well, conducting a survey [4] requires the use of the scientific process [5], a course that is basically followed by all types of research. Having this in mind, a survey that has critically gone through the steps of the scientific process...
posits a higher percentage of validity and reliability \[6\] of the results.

Not all surveys can be conducted in such a way that each member of the population can be studied upon because that would be a very expensive and thus, an impractical way of doing survey research. In executing a survey, the researcher will select participants through a random sampling technique \[7\], and these people will be the representatives of the entire target population. Using a random sampling method does not mean that the survey isn’t scientific; rather, it increases the validity of the results as bias \[8\] in choosing the participants is eliminated, thereby making the process scientific and the results valid.

The Principles of Survey Research

The research principles of data gathering, processing, analysis and interpretation are incorporated in surveys. These principles include validity and reliability.

A. Validity

Validity and reliability \[6\] are often discussed in the field of psychometrics, but not so much in market research, although it is assumed they are present.

Does the survey measure what needs to be measured? This is the question that can only be answered through verifying the validity of the survey. In scientific research, validity tells us how accurate the survey is by checking the representativeness of the sample and the precision of the questions. There are four important types of validity \[9\] included survey research:

1. **Face validity** \[10\]: Do the questions appear reasonable to acquire the data you want to collect?
2. **Content validity** \[11\]: Are the questions all about the issue and other subjects related to it?
3. **Internal validity** \[12\]: Do the questions imply the outcome that you want to achieve from the survey?
4. **External validity** \[13\]: Do the questions elicit answers that are generalizable (i.e. reflects the response of the entire target population)?

B. Reliability

In survey research, reliability \[14\] refers to whether the questions elicit similar information or the same characteristic even if the wordings or questionnaire structures are changed. Reliability of the survey relates to the consistency of the questions and statements in a questionnaire.

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