

MARKETING RESEARCH, GOALS, PROBLEMS AND OBJECTIVES

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ABSTRACT

The present work concerns the general conceptions of marketing, marketing research, its goals, problems, categories, objectives. Plus in the given work are mentioned the ways of marketing program evaluation, the ways to cut the impact of reduced spending, different steps important to take in order to help the consumer feel comfortable. A special attention is paid to the basics of marketing, different points of views on them. The present work may also help to navigate away from the marketing and business mistakes that will cost money, time and future growth potential.

Keywords: Marketing, Marketing research, Marketing program evaluation

1. INTRODUCTION

Managers need information in order to introduce products and services that create value in the mind of the customer. But the perception of value is a subjective one, and what customer's value this year may be quite different from what they value next year. As such, the attributes that create value cannot simply be deduced from common knowledge. Rather, data must be collected and analyzed.

The goal of marketing research is to provide the facts and direction that managers need to make their more important marketing decisions, John et. al (2008). Other literature sources, Ross Brennan et al, (2009), Sidney J. Levy, (2002).

To maximize the benefit of marketing research, those who use it need to understand the research process and its limitations.

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Marketing Research vs. Market Research

These terms often are used interchangeably, but technically there is a difference. Market research deals specifically with the gathering of information about a market's size and trends. Marketing research covers a wider range of activities. While it may involve market research, marketing research is a more general systematic process that can be applied to a variety of marketing problems.

The Value of Information

Information can be useful, but what determines its real value to the organization? In general, the value of information is determined by; The ability and willingness to act on the information, The accuracy of the information, The level of indecisiveness that would exist without the information, The amount of variation in the possible results, The level of risk aversion, The reaction of competitors to any decision improved by the information, and the cost of the information in terms of time and money.

The Marketing Research Process

Once the need for marketing research has been established, most marketing research projects involve these steps; Define the problem, Determine research design, Identify data types and sources, Design data collection forms and questionnaires, Determine sample plan and size, Collect the data, Analyze and interpret the data, and Prepare the research report, Jenny Poolton, Hossam S. Ismail, Iain R. Reid, Ivan C. Arokiam (2008).

2. PROBLEM DEFINITION

The decision problem faced by management must be translated into a market research problem in the form of questions that define the information that is required to make the decision and how this information can be obtained. Thus, the decision problem is translated into a research problem. For example, a decision problem may be whether to launch a new product. The corresponding research problem might be to assess whether the market would accept the new product.

The objective of the research should be defined clearly. To ensure that the true decision problem is addressed, it is useful for the researcher to outline possible scenarios of the research results and then for the decision maker to formulate plans of action under each scenario. The use of such scenarios can ensure that the purpose of the research is agreed upon before it commences.

3. RESEARCH DESIGN

Marketing research can classify into one of three categories; Exploratory research, Descriptive research, and Causal research. These classifications are made according to the

objective of the research. In some cases the research will fall into one of these categories, but in other cases different phases of the same research project will fall into different categories.

Exploratory research has the goal of formulating problems more precisely, clarifying concepts, gathering explanations, gaining insight, eliminating impractical ideas, and forming hypotheses. Exploratory research can be performed using a literature search, surveying certain people about their experiences, focus groups, and case studies. When surveying people, exploratory research studies would not try to acquire a representative sample, but rather, seek to interview those who are knowledgeable and who might be able to provide insight concerning the relationship among variables. Case studies can include contrasting situations or benchmarking against an organization known for its excellence. Exploratory research may develop hypotheses, but it does not seek to test them. Exploratory research is characterized by its flexibility, McCauley, Joseph I. (2004).

Descriptive research is more rigid than exploratory research and seeks to describe users of a product, determine the proportion of the population that uses a product, or predict future demand for a product. As opposed to exploratory research, descriptive research should define questions, people surveyed, and the method of analysis prior to beginning data collection. In other words, the who, what, where, when, why, and how aspects of the research should be defined. Such preparation allows one the opportunity to make any required changes before the costly process of data collection has begun, Ronald L. Rardin (1997).

There are two basic types of descriptive research: longitudinal studies and cross-sectional studies. Longitudinal studies are time series analyses that make repeated measurements of the same individuals, thus allowing one to monitor behavior such as brand-switching. However, longitudinal studies are not necessarily representative since many people may refuse to participate because of the commitment required. Cross-sectional studies sample the population to make measurements at a specific point in time. A special type of cross-sectional analysis is a cohort analysis, which tracks an aggregate of individuals who experience the same event within the same time interval over time. Cohort analyses are useful for long-term forecasting of product demand.

Causal research seeks to find cause and affect relationships between variables. It accomplishes this goal through laboratory and field experiments.

4. DATA TYPES AND SOURCES

Secondary Data

Before going through the time and expense of collecting primary data, one should check for secondary data that previously may have been collected for other purposes but that can be used in the immediate study. Secondary data may be internal to the firm, such as sales invoices and warranty cards, or may be external to the firm such as published data or commercially available data. The government census is a valuable source of secondary data.

Secondary data has the advantage of saving time and reducing data gathering costs. The disadvantages are that the data may not fit the problem perfectly and that the accuracy may be more difficult to verify for secondary data than for primary data.

Some secondary data is republished by organizations other than the original source. Because errors can occur and important explanations may be missing in republished data, one should obtain secondary data directly from its source. One also should consider who the source is and whether the results may be biased.

There are several criteria that one should use to evaluate secondary data, these are; Whether the data is useful in the research study, How current the data is and whether it applies to time period of interest, Errors and accuracy - whether the data is dependable and can be verified, and many others.

Primary Data

Often, secondary data must be supplemented by primary data originated specifically for the study at hand. Some common types of primary data are; Demographic and socioeconomic characteristics, Psychological and lifestyle characteristics, Attitudes and opinions, Awareness and knowledge - for example, brand awareness, Intentions - for example, purchase intentions. While useful, intentions are not a reliable indication of actual future behavior, and Motivation - a person's motives are more stable than his/her behavior, so motive is a better predictor of future behavior than is past behavior, McCauley, Joseph I. (2004).

Primary data can be obtained by communication or by observation. Communication involves questioning respondents either verbally or in writing. This method is versatile, since one need only to ask for the information; however, the response may not be accurate. Communication usually is quicker and cheaper than observation. Observation involves the recording of actions and is performed by either a person or some mechanical or electronic device. Observation is less versatile than communication since some attributes of a person may not be readily observable, such as attitudes, awareness, knowledge, intentions, and motivation. Observation also might take longer since observers may have to wait for appropriate events to occur, though observation using scanner data might be quicker and more cost effective. Observation typically is more accurate than communication.

Personal interviews have an interviewer bias that mail-in questionnaires do not have. For example, in a personal interview the respondent's perception of the interviewer may affect the responses.

5. QUESTIONNAIRE DESIGN AND MEASUREMENT SCALES

The questionnaire is an important tool for gathering primary data. Poorly constructed questions can result in large errors and invalidate the research data, so significant effort should be put into the questionnaire design. The questionnaire should be tested thoroughly prior to conducting the survey.

Attributes can be measured on nominal, ordinal, interval, and ratio scales: Nominal numbers are simply identifiers, with the only permissible mathematical use being for counting. Example: social security numbers. Ordinal scales are used for ranking. The interval between the numbers conveys no meaning. Median and mode calculations can be performed on ordinal numbers. Example: class ranking. Interval scales maintain an equal interval between numbers. These scales can be used for ranking and for measuring the interval

between two numbers. Since the zero point is arbitrary, ratios cannot be taken between numbers on an interval scale; however, mean, median, and mode are all valid. Example: temperature scale. Ratio scales are referenced to absolute zero values, so ratios between numbers on the scale are meaningful. In addition to mean, median, and mode, geometric averages also are valid. Example: weight

6. VALIDITY AND RELIABILITY

The validity of a test is the extent to which differences in scores reflect differences in the measured characteristic. Predictive validity is a measure of the usefulness of a measuring instrument as a predictor. Proof of predictive validity is determined by the correlation between results and actual behavior. Construct validity is the extent to which a measuring instrument measures what it intends to measure, Nargundkar, (2008).

Reliability is the extent to which a measurement is repeatable with the same results. A measurement may be reliable and not valid. However, if a measurement is valid, then it also is reliable and if it is not reliable, then it cannot be valid. One way to show reliability is to show stability by repeating the test with the same results.

7. ATTITUDE MEASUREMENT

Many of the questions in a marketing research survey are designed to measure attitudes. Attitudes are a person's general evaluation of something. Customer attitude is an important factor for the following reasons; Attitude helps to explain how ready one is to do something, Attitudes do not change much over time, Attitudes produce consistency in behavior, Attitudes can be related to preferences, Mehdi Mohammadi et al (2010).

Attitudes can be measured using the following procedures; Self-reporting - subjects are asked directly about their attitudes, Self-reporting is the most common technique used to measure attitude.

Observation of behavior - assuming that one's behavior is a result of one's attitudes, attitudes can be inferred by observing behavior. For example, one's attitude about an issue can be inferred by whether he/she signs a petition related to it.

Performance of objective tasks - assumes that one's performance depends on attitude. For example, the subject can be asked to memorize the arguments of both sides of an issue. He/she is more likely to do a better job on the arguments that favor his/her stance.

Physiological reactions - subject's response to a stimuli is measured using electronic or mechanical means. While the intensity can be measured, it is difficult to know if the attitude is positive or negative.

Multiple measures - a mixture of techniques can be used to validate the findings, especially worthwhile when self-reporting is used.

There are several types of attitude rating scales. Equal-appearing interval scaling - a set of statements are assembled. These statements are selected according to their position on an interval scale of favorableness. Statements are chosen that has a small degree of dispersion. Respondents then are asked to indicate with which statements they agree. Likert method of summated ratings - a statement is made and the respondents indicate their degree of

agreement or disagreement on a five point scale (Strongly Disagree, Disagree, Neither Agree Nor Disagree, Agree, Strongly Agree). Semantic differential scale - a scale is constructed using phrases describing attributes of the product to anchor each end. For example, the left end may state, "Hours are inconvenient" and the right end may state, "Hours are convenient". The respondent then marks one of the seven blanks between the statements to indicate his/her opinion about the attribute. Stapel Scale - similar to the semantic differential scale except that 1) points on the scale are identified by numbers, 2) only one statement is used and if the respondent disagrees a negative number should be marked, and 3) there are 10 positions instead of seven. This scale does not require that bipolar adjectives be developed and it can be administered by telephone.

8. SAMPLING PLAN AND DATA COLLECTION

The sampling frame is the pool from which the interviewees are chosen. The telephone books often are used as a sampling frame, but have some shortcomings. Telephone books exclude those households that do not have telephones and those households with unlisted numbers. Since a certain percentage of the numbers listed in a phone book are out of service, there are many people who have just moved who are not sampled. Such sampling biases can be overcome by using random digit dialing. Mall intercepts represent another sampling frame, though there are many people who do not shop at malls and those who shop more often will be over-represented unless their answers are weighted in inverse proportion to their frequency of mall shopping, Ekrem Erdem, (2010).

In designing the research study, one should consider the potential errors. Two sources of errors are random sampling error and non-sampling error. Sampling errors are those due to the fact that there is a non-zero confidence interval of the results because of the sample size being less than the population being studied. Non-sampling errors are those caused by faulty coding, untruthful responses, respondent fatigue, etc.

There is a tradeoff between sample size and cost. The larger the sample size, the smaller the sampling error but the higher the cost. After a certain point the smaller sampling error cannot be justified by the additional cost.

While a larger sample size may reduce sampling error, it actually may increase the total error. There are two reasons for this effect. First, a larger sample size may reduce the ability to follow up on non-responses. Second, even if there are a sufficient number of interviewers for follow-ups, a larger number of interviewers may result in a less uniform interview process.

In addition to the intrinsic sampling error, the actual data collection process will introduce additional errors. These errors are called non-sampling errors. Some non-sampling errors may be intentional on the part of the interviewer, who may introduce a bias by leading the respondent to provide a certain response. The interviewer also may introduce unintentional errors, for example, due to not having a clear understanding of the interview process or due to fatigue.

Respondents also may introduce errors. A respondent may introduce intentional errors by lying or simply by not responding to a question. A respondent may introduce unintentional errors by not understanding the question, guessing, not paying close attention, and being

fatigued or distracted. Such non-sampling errors can be reduced through quality control techniques.

9. DATA ANALYSIS

Before analysis can be performed, raw data must be transformed into the right format. First, it must be edited so that errors can be corrected or omitted. The data must then be coded; this procedure converts the edited raw data into numbers or symbols. A codebook is created to document how the data was coded. Finally, the data is tabulated to count the number of samples falling into various categories. Simple tabulations count the occurrences of each variable independently of the other variables. Cross tabulations, also known as contingency tables or cross tabs, treats two or more variables simultaneously. However, since the variables are in a two-dimensional table, cross tabbing more than two variables is difficult to visualize since more than two dimensions would be required. Cross tabulation can be performed for nominal and ordinal variables.

Cross tabulation is the most commonly utilized data analysis method in marketing research. Many studies take the analysis no further than cross tabulation. This technique divides the sample into sub-groups to show how the dependent variable varies from one subgroup to another. A third variable can be introduced to uncover a relationship that initially was not evident.

Conjoint Analysis

The conjoint analysis is a powerful technique for determining consumer preferences for product attributes.

Hypothesis Testing

A basic fact about testing hypotheses is that a hypothesis may be rejected but that the hypothesis never can be unconditionally accepted until all possible evidence is evaluated. In the case of sampled data, the information set cannot be complete. So if a test using such data does not reject a hypothesis, the conclusion is not necessarily that the hypothesis should be accepted.

The null hypothesis in an experiment is the hypothesis that the independent variable has no effect on the dependent variable. The null hypothesis is expressed as H_0 . This hypothesis is assumed to be true unless proven otherwise. The alternative to the null hypothesis is the hypothesis that the independent variable does have an effect on the dependent variable. This hypothesis is known as the alternative, research, or experimental hypothesis and is expressed as H_1 . This alternative hypothesis states that the relationship observed between the variables cannot be explained by chance alone.

There are two types of errors in evaluating hypotheses: Type I error: occurs when one rejects the null hypothesis and accepts the alternative, when in fact the null hypothesis is true. Type II error: occurs when one accepts the null hypothesis when in fact the null hypothesis is false.

Tests of Statistical Significance

The chi-square (χ^2) goodness-of-fit test is used to determine whether a set of proportions have specified numerical values. It often is used to analyze bivariate cross-tabulated data. Some examples of situations that are well-suited for this test are; A manufacturer of packaged products test markets a new product and wants to know if sales of the new product will be in the same relative proportion of package sizes as sales of existing products, A company's sales revenue comes from Product A (50%), Product B (30%), and Product C (20%). The firm wants to know whether recent fluctuations in these proportions are random or whether they represent a real shift in sales.

The chi-square test is performed by defining k categories and observing the number of cases falling into each category. Knowing the expected number of cases falling in each category, one can define chi-squared as:

$$X_0^2 = \sum_{i=1}^k \frac{(O_i - E_i)^2}{E_i}$$

where; O_i : the number of observed cases in category i ,

E_i : the number of expected cases in category i ,

k : the number of categories,

Before calculating the chi-square value, one needs to determine the expected frequency for each cell. This is done by dividing the number of samples by the number of cells in the table.

To use the output of the chi-square function, one uses a chi-square table. To do so, one needs to know the number of degrees of freedom (df). For chi-square applied to cross-tabulated data, the number of degrees of freedom is equal to (Number of columns - 1) (Number of rows - 1).

This is equal to the number of categories minus one. The conventional critical level of 0.05 normally is used. If the calculated output value from the function is greater than the chi-square look-up table value, the null hypothesis is rejected.

ANOVA

Another test of significance is the Analysis of Variance (ANOVA) test. The primary purpose of ANOVA is to test for differences between multiple means. Whereas the t-test can be used to compare two means, ANOVA is needed to compare three or more means. If multiple t-tests were applied, the probability of a TYPE I error (rejecting a true null hypothesis) increases as the number of comparisons increases.

One-way ANOVA examines whether multiple means differ. The test is called an F-test. ANOVA calculates the ratio of the variation between groups to the variation within groups (the F ratio). While ANOVA was designed for comparing several means, it also can be used to compare two means. Two-way ANOVA allows for a second independent variable and addresses interaction. To run a one-way ANOVA, use the following steps, Identify the

independent and dependent variables. Describe the variation by breaking it into three parts - the total variation, the portion that is within groups, and the portion that is between groups (or among groups for more than two groups).

The total variation (SS_{total}) is the sum of the squares of the differences between each value and the grand mean of all the values in all the groups. The in-group variation (SS_{within}) is the sum of the squares of the differences in each element's value and the group mean. The variation between group means ($SS_{between}$) is the total variation minus the in-group variation ($SS_{total} - SS_{within}$). Measure the difference between each group's mean and the grand mean, Perform a significance test on the differences.

Results Interpretation

This F-test assumes that the group variances are approximately equal and that the observations are independent. It also assumes normally distributed data; however, since this is a test on means the Central Limit Theorem holds as long as the sample size is not too small.

ANOVA is efficient for analyzing data using relatively few observations and can be used with categorical variables. Note that regression can perform a similar analysis to that of ANOVA.

Cluster Analysis

Market segmentation usually is based not on one factor but on multiple factors. Initially, each variable represents its own cluster. The challenge is to find a way to combine variables so that relatively homogenous clusters can be formed. Such clusters should be internally homogenous and externally heterogeneous. Cluster analysis is one way to accomplish this goal. Rather than being a statistical test, it is more of a collection of algorithms for grouping objects, or in the case of marketing research, grouping people. Cluster analysis is useful in the exploratory phase of research when there are no a-priori hypotheses.

CONCLUSION

The format of the marketing research report varies with the needs of the organization. The report often contains the following sections; Authorization letter for the research, Table of Contents, List of illustrations, Executive summary, Research objectives, Methodology, Results, Limitations, Conclusions and recommendations, Appendices containing copies of the questionnaires, etc.. Marketing research by itself does not arrive at marketing decisions, nor does it guarantee that the organization will be successful in marketing its products. However, when conducted in a systematic, analytical, and objective manner, marketing research can reduce the uncertainty in the decision-making process and increase the probability and magnitude of success.

To make a conclusion we may say that the marketing research covers a wide range of activities. The goal of marketing research is to provide the facts and direction that managers need to make their more important marketing decisions. Many of the questions in a marketing research survey are designed to measure attitudes which are a person's general evaluation of

something. Marketing research by itself does not arrive at marketing decisions, nor does it guarantee that the organization will be successful in marketing its products.

As the statistics shows, consumers are buying less, looking for deals, or switching to different brands, product categories, or stores. So it is important to follow seven key steps to minimize the impact of reduced spending: to stay focused, to enlist trusted partners, to value experience and judgment, to seize opportunities overseas, to go online with a dash of skepticism, not to cut across the board, to keep an eye on the new consumer

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