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**Survey Process
White Paper Series**

# The Six Steps in Conducting Quantitative Marketing Research

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The marketing research process includes the systematic identification, collection, analysis and distribution of information for the purpose of knowledge development and decision making. The reasons and times at which your company or organization might consider performing marketing research varies, but the general purpose of gaining intelligence for decision making remains constant throughout.

Customers occupy the central role in the marketing research process. As a company or organization, the overwhelming majority of research you are currently considering likely revolves around your customers or potential customers:

- Current customers
- Prospective customers
- Lost customers
- Members
- Community
- Employees (internal customers)
- Stakeholders (for example, investors, suppliers)

Whether you are creating a new marketing research program or perhaps revising an existing marketing research program, what are the steps you should take?

## Step 1: Identifying and Defining Your Need or Problem

If you are considering conducting marketing research, chances are you have already identified a problem and an information need.

This step is always the first of the marketing research steps. At this point, the problem will have been recognized by at least one level of management, and internal discussions will have taken place. Sometimes, further definition of the issue or problem is needed, and for that there are several tools you can use.

Here at the outset of the marketing research steps, the most common tools are internal and external secondary research. Secondary research intelligence consists of information that was collected for another purpose, but can be useful for other purposes.

Examples of internal secondary research are sales revenues, sales forecasts, customer demographics, purchase patterns, and other information that has been collected about the customer. Often referred to as data mining, this informationcan be critical in diagnosing the problem for further exploration and should be leveraged when available and appropriate. The amount of internal secondary information that can be applied is typically limited.

External secondary research is typically far more available, especially since the Internet age. Most external secondary information is produced via research conducted for other purposes, financial performance data, expert opinions and analysis, corporate executive interviews, legal proceedings, competitive intelligence firms, etc.

Leading sources for external secondary research resources include:

> Newspapers/Magazine Articles (business and vertical trades)
> Television
> Newsletters
> Competitive Intelligence Firms
> Industry Reports
> Trade Associations
> Business Directories
> Government Publications & Websites
> Search Engines
> Competitive Websites
> Friends & Colleagues

## Step 2:  Developing your Approach

Once your problem is better defined, you can move onto developing marketing research approach, which will generally be around a defined set of objectives.

Clear objectives developed in Step 1 will lend themselves to better marketing research approach development. Developing your approach should consist of honestly assessing you and your team's market research skills, establishing a budget, understanding your environment and its influencing factors, developing an analysis model, and formulating hypotheses.

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2

## Project Analysis

How difficult is the project to execute?

Is it a large sample (500+) or small sample (<200)?

Will the project need advanced analysis?

What are the likely methodological approaches?

Is in-depth and detailed reporting or executive summary reporting needed?

## Skills Analysis

Is there in-house market research available to meet project needs?

Is the in-house market research expertise available during the given time-frame?

What parts of the market research process can be handled internally?

## Budget Analysis

Is this a strategic problem/issue or a tactical one?

Is it a $20,000 project or $200,000 project — what is the information worth?

Where will the budget come from, and can it be shared between departments?

Who are those most likely to benefit from the research, and likely those most willing to fund the project?

In what timeframe will budget be available?

## Environment

What is the overall economic environment?

What is the economic environment relative to your products/services?

What is the governmental environment (regulatory, etc.)?

## Overall Theory of the Marketing Research Approach

What is your overall theory and hypothesis?

What do you intend to prove or disprove?

What actions are your company willing to take based upon survey results?

What are the internal/external roadblocks that will need to be overcome to drive results?

**Step 3:  Research Design**

Based upon a well-defined approach from Step 2, a framework for designing your marketing research design should be apparent.

Marketing research design is the most encompassing of all steps in the marketing research process, requiring the greatest amount of thought, time and expertise — and is the point at which those less experienced with market research will obtain assistance from an internal market research expert or perhaps partner with an external marketing research provider.

Since the intelligence eventually gained from the research is so closely related to the selected marketing research design, this is the single most import step in the research process and the step most vulnerable to common marketing research errors.

Marketing research design includes secondary information analysis, qualitative research, methodology selection, question measurement & scale selection, questionnaire design, sample design & size and determining data analysis to be used.

**Elements of marketing research design include:**

**A)  The Questionnaire Design Process**

Before you get to the questionnaire design process, you must have already taken first and second steps in the market research process. Simply providing questionnaire design samples that might include several sample questions for inclusion in your questionnaire does not completely do justice to the science and art behind the questionnaire design process.

Every company or organization that considers performing market research will have different issues, which is why it is so difficult to find ideal questionnaire or survey examples. Since there are some similarities between more typical types of research projects, however, we have provided on this website several survey questionnaire for your reference. It is highly recommended that you and your team go through the entire questionnaire design process to make sure that any survey instrument you create will be an effective tool for gathering the information you need.

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4

The Questionnaire design process:

Determine the information needed

Determine which survey methodology is most appropriate for your needs

Specify individual questions to be asked

Decide what question structure, scale, and wording is appropriate

Properly order the questions within the questionnaire

Proof and pretest survey with small sample to check performance

Make changes based on pretest and execute survey

## B) Measuring & Scaling

Creating a survey questionnaire that will deliver effective marketing research data collection is a difficult process with many opportunities for making some of the more common market research errors. Many less experienced market researchers may believe that creating a questionnaire is simply the act of coming up with questions and putting a pen to paper, but that is a dangerous assumption (see Polaris white paper: Common Marketing Research Errors).

Creating a questionnaire requires as much science as art, and incorporating those two elements into a high-quality survey that will draw a good response rate while effectively collecting accurate data often takes time and experience.

When creating a survey questionnaire, there are basic types of scale questions to have in your tool box. They are:

➤ **Nominal** — when numbers are used to identify objects, such as social security number, license numbers or daily customers. In this case, the number acts mostly as a data tag, typically for identification.

➤ **Ordinal** — when numbers are used to indicate the relative position, but not indicate the magnitude of the difference between those positions. An example of this would be rankings in which items are listed by priority, say first through fifth, or competitive events where the quantifiable difference in perception between #1 and #2 is unknown.

➤ **Interval** — when a rating scale is used and the zero point is arbitrary. An example of this is satisfaction scores (satisfaction of 3 on a scale of 1 to 5) as well as most other attitude and opinion questions, regardless of the scale used (3, 5, or 10 point). Unlike ordinal, the difference between each data point is fixed.

➤ **Ratio** – the most useful of all of the scales in creating a questionnaire, ratio scales allow the researcher to incorporate each of the above listed scales into one (nominal, ordinal and interval). The key difference with ratio is that unlike the interval scale, it is anchored with an absolute zero point. Examples of ratio questions are market share, income group, age group, etc.

If you are creating a questionnaire from scratch, it is important to be mindful of these scales as each one lends itself to a particular type of data analysis.

## C) Sample Size Calculator

What does a sample size calculator do? When you know how accurate you want your data to be, and you know the size of your target population, then you need to calculate how big a sample you need to draw from that population in order to have survey results that can be projected onto the target population (visit the Research LifeLIne online  sample size calculator at:

http://www.polarismr.com/education/tools_stat_moe_prop.html.

## D) Basic Statistical Testing

**Calculate the Margin of Error and Its Significance**

To understand the results of any survey, you must calculate the margin of error and the statistical significance of any difference found.  See below for a basic explanation of the relevant statistic procedures.

To understand how accurate your survey results are, one must calculate how much error is likely given the size of the sample you are surveying in relationship to the total population. The margin of error is the amount of error one could expect to find, due to just chance, above or below the actual figure obtained in the survey results. To calculate an acceptable margin of error, you must first select the confidence level you want for your results, and you must enter the sample size you are surveying and the total size of the population from which the sample is drawn.

An important guideline is the confidence interval or confidence level. That tells you just how confident you can be that the error rate you find reflects simply errors due to chance or sampling variation and not actual differences in the total population of interest. If you want to be very sure of your findings – say, if life-or-death decisions are to made as a result – then you will want a 99 percent confidence level. That means that you can be 99 percent confident that there is only a small percent

likelihood (your margin of error) that the differences do not reflect actual differences but are due to chance. If you are looking for directional advice, you may want to go with a 90 percent confidence interval, as that will give you many more statistically significant results. Most commonly, a 95 percent confidence level is used.

The sample size is the number of people you are surveying. A sample is a portion of a total population. Sometimes you know the actual number of the total population, say if you are surveying a percentage of your customers or association members. When you don't know the total but you know it's more than the number you are surveying, then you will want to select an infinite population.

Most of the time, you will probably want to calculate a margin of error for the percentage or proportion of the sample choosing a particular answer in the survey.

Sometimes, however, when you've asked your respondents for a number – such as the number of hours they are on the Internet – then you will want to look at the average or mean number, and calculating the margin of error for a mean is somewhat different. To do this, you still must know the confidence level you desire, the sample size and the population size, as you do for calculating margin of error with proportional or percentage data. But you also must know the standard deviation for your data set. The standard deviation is the square root of the variance, which is based on the sum of squared differences between each score and the mean. Most calculators and spreadsheet programs can calculate the standard deviation for your data set.

Once you know your margin of error, you can say this about your data: If one were to pull 100 samples from the population and ask each group the same questions, you can be certain that 95 percent of the time (or whatever your confidence level) you will get answers that are within five percent (or whatever your margin of error) of the answers you got this time.

**To test whether the difference between two results is significant**

Two proportions or percentages, or two means, may be far apart in actual numbers but not so far apart as to be statistically significant if they come from samples of far different sizes. To be sure the difference is due to your independent variable – the issue or action you are testing to see if it makes a difference in your dependent variable – you must test the statistic to make sure the difference could not be the result of chance or sampling variation.

A simple way to determine whether two proportions or percentages are truly different is to conduct a z-test. To calculate the z-score, one needs to know the desired confidence level, the two actual percentages, the size of the two samples used and

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7

the size of the total population. One also should be aware of whether one sample is included in the other sample (called a subsample), which occurs, for instance, when a sub-group is being compared with the total. For instance, when one wants to compare the percentage of one group answering a particular question yes with the percentage of the total sample answering yes, then the z-score must be calculated differently than when one compares the percentages of two different groups.

The best way to determine whether two means, or averages, are truly different is to conduct a t-test. To calculate the t-statistic for means, one must know the desired confidence level, the two means, the two sample sizes, the total population size, and the standard deviations for each mean.

When the z-score for two proportions or the t-score for two means are high enough, then one can say with some (90%, 95% or 99%) confidence that the difference between the two is due to the action of the independent variable on the dependent variable and not simply due to chance or sampling variation.

## Step 4: Data Collection

Marketing research data collection (often called survey fielding) is the point at which the finalized questionnaire (survey instrument) is used in gathering information among the chosen sample segments. There are a variety of data collection methodologies to consider.

Selecting which is the most appropriate marketing research data collection methodology for a particular research project takes place during Steps 2 & 3 of the marketing research process.

Marketing research data collection typically begins with field testing the final questionnaire with a small portion of the respondent sample to make sure it is gathering information correctly. Then data collection can be fairly automatic throughout the remainder of the marketing research data collection process. When quota groups and/or sample subgroups are being screened for, data collection will require more oversight, maintenance time and cost. Regardless of the data collection methodology chosen, the data collection process often takes from 25 percent to 50 percent of the total time needed to complete a research project.

Market research data collection methods include:
➤ Computer Assisted Telephone Interviewing (CATI)
➤ Internet survey
➤ Interactive Voice Response (IVR)
➤ Mail survey

➤ Mall intercepts
➤ Traditional telephone interviewing
➤ Internet panel
➤ Mail panel
➤ In-home panel

## Step 5:  Survey Data Analysis

Any survey data analysis will depend on how the survey questionnaire was constructed. Less complex survey data analysis can be handled with any of a number of office suite tools, while more complex questionnaire data analysis requires dedicated market research analysis programs.

Types of statistical survey data analysis that might be performed are simple frequency distributions, crosstab analysis, multiple regression (driver analysis), cluster analysis, factor analysis, perceptual mapping (multidimensional scaling), structural equation modeling and data mining. The more complex the needed level of statistical data analysis is, the more time and cost it will take to execute.

(*see table next page*)

## Step 6:  Marketing Research Reports

Market research reports and presentations are easily the second most important step, if not the first.

Any critical information and knowledge that comes from your market research investment will be limited by how your market research reports are presented to decision makers.

There are as many reporting styles as there are market research reports, but some are definitely better than others, and there are definitely trends to be aware of. If you are interested in how to write a research report or simply interested in what quality market research reports look like, contact Polaris for examples and for access to Polaris' secure online reporting system, StatTrac®.

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| **Multiple Regression**<br><br>(Driver Analysis) | Describes the relationship of each variable in a set (and the set of variables as a whole) to a single variable. | Determine key "drivers" of overall customer satisfaction with your product/service. |
| **Factor Analysis** | Reduces a complicated data matrix into its more basic structural elements. | Uncover basic dimensions that customers use to evaluate how satisfied they are with your organization. |
| **Perceptual Mapping**<br><br>(Multidimensional Scaling) | Extracts multiple dimensions from a variable set and positions concepts within that space. | Visualize how your customers mentally organize your product or service category and your brand's position. |
| **Structural Equation Modeling** | Tests how well observed data confirm a pre-defined theoretical model. | Confirm the hypothesized effects of the perceived timeliness, competence and professionalism of a utility company's field technician's on the overall perception of the same group of technicians. |
| **Cluster Analysis** | Identified homogenous subgroups within a much larger group of respondents. | Identify customer profiles or market segments, groups of customers who make similar decisions and perceive products and services similarly. |
| **Conjoint Analysis** | Determines the relative importance of individual attributes by presenting manageable, random subsets of all possible combinations of attributes being measured. | Create a "market simulator" that gives the ability to predict changes in market share of new products by making product attribute changes. |
| **Maximum Difference Scaling**<br><br>(MaxDiff) | A trade-off analysis that determines the relative importance of individual attributes by presenting a series of forced-choice situations. MaxDiff is also ideal for segmenting respondents into groups with similar preference structures. | Prioritize strategic project goals by a list of utilities for individual product attributes and segment respondents into target markets based on their preferences for those attributes. |

For more information about survey research processes, please visit our website at
http://www.researchlifeline.com/ or call us at 1-855-244-3500.



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