INTRODUCTION TO ANALYTICAL METHODS FOR MARKETING RESEARCH & PLANNING

PREFACE

This document contains notes on the methods and procedures for marketing research and business planning. The development of these notes was an evolutionary process over several years. The original objective of these notes was to provide information to users of marketing research. As a consultant in marketing research and planning, I had been asked to provide write-ups of the methods employed for my more erudite clients. The objective was to provide an extensive archive for references. Later I found the notes useful to expand the scope of the graduate marketing research courses I taught at Drexel and Villanova Universities. However, the greatest use of these notes was the opportunity it gave me to clarify my thoughts and learnings on the subjects. The discipline of writing down ideas, force to clarify concepts and to distinction between what you think you know from what you are uncertain of.

Marketing research and business planning is my second vocation. My academic training and early industry experience had been in Chemical Engineering and applied sciences. Unlike those fields, there seems to be a lack of general references that summarized the wide range of methods and applications used in marketing research and business planning. There are, of course, introductory text in marketing research and planning as well as academic tracks in technical aspects of specific techniques. However, these do not help in understanding the choices of procedures or issues that need to be considered using the wide range of methods. There is no equivalent to the handbooks or standard references that engineers and scientists are use to. One of the purposes of this document is to start the creation of such a reference.

However, these notes are personal commentary on methods and approaches, which may change over time and represents a view based on personal experience. Other researchers may and probably due have different opinions on methods and approaches based on their own experiences. I welcome comments and opinions from other researchers and will be glad to include appropriate additions to these notes.

To some extent, this document represents both a very old and a very new form of publication. The document is a collection of monographs. The monographs, at one time, were the traditional method of science publication, which allowed careful presentation of a complete topic. Monographs unfortunately have been supplanted by flood of topical journal research publications. These research articles focus on specific topics and follow the research paradigms including detailed history and narrow focused problem solving. Rarely do we find the review articles that could help bring summarize the present state of the art.

However, this document also represents, what I believe to be, the new wave of "ever-green" publication. It is published electronically and, therefore, is revised often. This represents both the good and the bad of the new technologies. Since it does not require physical publication, revision are easy and with Adobe Acrobat, searching is simple without the requirement of indices. As new information is available, changes have been included in the document. However, at the same time the document has not been reviewed or fully edited. I do hope that people will send me comments and suggested changes, but basically it is up to the writer to do any editing.

The focus of the notes is on application. Little effort has been taken in researching the originators of ideas or citations at this time. As such, these notes should not be considered an academic research document. They represent my thoughts and understandings on the topics of marketing analysis and business planning. They represent only my specific opinions unless otherwise noted. However, I do not claim originality over the methods and approaches. They have been freely "borrowed" from the practitioners and theorists.

I wish to acknowledge people who have influenced my knowledge and have freely shared their ideas. In particular, I have to acknowledge the former staff of the Marketing Research Division of the E. I. Dupont de Nemours & Co., Inc. for a five-year tour de force in marketing research. I consider my sojourn in that organization as a post-doctoral fellowship in marketing research and planning. In particular, I must recognize: Irv Gross, Jack Frey, Jeff Piech, Bill Cook, Roger Colberg, Eric Bradlow (now at the University of Pennsylvania, Wharton), Jim Anderson (now at North Western), Jim Narius (now at Wake-Forest), Bob Grass, Ron Sullivan, David Bartges and Art Beard of the Marketing Research Division. In addition, I need to acknowledge my colleagues and clients including Michael Lanham, Steven Ball, John Reith, and Ralph Beaman of Dupont, and Greg Bonner (Villanova), Rolf Andersen (Drexel), Peter Haldy and Greg McIntosh (RHM & Associates).

Gene Lieb

PROLOGUE

These notes are not intended to be a complete source of information on research and planning methods. Far more detailed books exist covering the statistical and psychometric methods discussed here. These notes are only intended as a guide to the methods available and some thoughts as to their appropriate selection and use. It is my fundamental belief that there are no universal "best" methods for all situations. All methods have limitations. The trick is to pick and choose the most appropriate approach, which best balances the advantages and disadvantages for the particular situation.

While some basic background in statistics, marketing and business planning may be needed to understand these notes. However, it is hoped that an extensive knowledge is not necessary.

This document has been prepared as a set of nine separate though interconnected sections or chapters. Each chapter deals with a topic of information analysis and use. The focus is to review and describe the procedures available. They are designed to be relatively independent of each other.

1. Marketing Research and Planning - This chapter is devoted to describing the concepts and models used to marketing decision making and data analysis. It is intended provide a review of the fundamental concepts of marketing research and business planning. It is designed to provide a glossary of terms that are used to describe the applications and methods discussed in the subsequent chapters. Finally it provides some guidance into the modern process of marketing survey research.

2. Attribute and Statistical Evaluation - This chapter covers the traditional multivariate analysis of quantitative and analytical marketing research data. This is the traditional analysis for identifying segments, models, and marketing position. In this chapter, the various types of statistical tools are explored in respect to the applications.

3. Psychological & Communications Research - This chapter focuses on subjective tools for exploring the market. Here we focus on the various tools that are available to verify the marketing models as well as the issues within the market. In particular, advertising, communications, and semantic research methods are discussed.

4. Perceived Value Analysis - There has been significant effort to develop effective methods to measure the value of product features and to estimate optimum product design. This chapter reviews the various traditional methods such as full profile conjoint and the various alternatives. Statistical designs are provided for some of the techniques as well as examples and comparisons.

5. Pricing Research Methods - Setting prices is almost always a key marketing problem. Perceived value methods can give non-competitive and artificial view of the overall price sensitivity of products. Techniques are discussed in this chapter price sensitivity estimates and optimum pricing in complex and competitive environments.

<u>6. Forecasting Procedures</u> - This chapter deals with both analytical forecasting methods and predicting the general structure of markets. Both dynamic and equilibrium type forecasting procedures are discussed. The "naive" market model is described with data illustrating its uses. The model includes projections of new technology product sales, market share, price volume relationships, and value distributions.

<u>7. Value and Market Analysis</u> - This chapter focuses on value and technology assessment. Value is approach, in this chapter, from an engineering (value-in-use) perspective and from a market statistical approach. Technology is driven by both new capabilities and by the value derived from its applications. Value evaluation is, therefore, an integral part of technology assessment.

<u>8. Strategic Planning Methods</u> - This chapter focuses on the tools for the business strategic planning process. The various graphical and visualizing techniques are discussed as they apply to the overall planning process. The various auditing procedures are also discussed and outlined.

<u>9. On Business Modeling & Decision Support</u> - This chapter explores the nature of designing and building marketing decision support systems. Various types of business decisions support systems are discussed in more detail than in the other chapters. The second half of this chapter is devoted to constructing these systems *within Microsoft Excel*.

Along with these chapters are thirteen specific planning workbooks and guides. They are design to help lead the planning process.

1. MARKETING RESEARCH & PLANNING

This is an introduction to a set of notes on modern analytical methods in marketing research and business planning. As is fitting, this section of the notes was written after the completion of the operational draft of the other sections. The purpose of this opening chapter to the notes is to provide a summary of the underlying marketing and business concepts that are used in the rest of the notes. This summary is not intended as a complete discussion, but only a synopsis of the key principles and issues. For detailed discussion of these issues, the reader is referred to the classic texts in marketing and business strategy.

The notes, by their nature, emphasis the ability to reveal insights into the markets and businesses based on the analysis of data. This is, as it should be. However, little attention was given to some fundamental issues underlying this approach. There are three key questions:

1. What are the ultimate limits to these analytical approaches?

2. What are the underlying concepts behind the interpretation of the analytical results?

3. What are the basic structures by which data and information obtained?

It is these three questions that are discussed in this introduction.

1.1. THE LIMITS OF "RATIONALITY"

It might sound somewhat ironic to start an introduction to these notes with a discussion on the limits of analytical thought. But, it is important to view the tools within the context of their limitations. Or more specifically, we need to understand how analytical knowledge and measurement fit within the "irrational" factors in decision making.

Rationality is used almost interchangeably with measurement and analytical methods. According to many, if you can't measure it, it isn't important. This is the basis of the "scientific method" and of the popular "Total Quality" methodology. It has become the basis of the idealized modern methods of management. We measure everything, we model everything, then we can forecast everything, and eliminate risk. Unfortunately, for those of us that work with analytical tools, it is not so. Risk still remains. Real decisions inevitably require the assumption of risk.

1.1.1. INHERENT RISK AND UNCERTAINTY DECISIONS[1]

All real decisions are uncertain. The future can not really be predicted. Those who pursue analytical predictions use the term "forecast" as a means to attempt to escape the uncertainty of any view of the future. But the fact still remains that we never have

[1] Peter L Bernstein, "*Against the Gods, The Remarkable Story of Risk*", Wiley, New York, (1996)

sufficient information to predict the future, nor can we. This world is always too complex to allow a risk-free forecast. Our models are always incomplete, leading to additional uncertainty.

Even if we had perfect models to make such forecasts, they would be incomplete since the purpose of the forecast is to effect change. The very process of changing things makes the forecasts and model inaccurate[2].

1.1.2. THE VEIL OF RATIONALITY

Several years ago I had insightful experience with my stepdaughter. Having done something that she knew her parents would consider irrational, she stated simply that "*Rationality is Over-Rated*." After recovering from by jaw bouncing off the floor and my head hitting the ceiling, and after telling her mother that she is just "young and going through a phase." I began to realize that there is truth here. Analytical rationality may get in the way of both seeing opportunities and allowing us to pursue that which is difficult. It is far too easy to rationalize against any action or to see the world in a limited fashion.

1.1.2.1. Limits of What Can be Measured[3]

Analysis starts with measurement. Here we are using a very general concept of measurement. It is not necessary to quantify in order to measure. It is only necessary to observe and classify a concept or a thing. Without this "data" it is not feasible to model or to analyze. However, not everything can be measured. We have never had an adequate measure of such basic concepts as customer loyalty, satisfaction, or value. These concepts are general derived, but not measured. They may not be measurable.

1.1.2.2. Limits of Measuring

Measurement is always uncertain. We will discuss the sources of this uncertainty in more detail later. But at this point, it sufficient to note that all data is uncertain irrespective of how well defined the subject or the effort undertaken to make the measurement. The very process of measurement influences that which is being measured.

1.1.2.3. Externalities

Even if we can make a measurement, and that that measurement is fairly accurate, there are other factors not controlled, which generate further uncertainties. Market change, preference change and the economy change. All these things make measurement always uncertain.

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[2] This concept is similar to the ideas of "Chaotic" processes which while being deterministic, can not be forecasted.

[3] David Boyle, "*The Sum of Our Discontent, Why Numbers Make Us Irrational*", Texere Press, New York (2001)

1.1.2.4. Distortions in our Views

Our worldview is never clear. It is always distorted. Even as far back as the early seventeenth century, Francis Bacon[4], an early philosopher of science, recognized that our worldview is distorted by our own "idols" and divided the sources into four types:

1.1.2.4.1. "Idols of the Tribe" are those distortions common to all people. It is the propensity of people to force order on the universe, even when order does not exist.

1.1.2.4.2. "Idols of the Cave" refer to those distortions that apply to certain groups of people such as marketers rather than to other groups**.**

1.1.2.4.3. "Idols of the Marketplace" are distortions derived from the limitation of words and language to convey concepts**.**

1.1.2.4.4. "Idols of the Theater" are distortions propagated by the various philosophies, theologies and worldviews that people believe**.**

1.1.3. THE CAUSAL FOCUS

We use information to model our universe, the marketplace. By doing so, we relate things together based on our data. We create regression models purportedly to "predict" behavior. In reality the best we can do is <u>describe</u> behavior and relationships. The models show correlation but not necessarily causation irrespective of how we design the marketing research. While we can come close to inferring relationships, it is always a stretch. Causation should not be thought as derived directly from correlation, yet that is exactly was we are seduced into thinking by statistics.

1.1.3.1. Main Effects

Most of the statistical analyses are based on linear or trade-off models. These models assume that the major effects are simple dependencies on single factors. These are very simplistic and exclude interactions and complex relationships. The world is really far more complex than is captured in this philosophy. However, it is usually the best we can do.

1.1.3.2. Central Measures

Often we focus on the "average" or "typical" results. These are measures of central tendency. We need to keep the analysis simple enough to be comprehended. We live in a world of "information overload" and we need methods to simplify that statistical world.

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[4] A short discussion of these issues can be found at: http://waysofknowing.info/lecsite/baconlec.html. The original publication by Francis Bacon was Novum Organum (1620). The interested reader is referred to "Francis Bacon: The Major Works", Francis Bacon, Brian Victor, Oxford Press (2002)

However, that simplification makes us lose sight of the distributed, individual, nature of markets and the complexity of the world.

1.1.4. The Need for Discipline and Creativity

The great ancient strategist Sun Tzu[5] identified the need for both the orthodox and the unorthodox in preparing war strategies. Sun Tzu is referring to relying on conventional wisdom versus creative unexpected actions. As in war, as in business! We need to both priniciples.

1.1.4.1. Orthodoxy and Discipline

Orthodoxy constitutes the conventional practices and concepts that we shall discuss later. Orthodoxy is the basis of all analytical strategic thinking. Sun Tzu goes further by emphasizing the need for proper execution of conventional practices that is the heart of the need for orthodox methods. It is the discipline inherent to orthodox behavior and practices that is critical for success. Without that discipline whatever strategies are derived, will be poorly executed.

1.1.4.2. The Unorthodoxy and Creativity

Unorthodox options and strategies are derived from creative thought. This creativity produces new ways of competing and fosters the exploitation of new technologies and approaches. It is often the basis of building competitive advantage. Here the focus is on doing things differently than in the past.

1.1.4.3. The Balance

If we only followed orthodox approaches, those that we measure, then we will loss out on the opportunities of that which is new and creative. Creativity and change are the drivers of our economy. Without those elements, businesses will eventually die. However, relying solely on creative, unorthodox, methods will lead to chaos and also eventual business death. It is the combination of the orthodox and unorthodox that provides strength. Unfortunately the conventional marketing research and planning methods focus only on the conventional, and therefore, are limited.

1.1.5. The Power of Belief

Anyone who has been with quality salespeople introducing new products has been impressed by their enthusiasm. Enthusiasm and belief are critical for any success. They are the drivers that make the difficult happen and that which is thought to be impossible, a reality. Belief and enthusiasm are contagious. They are not simply an individual

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[5] There are several publications on the “Art of War” by Sun Tzu including: Translation by Thomas Cleary, Shambhala Dragon Edition, Boston (1988) and Translation by Ralph D. Sawyer, Barnes & Noble, New York (1994)

psyche. It permeates the marketplace. There is an old story that the founder of Federal Express first proposed the idea as a student and got a "B" on the concept for not being "feasible". That professorial evaluation was probably correct based on conventional wisdom. But, it did not take into consideration the "belief" in the idea that carried more weight than the analysis. History is full of the power of belief, or in some cases, the removal of options. Alexander[6] and Cortes[7] both made retreat infeasible and strengthened the conviction of their troops. These go beyond "reason" and analytical analysis. But they generate "irrational" success.

1.1.6. THE HISTORICAL AND RATIONAL IMPERATIVE

With all these problems, why do we rely on the analytical, "scientific," approaches? Because they are the best methods available to reduce risk and provide order. Historically, the development of rational methods coincided with the development of modern business practices. And this was no accident. While the methods are inaccurate and should never be considered all-powerful, they do provide insight. Furthermore, there is no "killer method" that will solve all business problems. But for sure, without using any of them, it far is too easy to get lost.

Our management culture has been built on "rational" scientific management. It is of more important today to communicate a reasonable argument for decisions as it is to make good decisions. A major role of analytics is to provide the logical basis to support decisions. Alternative, analytics are used to challenge decisions. It has become the language of management.

[6] Alexander the Great burnt his ships upon entering Persia.

[7] Cortes sent his ships back from Mexico preventing any retreat.

1.2. INFORMATION AND KNOWLEDGE

Decisions can be and often are made without information or knowledge. However, modern management is based on the concept that knowledge provides a means to make better decisions.

1.2.1. The Value of Knowledge

There is often a multitude of information. Information overload is a reality. However, all knowledge does not have equal value. Some types of knowledge are directly applicable to problems while others have little effect. The trick is to differentiate information. Unfortunately, that is only easy long after events.

1.2.1.1. The "Triage" of Knowledge

It is useful to think of a "triage" of knowledge and information. Split information into three piles. (1) Some knowledge has major potential impact on the decisions that are being made. The focus is on real problems and actions not on what could be done. Important information influences decisions on the deployment of resources. This is the bottom-line on the value of knowledge. Knowledge that effects change has high value. (2) Knowledge that describes the context of important information has value to a lesser extent. These include measures of uncertainty and insight in to the key processes. And to some extent, this also includes the sources of key knowledge since that effects its believability and impact on decisions. (3) Information that is "nice to know." Often marketing information is gathered on issues that are not used for any specific decision. For example, segmentation schemes are often derived from attitude data that is irrelevant to key decisions but does provide some human face on the market. This information is not totally useless but has at best marginal value.

1.2.1.2. Timing

"Timing is everything." The decision making process usually starts with some event or piece of information that demands attention. This is highly important and valuable information. Current information, knowledge and "wisdom" are typically then applied to provide one or more likely actions. Often at this point, information and knowledge is sought to clarify the issues, reinforce or refute the tentative decisions, and to define the specific actions needed to be taken. If that information is made available prior to the decisions, it is very useful and therefore, valuable. However, if it comes too late, it serves little purpose for these decisions. Once again, "Timing is everything".

1.2.1.3. The Presentation of Knowledge

How information and knowledge is presented to the users of that information and by whom greatly affects its value. There are two issues: (1) the transfer of knowledge and (2) its credibility. Knowledge is not readily transferred. People learn in different preferred modes. New learnings needs to "piggy-back" on previous knowledge. Consistent language and images need to be used for ideas to easily be incorporated into existing mental concepts. This is not an easy task and usually requires understanding of "where the decision makers are coming from".

For marketing research information to have impact, it must be creditable. Credibility of knowledge is closely associated with how it is presented, by whom and how it agrees with prior beliefs. The old market researcher dilemma holds:

"If I tell management that, which contradicts their beliefs, they tell me that the research is wrong and useless. If I tell them that, which supports their beliefs, they tell me they already knew that, and the research is useless."

The impact of marketing research information is improved by careful attention of it presentation. Without that care, its value could be marginal.

1.2.2. Process of Seeking Knowledge

Defining information and knowledge has always been the realm of the philosophers. From a practical perspective, we define the process by which knowledge is sought and used for decision. This process runs from the identification of a need for information and runs to using it to produce an action. Below is a path diagram showing a simple process of information.

Need/Opportunity ⇒ Access ⇒ Data ⇒ Information ⇒ Knowledge ⇒ Action

In this case, the raw information is referred to as "Data." To some extent this is a marketing research bias where most of the information is in the form of responses to questionnaires. However, the data can represent all sources of basic information. That data then needs to be put into a form that is understandable. In quantitative marketing research, that process of converting data to information consists of tabulations, models, and analyses. However, that information is still inadequate to drive actions. The information needs to be merged with the experience, previous models, and other information of the management team. This is the process of forming knowledge. Finally, that knowledge needs to be applied to the world in the form of actions. Without actions, there is no value to the information.

1.2.3. Sources of Information

There are traditionally five areas of concern for business strategic decisions[8]. These focus on the sources of uncertainty and strategic opportunity.

1.2.3.1. Internal Business Information - Each firm compiles a vast array of transaction and financial data from which the business and market activities of the firm can be measured. These are the critical metrics of what the firm is doing**.**

[8] This division of attention has been attributed to Michael E. Porter.

1.2.3.2. The Market Place – While internal metrics indicate what the firm is doing, they do not show how that relates to the industry as a whole. Market Data are obtained to measure who buys what from whom. However, that does not indicate why the products are purchased. That is the function of Marketing Research. The value of the offering and the purchase process are usually the concerns. Both syndicated and custom Marketing Research studies are undertaken to determine the "position" of the offerings in respect to competition. The techniques and methods used in analyzing marketing research data are discussed in detail in the other chapters of these notes.

1.2.3.3. Distribution Channels and Influencers – Generally, it is critical to understand not only the customer and users of products, but the means by which products get to the customers. This constitutes the distribution channel and the influencers of the purchase decisions. In most markets, the distribution channels may be fragmented and complex with multiple potential routes. Each of these routes may influence the product availability and purchase decisions.

1.2.3.4. Competitive Intelligence - There is almost always competition. Competitors come in all sizes and capabilities. It is often critical to assess the likely behavior of these competitors to market actions or to estimate their likely initiatives. Traditionally, competitive intelligence activities focus on three elements: (1) their capability to conceive and a manage actions, (2) their capacity to afford the actions, and (3) their intent to do them. Capability and capacity are assessed based on external knowledge of the firm and from internal insights. The biggest problem is, of course, assessing intent. Usually firms have far greater capability and capacity than they have intent to take actions. Actions require the expenditure of resources, which most firms are reluctant to do. Typically intent is assessed based on past behavior and some understanding of the firms' leadership.

1.2.3.5. External Effects

We live in a very complex world. Even understanding the internal activity of the firm, the market place and competitors do not fully describe the business situation. Other factors need to be understood including:

1.2.3.5.1. Economics – All businesses function within the general economy. However, specific conditions exist within the local and industrial economy that dictates the business opportunities and risks. Typically estimates of the future economic situation are available from both public and proprietary sources. The real trick is to understand the implications of economic trends on the specific business situation.

1.2.3.5.2. Technological – Technology continuously changes. Those changes are induced internally by the firm's research and technology development efforts, but are mainly due to external activities. Tracking these changes are referred to as "Technology Forecasting and Assessment." Typically this is done by the internal research organization. However, where the issues are related to market acceptance or opportunities, marketing research project are often undertaken**.**

1.2.3.5.3. Governmental – Government actions and policies inevitably effect business practices including marketing activities. Generally, sources for tracking of US governmental activity are widely available including business publications as well as proprietary sources. International activities may be a different matter. While governmental activities in Europe and major Asian and Latin American countries are available, in developing countries, that information is often not readily available. The US State Department does provide some further information. Firms operating in developing country do develop proprietary sources. However, getting quality information in these areas are almost always problematic. Unfortunately the question is generally not getting the information but interpreting it and forecasting its impact on the business**.**

1.2.3.5.4. Environmental – There is usually a host of other factors that may influence the business. As a group these are referred to an environmental affects. These include local resource availability as well as truly environmental issues. Typically local government is also covered under this umbrella category. There is a large cottage industry providing information on the various topics here**.**

1.2.4. QUANTITATIVE AND QUALITATIVE RESEARCH

The distinction between qualitative and quantitative research differs significantly between disciplines. In marketing research the distinction focuses on the ability of the research to estimate the characteristics of the population. Quantitative research is designed to give estimates of the population, market, or segment. These studies must be consistent and with a large enough sample for reasonable precise estimation. These studies focus on the "How Much" type issues.

While quantitative studies are important, they typically are highly constrained. Consistency restricts the ability to explore possibilities and seek insight into the "What" of issues. Studies that focus on the scope and general attitudes of the market are referred to as "Qualitative" marketing research. However, the tools that are used in these studies need not be restricted to "soft" methods.

1.2.5. Subjective and Analytical Information

Qualitative studies are often associated with subjective or "soft" methods of obtaining information. These methods involved open-ended questions, projective techniques, and psycholinguist approaches. The aim is to explore the range of possibilities and underlying (inner-mind) motivations. Analytical approaches, on the other hand, focuses on collecting consistent data that can be analyzed using statistical techniques. These methods typically have a constrained range of responses.

It should be noted that data from subjective methods can be analyzed using analytical tools. Semantic/Linguistic analysis of open-end questions can help identify underlying meanings to responses. And the results of analytical studies often need to be interpreted in the light of subjective understanding of market behavior. As such, the distinction between methods is more an issue of intent and importance of the analysis rather one of fundamental differences.

Subjective methods (such as open-ended questions) can be used in quantitative studies and analytical methods (such as conjoint analysis and choice modeling) are often used in qualitative studies. The methodologies are independent of the types of study being undertaken. The issue is to select the methods and study type that will best gather the needed information.

1.2.6. Uncertain Information

All knowledge is uncertain. Error or noise is introduced at every stage of the process of seeking information. Again, here we should look at the process of seeking and using knowledge:

Need/Opportunity ⇒ Access ⇒ Data ⇒ Information ⇒ Knowledge ⇒ Action

Each of these steps introduces problem and issues that limits the value of the information. Most traditional error analysis focuses only on precision. That is, it focuses on the statistical ability to estimate error around average values. Unfortunately, precision is rarely the major source of error. Total accuracy of results depends on a wide range of factors. The following are a list of the major sources of error in marketing data.

1.2.6.1. Wrong Conceptual Models (World View) - The total knowledge seeking process is build on a series of conceptual models. If these models are wrong, the process is likely to be seeking useless information or to transform it into meaningless results. Unfortunately, this problem is rarely explored. Both researchers and clients usually are committed to their world views and market concepts.

1.2.6.2. Variation from Conceptual Models (Structural Problem) - Most analyses usually assumes average values as measures of the market. However, these conceptual models usually reflect variation in both parameters, which can be measured, and in structure which usually is not.

1.2.6.3. **Asking the Wrong Questions (Instrument Error) –** The key imperatives in marketing research is to "ask the right questions of the right people." Often we only discover the right questions after a study has been completed. This is referred to as an instrument error.

1.2.6.4. **Inability to Ask the Right Questions –** There is a distinction between what we want to know and the ability to obtain that knowledge. This may be do to the inability to formulate a means of extracting that information or to an inconsistency between what information we want and what the respondent is able to give us. This can be fundamental. For example, most measures of the value of product features are based on the assumption that features are comparable (in a trade-off sense) in the mind of the respondent, which may not be the case. As such any measurement of that value would have an inherent error or at least be inconsistent..

1.2.6.5. **Asking the Wrong Person (Sampling Error) –** While efforts are usually made to identify the key decision-makers or gatekeepers of knowledge, it is an inexact art. Asking people if they are the right person, decision maker, inevitably leads to a positive response. Care is usually taken to prevent surrogates from responding to surveys, however, that is often insufficient to assure the correct respondent.

1.2.6.6. **Misinterpretation of the Question (Accuracy) –** Though the intent of a question may be correct, its wording may not be. Multiple questions may be merged; responses may overlap or not be all inclusive. Furthermore the words used may have different meanings to different respondents. This is particularly a problem with international studies with multiple languages and units.

1.2.6.7. **Unstable Results (Unreliability) –** Information is collected at one point in time. Conditions change, attitudes change, and the environment change. There is always some variation that can be expected over time. We normally assume those changes are small. But in some cases, they are not and results taken at one point may be a poor measure of later results.

1.2.6.8. **Instrument Bias (Wording) –** The way questions are worded can greatly effect the response. While this may be unintentional, it can result in strongly biased data. In some cases, however, bias may be introduced intentionally to test the strength of a response but the resulting data needs to be handled carefully.

1.2.6.9. **Interviewer Bias (Heisenberg Uncertainty) –** The very fact that a measurement is being made, will effect its results. A fundamental principle of physics insists that the process of measurement introduces uncertainty. While the uncertainty introduced by most physics experiments is explicit and usually small in the case of marketing research, it can be large and unknown. Every effort should be made to try to simulate the actual decision environment in order to reduce this bias. However, to some extent it always exists.

1.2.6.10. Non-predictability (Validity) – Even if the information is accurate and the underlying model describes the data, it may not predict future behavior. The resulting model is said not to be predicatively valid if it does not forecast future behavior. The ability to predict behavior is an underlying assumption that correlation of a model and data implies causation. However, this is not necessarily the case.

1.2.6.11. Small Sample Size (Precision) – The sample size clearly effects the expected error in any measurement of average behavior. This is the traditional meaning of statistical precision. It is the measure of error that is typically reported because it is the only one that is directly measurable from the data.

1.2.7. CERTAINTY AND COSTS

Reducing error, or increasing certainty, of results requires resources. It is a balancing act, between cost of information and the certainty of the results. The easiest of the sources to effect is, of course, sample size. The larger the sample is the more precise the results. This simply involves increasing the number of sources or respondents. However, this increases the costs proportionately in major studies. In order to test reliability and validity as well as experimental error, the information often needs to be obtained multiple times. This is also doable, at a considerable expense. Other sources of potential error can be addressed with careful testing of the instrument and monitoring. These tend to be less expensive solutions, but require careful execution.

1.2.8. NEED FOR ACCURACY

Not all decisions require highly accurate information. In fact, many decisions require only crude, or "order of magnitude" estimates to provide sufficient information for the decision. For example, for initial new product concept evaluation, it is usually only necessary to establish interest within a major portion of the market. Later in new product development far more accurate estimates may be necessary to justify commercialization, but not initially. Similarly, evaluation of advertising and promotional material can usually be done with small samples since only highly preferred items will be selected. This is critical to understand, therefore, the nature of the decisions in order to determine the accuracy and precision that is required.

1.2.9. SMALL SAMPLE SIZE STUDIES

Recently, there has been significant interest in small sample size quantitative studies. Sample sizes as low as 25 respondents are used to estimate market segment properties. These studies are small enough to allow subjective techniques such as personal interviews and open-ended questions to be used as well as sophisticated analytical techniques such as choice modeling and full profile conjoint. The small sample size allows greater attention to the "softer" belief issues as well as to the details of the execution. In addition, these studies tend to be significantly less expensive than the larger sample sizes. However, these advantages come at the expense of precision of the measurements. While the "jury is still out" on the value of this approach, early results are very encouraging for routine market analysis.

1.3. CONCEPTS, KNOWLEDGE, AND DECISIONS

The key to understanding the process of using information for decision making is in the idea of conceptual models. These models constitute the working "Paradigms"[9] embedded in organizational and professional cultures. The original concept of the paradigm was derived to describe the process of scientific investigation. However, the concept is far more general. I would dare to contend that all rational thought requires some type of ordering principles. The term "paradigm" was coined by Thomas Kuhn to refer to the holistic collection of conceptual models that not only define how we measure things, but what we measure; not only the way we answer key questions, but the questions that we ask. The very ways we look at the business problems are defined by our paradigm. The concept of the business paradigm is synonymous with accepted business conceptual models as taught in business schools and practiced in business operations. It is the accepted "scholarly" view of how business "should" function as well as how they do function.

1.3.1. THE DOMINANCE OF CONCEPTUAL MODELS

All disciplines are based on sets of conceptual models. It is the way that knowledge grows and the way that we impose order into an otherwise chaotic world. It should be noted that the conceptual models are so basic to our thinking that they go unnoticed and rarely if ever challenged. They are fundamental to our way of thinking.

In the following sections, we will summarize the principal conceptual models of business and marketing that are used in the analysis and planning chapters in these notes. At this point, let us look deeper into why these conceptual models and paradigms are so important.

1.3.1.1. What is the problem?

The conceptual model of business and marketing provides the language in that is used to describe the business problem. The very way that the problem is stated is defined in terms of our models, assumptions and worldview. Two different firms, in the same industry may view the same situation differently as they impose different conceptual models that incorporate their unique assumptions.

1.3.1.2. What decision to make?

The decisions that are made are define by the same set of conceptual models. We may, for example, describe the marketing action in terms of "repositioning" or realigning the

[9] The concept of a "paradigm" that is used here follows that discussed by Thomas S. Kuhn in his classic treatise on "The Structure of Scientific Revolutions", 2nd edition, University of Chicago Press, (1970). Kuhn asserts that the structure of scientific investigation is incorporated into a series of "paradigms" indicating how the world is seen by the discipline. Revolutions take place when the paradigm is successfully challenged.

products against competitions. These are all based on marketing conceptual models and are described in the language of marketing.

1.3.1.3. What should be measured?

The conceptual models also define what information is relevant to those problems and decisions. Furthermore, to a great extent the paradigm defines who has the information, how to obtain it, and what it means.

1.3.2. The Transformation of Data

Previously, we had discussed the process by which data is transformed into knowledge and finally employed for decision making. That method of transformation is also incorporated into the conceptual models and paradigms. When we focus on computing average values, or on distributions, or when we construct maps and graphs we are following the conceptual models and customs of marketing. Our understanding of what is thought to be important and correct, likewise, is defined by the paradigm. How we analyze data is, therefore, directed by the accepted paradigm of marketing and business analysis.

1.4. A BUSINESS ORIENTATION

Inherent in marketing research approaches is the concept of the "business." This concept does not simply refer to the profit making enterprise but covers a range of activities that focuses on sustainable operations. It is a useful concept in that it focuses on what the organization does. Typically the business unit is selected to represent the organization for which the decision process is intended to help. This is made simpler, in the case of marketing research, since the business unit typically is the paying client and therefore the concept is natural. However, for larger organizations, the organization of business units may be more fluid and overlapping. However, the purpose of the definition of the business is to explicitly set the decision-making agenda.

In strategic planning, there are five elements that are used to define the business: (1) the business model or definition, (2) the business mission and vision, (3) the business structure, (4) the Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis and (5) the allocation of resources

1.4.1. THE "BUSINESS MODEL"

The business model defines the scope of operations and how it will function. It is the defining statement of the business. It should be noted that, in a venture there are probably multiple businesses. Different products, customers and structures can define these individual businesses with the overall venture. In addition, it is not unusual to also have a business model description of the total venture.

Understanding the business model is critical in identifying any business problem and defining the research and planning efforts that are required. Without understanding the scope of the business it is not feasible to focus on what can or can not be done.

The business model centers around four basic concepts: Products, Customers, Means, and Making money. It is the last of these that have become the focus of issue. During the 1990 dot.com businesses focused only on operations without concern for making money. As such, when the dot.com bubble burst, the blame came down on the inappropriateness of their "Business Models." However, problems may arise for any of the four elements.

1.4.1.1. <u>Products</u> that are sold - Products specifications in the business model must be broad enough to cover the full range of products and services that the business is prepared and authorized to offer. It is not unusual for the product scope to exceed the present offerings. Usually the physical products and services are described in the business model but not necessarily the totality of the offerings.

1.4.1.2. <u>Customers</u> that buy the products – Usually the identified customer is the controlling factor in the market for the business' products. The identity of the customers will, therefore, depend on the nature of the business. Typically, the user of the product is the targeted customer. Under these conditions, resellers and distributors are identified, but the emphasis is on the individuals who actually buy the product for use.

1.4.1.3. <u>Means</u> to obtain the products – The products have to be obtained, somehow. This is structural issue, but critical to the description of the business. How a business will function will depend strongly on how it obtains its products.

1.4.1.4. Means of <u>Making Money</u> – This is the bottom line. In most simple enterprises, the business makes money by selling products. However, that is not the only feasible way to make money. It is critical to understand the mode by which costs are covered and earnings made**.**

1.4.2. Mission and Vision

The mission and vision statements provide the direction for the business and scope for any planning process. While these statements are often not critical for operational planning, they are critical in the long run. The mission and visions statements are tied to the business model and definition. They represent the management's view of where the business is intended to do and what it is expected to become.

1.4.2.1. Mission and Objectives - The mission statement focuses on the present operations. It is basically a clarification of the objectives of the business. Unfortunately, mission statements have tended to be merely financial expectations rather than overall descriptions of how the business is to function. The more detail that is given in the mission statement the greater is the guidance that management provides to operations.

1.4.2.2. Vision and Goals - While the mission focuses on the present operation, the vision describes where management "hopes" the business is going. Once again and unfortunately, the goals are usually only given as financial and growth targets rather than guidance and direction.

1.4.3. The Business Structure

The statement of "Who's on first?" is the beginning a number of comic routines, but is also a descriptor of the nature of business structure. Unless one understands how the business is structured and who is responsible for what, it becomes difficult if not impossible to make decisions and get action.

1.4.3.1. Organization – The operation requires some type of organization. How are decisions made? Who acquires products and when are they acquired? How is the business setup? These are the questions that must be answered to structure how the business functions. The description of the organization may be informal as in describing small entrepreneurial businesses or highly formal in large corporations.

1.4.3.2. The Supply and Value Chain – Typically businesses operate within a network of vendors and suppliers providing goods and services, and a distribution channel reselling their products. These together form a supply or value chain linking the sources of raw materials to the ultimate customers. However, there is a multitude of options on how to form these chains. Often there may be multiple distribution channels and multiple sources of supply. The choice of these channels is strategically critical.

1.4.4. THE SWOT ANALYSIS

The **S**trengths, **W**eaknesses, **O**pportunities, and **T**hreat (SWOT) analyses captures the competitive state of the business. It is its competitive situation. Typically the SWOT analysis includes competitive intelligence, technological assessment, and regulatory and environmental evaluations. The goal of this analysis is to provide insight into the strategic conditions of the business. The SWOT analyses, of course, are an on-going process. The business situation is always in flux and as such opportunities and threats continuously arise. Over time, weaknesses may be strengthened and relative strengths may rise or weaken.

1.4.5. THE ALLOCATION OF RESOURCES

Actions are the end point of all strategy. If you don't do anything, then at best nothing is going to change. Actions require resources! As such, the key component of any effective plan is the allocation of resources. That is where resources are going to be obtained, how they are going to be employed, and what are they expected to do, are the critical strategic issues. Resources consist of manpower, fixed assets and funds. Of these funds are usually considered to be the wellspring of all other resources. The issue is how to balance needs and "requirements" with the resources available. A picture or projection of the allocation of resources and their results are usually presented as a table in the form of a financial "proforma." This is a statement of where resources will be applied and what the results in terms of earnings and cash flow will be.

1.5. DECISIONS AND ACTIONS

The marketing "paradigm" provides the structure and language needed to describe the commercial situation. It also describes the nature of the decisions and actions that need to be considered. The decision concepts form two groups, the four P's of tactical actions, and the business imperatives which are the things that we strive for.

1.5.1. THE FOUR P'S

From a marketing perspective, there are four types of tactical or operational actions that should always be considered. They are summarized in the now classic 4P's[10]. They represent the action or decision elements that need to be included in the marketing plan. But more important, they represent the levers and tools that are available to marketers. They always need attention.

1.5.1.1. Product (Offering) - The products and services are the central elements of exchange. The design of the products and quality of the product is the major determinate of its value to the customer. The product in this regard includes the concept of "Brand" value as well as the specific features of the product. Much of the marketing research effort focuses on the perception and preference of the attributes that define the competitive offerings.

1.5.1.2. Price (Customer Cost) – Price is always more complex than it first appears. Usually, manufacturers (OEM"S) do not have the control over the eventual price that the ultimate customers see than they think they have. Furthermore, customer costs often include things not included in the simple price. However, it is price, at least, the price to the next level in the distribution channel that needs to be set. It is always an issue.

1.5.1.3. Place (Distribution Channel) – In the structure of the four P's, "Place" refers to the distribution channel. This is somewhat awkward in that the modern distribution channel may be virtual and not have physical place at all. However, it is the traditional description. "Place" indicates how the offering gets to the final or ultimate customer. Typically, this is an option of the manufacturer. Several channels may be functional at the same time with different sets of influencers.

1.5.1.4. Promotion – Promotion, of course, includes advertising but goes far beyond that to include the sales-force and all other forms of action to encourage and promote sales. This is often a creative and very uncertain set of activities. Much of what is typically considered sales and marketing activities are held within this category. It should be noted that in some

[10] Some authors have introduced a fifth P for position. However, the position of a product is modified by changes in promotion, price and the offering itself. Positioning, therefore, doesn't really represent any specific action as the other items do.

industries such as pharmaceuticals over 50% of the total cost of sales come from the marketing effort and covered by "Promotion".

1.5.2. Imperatives

But what defines "good" decisions? Ultimately it must rest on meeting some underlying benefits. This is something a kin to a business "Hierarchy of Needs"[11]. Success along these measures not only affects the business, but career prospects of the decision-makers and the prognosis for the health of the business. Included in ascending order are these imperatives:

1.5.2.1. Survival - Critical for all organizations is fundamental survival. The importance of this imperative depends on the perceived threat to the organization.

1.5.2.2. Performance - Increases in earnings, sales and revenue are the typical measures of performance. They are the yardsticks for measuring business success as well as all actions. However, in some areas, such as promotion, surrogate measures are used.

1.5.2.3. Growth – "If a business does not grow, it will eventually die." This is the fundamental growth imperative. It is critical for public corporations where the stock price depends not only on the present performance, but on the expected growth. Here we are interested not only in the growth of the existing businesses (organic growth), but in new businesses and new products as well.

1.5.2.4. Cost Control – Earnings are determined by both revenue and costs. However, costs most often are related to the size or volume of business. Increasing volume and simplifying the business operations result in reduced costs and contributes to earnings and the strength of the business. It has now become almost a universal imperative to reduce costs (almost "at any cost").

1.5.2.5. Leadership – There is a belief that a leadership position (price, technology, market share) leads to higher profitability. While this is not necessary always the cases, there is sufficient experience to justify its support. As such, building and maintaining market leadership is often an imperative.

1.5.2.6. Maintaining the Business Structure – Change is usually viewed as a threat to the business. As such, it is often viewed as an imperative to stabilize the market or at least do not disturb the status quo.

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[11] This is a concept derived from Maslow's Hierarchy of Needs. See: Abraham Harold Maslow, " *Toward a Psychology of Being*" 3rd Edition, John Wiley (1999)

1.5.2.7. Good for Our Stakeholders – The identification of the stakeholders in a business differ depending on the nature and to some extent the attitude of the business management. But basically, they include the owners, management the employees, direct customers, and suppliers. Things that improve the stakeholder "value" provide value to the business and therefore are measures of success. However, these values, discussed here are beyond earnings and growth and usually reflect to stability of the business and stock price.

1.5.2.8. Do No Harm – This imperative requires the firm to be within the law and within the society's moral code. What is legal and what is ethical is unfortunately open for interpretation. However, it is recognized that skirting the law and morality can be deleterious to the firm.

1.5.2.9. Good for Society – It is, of course, better to do good than evil for the world. But for a business, good implies long term value and the potential success. As such, doing social "good" should be viewed as a success factor.

The first imperative is clearly an overwhelming need to survive. The next three are basic organizational objectives. They govern fundamental needs for organizations to make acceptable returns. Here we go beyond just survival to reflect on a "good return." The next two imperatives reflect the building and maintaining a strong business. And finally the last two are ethical imperatives.

1.6. MARKETING CONCEPTS[12]

Marketing information or rather the lack of it has been identified by Robert Cooper [13] as the source of most product failures. While this may be a great simplification, and other things do affect new business success, understanding the market and the marketing process is critical for any business. Most of the analytical tools developed in the chapters in these notes focus on marketing issues and concepts. In this and the subsequent sections we will discuss these underlying concepts.

1.6.1. MARKETING AND CUSTOMER ORIENTATION

While both marketing and customer orientations focus on the customer, they have very different perspectives. The customer orientation takes a "sales" perspective. Each customer and sales situation is viewed as unique. The goal is to make the "deal." Pricing and product development are means of making the deal. Each deal is viewed separately and not integrated into the whole policy. The customer orientation is an operational concept.

The marketing orientation, on the other hand, is strategic. It views the ensemble of potential buyers as a group that can be characterized. The "four P's" are the strategic means by which a strategy is undertaken whose goals are to improve the business. Since the market is viewed as a collection of potential buyers, it is a probabilistic or stochastic view. We seek what is the best overall strategy that will probably produce the desired effects.

Notice that these two concepts, the marketing and the customer orientation, are not necessarily mutually exclusive. However, typically one or the other dominates the processes of marketing and selling products. Typically, for industrial supply businesses, with very few and very important buyers and with customized products and services, customer orientation dominates. With consumer products or industrial products that rely on ultimate sales to consumers, a strictly marketing orientation is called for. In still other cases, a mix should exist.

1.6.2. THE FOUR C'S[14] OF THE MARKETPLACE

The transaction is the fundamental component in commerce. The 4 C's of the marketplace describe the stakeholders in those transactions. They are the individuals that need to be considered in the analysis of any transaction.

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[12] A excellent general reference for marketing concepts is: Philip Kotler, "*Marketing Management*", 10th Edition, Prentice Hall, New Jersey (2000)

[13] Robert G. Cooper, "Winning at New Products", Holt, Rinehart and Winston of Canada, New York (1986)

[14] Occasionally, a fifth C has been added for Costs. However, it tends to deflect from the focus of the C's on the individuals involved in the marketplace.

1.6.2.1. Company – The identification of the company is the basis for all market analysis. Here it is synonymous with the firm responsible for the offering. This may be fairly complicated when several firms are involved in delivering the offering. Marketing, by its nature, is oriented to the movement of products from the firm to its customers and the reverse movement of information back to the firm.

1.6.2.2. Customers – The identity of the customer is even more complex. While there is only one company of interest, they may be several levels of customers that need to be considered. The term customer, in marketing, typically refers to the most powerful factor in the purchase process. For packaged goods, that is usually considered to be the ultimate customers. However, for industrial products, it may be any number of users or resellers of the product.

1.6.2.3. Competitors – In traditional market analysis, only in-kind and direct competitors are usually considered. However, markets and possible substitutes can make up a complex set of alternatives. The range of effective competitors can include in-house sources as well as in-kind and in-function competitors. The world has become a far more competitive environment and that competition must be considered.

1.6.2.4. Collaborators - Fortunately, we are not alone. There are people that help and influence in the purchase process. These are usually the resellers, consultants, collaborating firms, and other participants in the purchase process. All can be critical and none should be unexamined.

1.6.3. A Marketing Perspective

Marketing is a collective perspective of the customers. As such, tools and approaches have been developed to allow for an overview of the collection of customers, competitive views of the products, and market performance. These are simplifications of the details of the market. They are useful approximations, but never the total picture. However, these concepts define the nature of marketing strategy. They are the terms used to describe strategic options.

1.6.3.1. Market Segments

Customers are a diverse group of people buying products under different contexts. Each is different and has characteristics that are widely distributed. However, it is useful to think of groups of customers as having common characteristics and would act similarly in the marketplace. These groups are referred to as market segments. They provide more detail into differences in characteristics than considering the market based solely on average values. But these segments are inventions of the marketing strategic process. They are not natural to the market. There may be a number of ways of defining these segments based on demographics, valued benefits, or attitudes and opinions. Whatever method is used, effective segments have three characteristics:

- Homogeneous (on some characteristics)
- Strategically Useful (able to make effects)
- Identifiable

1.6.3.2. The Offering

From a marketing perspective, the concept of a product extends well beyond the physical product to include all of the qualitative and service aspects of the "offering." These aspects cover both the intrinsic nature of the product, and the benefits that is derived from it.

1.6.3.3. Brand

The idea of a "Brand" is synonymous with the concept of "Customer Franchise." It represents the identification of a specific product or offering with its source. Though trademarks, brand names, and taglines reinforce the brand concept, the fundamental concept is more basic. The produce sold in a specific grocery store will carry with it the characteristics of freshness and quality unique from its source. Those qualities generate a customer franchise and therefore, a "branding" of the products even though they may not carry any label. Branding is the fundamental association of a product with its unique source. The brand is an essential element in the definition of the "offering.

1.6.3.4. Product Position

There is an old adage that the "battlefield of marketing is in the customers' mind." The image of the product in the customer's mind is referred to as the product or competitive position. It represents the cognitive and the subconscious values associated with the products or more precisely a brand. This image may be quantified as in a perceptual map showing the relative performance on the important characteristics or qualitative in terms of descriptions of why one buys one product over another.

Typically, we think of separate market positions for each key market "segment." In this respect, the concept of segments and position are interrelated. They define the coordinates of forming marketing strategy.

1.6.3.5. Market Share

The concept of market share has been so widely used one might think that it is well defined. In actuality it is not. Share refers to the percentage of a market that customers give to a product. The issue, of course, is how to define the market. A story described by Jack Welch[15] illustrates this point. When he first became CEO of General Electric, he required his businesses to sustain high market shares and high growth rates. His business units complied by defining their markets within a range of their strength. However, later

[15] Jack Welch and John A. Byrne, "Straight from the Gut", Warner Business Books, New York (2001)

in his tenure he began to realize that this was inconsistent. It is difficult, if not impossible to maintain high growth with businesses restricted to narrow market definitions. He then required the businesses to redefine their shares to reflect a broader market definition with growth potential. Market share requires the identification of the "market." It is that identification that is critical in defining the business and its objectives.

1.6.4. Outcomes Perspective[16]

An outcomes perspective focuses on the use and uses of products as the basis of value. Product and services are obtained to do something. While this focus may seem to be straight-forward and obvious, it carries with it a very different perspective than typically used for new product development. Typically products and particularly industrial products are viewed as performing a single well defined function. In reality, products and services perform any number of functions. Some of these are well defined and cognitive while others are not so well defined and not so well recognized.

From this perspective it is the performance of outcomes that define and differentiate products and services. The attributes read on the outcomes in that they produce benefits only in respect to the desired outcomes. Latent or hidden benefits are viewed then as unmet "needs" or once again outcomes. Note the concept of outcomes takes on different meanings depending on the nature of the product and services.

1.6.4.1. Outcomes and Tasks

For multiple applications products, outcomes are defined by the uses and demands of the offering[17]. In order to obtain the desired outcomes, various tasks have to be performed. In this regard the quality of product performance is based on the difficulty or the lack there-of to perform the underlying tasks. It is therefore necessary in order to capture the product performance to understand both the outcomes and the necessary tasks. The measures of these outcomes would be a measure of importance, the difficulty to accomplish them as well as the quality of the outcome. Here importance really carries two components: (1) a general need for the outcomes and (2) the frequency of occurrence.

1.6.4.2. Results

In other cases products would be used in complex environments producing a number of outcomes depending on conditions. Products like pesticides, for example, act differently on the various types of pests present. Here the outcomes would depend on those pests that are present as well as other conditions.

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[16] Anthony W. Ulwick has pioneered the use of general Outcomes research in marketing. Several references are available on his company site: http://www.strategyn.com

[17] Industrial vehicles, such as earth moving equipment, for example, fall into this category.

1.6.4.3. Indications and Side-effects

The outcomes of the use of therapeutic and medical products[18] tend to depend on the indications that call for their use and the side-effects that they may produce. Note that this condition extends beyond therapeutics to other products where there is a range of needs and potential side-effects that will take place.

1.6.4.4. Down the Supply Chain

For industrial products, it is critical to understand, that its value must be viewed as multiple functions at various points along its supply chain. Industrial products are used to make other products that are then eventually sold as a final product. As such, it conveys different uses or outcomes along the supply chain. This is particularly critical if the product maintains its identity down the chain. For example, the needs and outcomes for a microprocessor are different to the manufacture of a computer than it would be to the users. In this context the outcomes reflect the use by each member of the supply chain.

1.6.5. The Value Perspective[19]

The market economy is based on quality transactions, where each participant is better off after the transaction than before. This is a fundamental concept of modern capitalism. Both parties are better off. From a value perspective that means that each has obtained greater "value" or "utility" than they lost in the transaction. The key issue then is to define the "value."[20]

1.6.5.1. Sources of Value

As the "marketing battlefield is in the customers' mind", so the concept of value must also be in the customers' mind as well. It is a subject and emotional issue. What makes a person feel better is as important as what makes him wealthier. And while defining value is ambiguous, it is clearly a force that drives the commercial process. It is the ultimate in "latent" variables. For the most part, value must be viewed in terms of what forms it.

1.6.5.1.1. Benefits Drives Value

Value is ultimately derived from the perception of the offering from the customers' perspective. From a sellers' perspective, the offering is often viewed as a bundled of

[18] Outcomes research as applied to medical procedures focuses on the quality-of-life issues. While this is not inconsistent with the definition used here, the focus is somewhat different. Quality-of-life and survival rates are used for social value analysis rather than for product value. However, this difference may change with the power of collective influencers of purchases.

[19] The fundamental concept of value driving the buying process was presented to me by Irv Gross formally of E. I. Dupont de Nemours, & Co., Inc. and of Pennsylvania State University.

[20] Without such a description of value, the statement becomes just an operational "truism."

attributes. The product position is then computed based on these attributes. However, the customer does not, typically, see it that way. Customers see product features and the benefits that he derives from using the product. His value is the combination of those benefits and the importance or impact of those benefits on him.

Attribute ⇒ Feature (levels) ⇒ Benefits ⇒ Values

Since value is in the mind of the customer, it is not unique. Each individual has different appreciation for products and service. Value, therefore, is a distributed property, which defines the demand for offerings.

1.6.5.1.2. Reduction of Fear as a Value

An alternative source of value is the reduction of risk or fear. This is a powerful tool in the cosmetic industry and some other consumer products where the major benefits are derived from reduction in fear of rejection. Similarly, fear itself has become a major attribute in political branding and marketing. This is often now referred to as negative campaigning. Value here is associated with not buying the alternative product. A key attributes of branding focus on the reduction of risk. You pay a premium for a product based on assumed risk reducing properties inherent in its brand. As such brand equity can be considered a premium paid for risk reduction.

1.6.5.1.3. Cognitive Value – Much of the value of products comes from its explicit and inherent features. For example, the speed of the processor and the size of memory are explicit features of personal computers. Value derived from these features is referred to as being cognitive in that the basis of the value is clear identifiable by the customer and is directly associated with the offering. Most of the value associated with industrial products (products sold to firms for conversion to other products) falls into this category. The product value to distribution and retail business also falls into this category, since that value is associated explicitly with the expected profit from the subsequent resale of the products.

1.6.5.1.4. Implied Value – In addition to value associated explicitly with the product features, are implied or implicit value associated with the brand. These include implied warranties and expectations associated with the source. The value, however, is also directly associated with the product.

1.6.5.1.5. "Inner-Mind" Value – Feelings have value! Products, particularly those targeted to the consumer are designed to satisfy underlying social needs. No one in our modern mercantile society should doubt the power of the personal need for social acceptance. “Sex” sells as does satisfying a broad range of perceived social needs. These are true values. While we normally think of these values for consumer and packaged goods, they also apply to commercial products. The need to reduce risk is a fundamental value and exceeds merely the reduction of financial risk. While the old adage that "No one ever lost they jobs by buying from IBM", may no longer be true, but it still carries the underlying concept for the need to reduce risk even with industrial products.

1.6.5.2. Creating, Delivering and Exploiting Value

The principle goal of marketing is the creation of value. The process of marketing must be to at least, present the offerings in the most favorable fashion. This is a value creation process, for value is a perceived property of the offering. The four P's discussed previously are mainly focused on the creation and delivery of value. Products are created to give value. Promotion should be designed to enhance value. Place or distribution must deliver value. And pricing both delivers value and exploits value for the firm.

1.6.6. Competitive Advantage

Competitive advantage, from a marketing perspective, reflects the comparative distributions of value between competing products. The very fact that multiple products successfully compete in the same market reflects that each as an advantage, at least, to some customers. Here again value is a personal property. As such, what is an advantage to some customers might be viewed as a disadvantage to others. It should be noted that competitive advantage is in the mind of the customer. It may not be based on actual performance. Just as a reminder: "The marketing battlefield is in the mind of the customer" and from a marketing perspective "Perception is reality."

1.6.6.1. Product/Technological Advantage - Some products are viewed as being better than the competition by some customers. This includes not only performance, but also consistency. As such, products that in all other aspects are "commodities" will be viewed differently. These technological advantages may not necessarily be real, but only perceived. For example, generic pharmaceuticals are generally viewed as inferior to branded products, though chemically they are nearly the same.

1.6.6.2. Reliability and Service – Some suppliers and manufacturers may be viewed as more reliable or offer better services than others. Much of this perception is due to past experience. This tends to be a major driver of customer loyalty.

1.6.6.3. Cost/Price Advantage – Lower prices may be a great source of competitive advantage, at least to the market segments that are highly price sensitive. However, typically the ability to be lower priced is viewed itself as the basis of advantage. That is being the "Low Cost Producer" is a basis of competitive advantage.

1.6.6.4. Brand Image –Firms invest heavily in the development of brands because they provide value both implicitly and explicitly. They provide recognition by the customer and they assure the customer of the product quality, consistency and of identity of the supplier.

1.6.6.5. Leadership – Leadership, either by share or just by image has value and provides competitive advantage. In some areas, such as Europe, being the dominant supplier provides both the assumption of quality and market access.

1.6.6.6. Relationships – Access to the market is often determined by the relationships among firms, which provides competitive advantage. The concept of strategic alliances has grown out of this advantage.

1.7. THE PURCHASE PROCESS

The transaction, the exchange of goods and services for money, is the basis of all business. As such, understanding the purchase process is central to all business analysis. In one sense, the goal of marketing is generally to intervene in the purchase process to favor the firm's offerings. As with other market characteristics, the purchase process varies from one customer to the next. However, it is useful to accept a concept of the "general purchase process." Of course, such a general concept will be modified to reflect the specific characteristics of the products and the distribution and communications channels.

1.7.1. Context and Occasion

Purchases are done within a unique context and within a specific period of time. The same customers acting under different conditions are likely to behave differently. A person wishing to buy a car for himself will approach the purchasing process differently than if the same person was buying the car for his child. The context then would be very different. Different things are valued and different concerns will be present making the whole process different. Even in the purchase of industrial raw materials, context is critical. Contracting for a long-term supply of such materials is very different than trying to cover an immediate need for supplies. Each is very different, yet involve the same players and the same products. To understand the purchase process, the context must be defined first.

1.7.2. Trial and Repurchase

In the next section we will discuss the Total Quality Management and its focus on the existing customers. That focus on existing customers reflects the importance of repurchase of products. The product acquisition process can be thought, typically, as consisting of two purchases, the trial purchase and the repurchase. For services for example, a vendor may be hired to first perform a relatively low cost project, then evaluated and offered a larger project.

For new package goods, free trial samples or coupons are often used. For industrial products, a process of "qualification" is often used to test products. This may include trial sales of product from actual production. Automotive firms will promote to young potential customers for the purchase of their first cars, with the expectation of future more expensive repurchases. The fostering of the trial process is strategic in that it represents a cost to be recouped from sequence of repurchases.

1.7.3. Two Step Purchase Processes

All purchases start with the recognition of the need for the purchase. However, once the need has been identified there is usually a very large number of alternative approaches and products. Typically we consider the process of choosing a product as having at least two steps. This is due to the need of reducing the number of options and the requirements of organization for cost control.

- All organizations, including families have some **division of responsibility**. In corporations, this division focuses on **cost control** and qualification. For industrial products, typically the engineering staff will qualify the products and the buyers will select the vendors. On an individual basis for capital goods, customers often separate process of specification from product selection.

- The final decision on the product is usually taken from a limited number of options. This is referred to as the **Consideration Set.** The first stage of the purchase is to select this consideration set. For industrial technical products, the firm's engineering staff will provide this set. In other cases, selection may be provided by the reseller, based on their offerings. In packaged goods, for example, the supermarket typically selects the consideration set for food products. With the spread of the Internet, of course the power of the distributor and retailer to select the consideration set is becoming more limited.

- All purchase decisions, however, are **value driven.** With multiple stages and participants, there are multiple sets of values that need to be considered. The value set necessary for determining the consideration set, for example, may be very different than that for the final purchase decision. As such, the value model describing what drives the purchase decision will likewise be complicated.

- Beyond just the decision-makers are a broad number of **influencers** in the decisions. The influencers may be direct or indirect. Recommendations from consultants, colleagues, friends, family, and even celebrities can affect the purchase. In addition, the sales forces, both from the manufacturer and the reseller can have a huge effect.

1.7.4. Purchase Intervention

As previously noted, the purpose of marketing is purchase intervention. The goal is to increase the perceived value of the offering such that the product will command a higher price or obtain a higher than expected share. This intervention is done through marketing actions, the four P's.

- One of the approaches is to change **perceptions** of the product and their competition. This is done through the promotional effort. With consumer products this is often done through brand awareness.

- It is always useful to encourage the buyers to value or **prefer** specific and hopefully unique features of the offering. This is one of the key goals of the sales effort, trying to shift emphasis onto unique features of specific products and against alternatives.

- With **customization**, one has the ability to modify the offering for the customer. Along with price flexibility this allows a broad range of possibilities in driving the purchase process.

- The **distribution channels** can be modified to better attract the customer and control the purchase process. The advent of the Internet has a huge potential for this type of intervention.

1.8. THE PROMOTIONAL VIEW

Advertising and promotion (A/P) have a somewhat different perspective on the purchase process. Information is all-important in this view. Language and words, images and concepts dominate communications. Communications then drives the purchase process.

1.8.1. THE POWER OF AWARENESS

From a promotional perspective, the purchase process focuses on the flow of information. The decision on what to purchase is based on the information that the customer has. It is based on awareness of the problem, potential solutions, and the brand with its image.

Need Awareness ⇒ Solution Awareness ⇒ Brand Awareness ⇒ Brand Selection

1.8.1.1. Awareness of the Need – From an advertising and promotional perspective the issue starts with an awareness of the need and its importance. Much of traditional advertising is focused on the strengthening of the potential customers' perception of the need for their products. This is often a generic presentation along with brand identification.

1.8.1.2. Awareness of the Solution – Once the needs are recognized and valued, the methods of satisfying those needs have to be identified. That is the generic solution of the problem, for which the branded product is one, has to be identified. For example, cars are sold as means of satisfying the need for freedom. The association with cars and freedom is a required linkage.

1.8.1.3. Awareness of the Brand – The customer must be made aware of the brand. If he is does not know that the offering exists, he won't look for it, he won't find it, and therefore, he can't buy it. This is a fundamental. However, it is insufficient**.**

1.8.1.4. Selection of Brand – Finally if customers are aware of the product and its image, they may buy it.

1.8.2. BUILDING AWARENESS

Awareness is built from an advertising and promotional perspective through repetition and learning. It is through exposure by potential customers to the brand and the "message" that awareness and preference is built.

1.8.2.1. Media - There are a multitude of ways of "getting the message out." The term "advertising and promotion" covers all the modes are considered. These include word-of-month, point of sale, sales aids, public relations, as well as the traditional commercial mass communications methods**.**

1.8.2.2. Exposure - *Exposure* consists of both the breadth of potential customers contacted and the *frequency* of those contacts. It represents the number of "impressions" that the message has made. The term used for breadth of coverage is "*Reach*." This term suggests the difficulty of obtaining coverage.

1.8.2.3. Impact – However, all messages are not equal. The quality of the message is always a critical issue. The measure is its ability to be remembered and its impact on the decision process.

1.8.3. Awareness Messages

Designing advertising and promotional messages is more of a creative art form than a science. However, there are three key concepts that need to be considered.

1.8.3.1. Product and Brand Names – Awareness focuses on the identity of the products and their differentiation from competition. The product and brand names perform this function.

1.8.3.2. Position Statements – The product description in terms of benefits and differentiating elements are captured by the position statement. The statement is a clarification of a set of claims that links the products to customer value. It acts as a summary of the offering.

1.8.3.3. Brand Images – The purpose of the brand names and position statements are to convey an image of the offering, as a means of satisfying customer needs. This is the brand image, which should differentiate the products from competition.

1.8.4. Determinates of Supplier's Brand

The supplier's brand refers to the underlying image of the products' supplier. As such the brand transcends the specific product. It is an emotional issue and is viewed as being intangible but still a key influence on the purchase process. On a psychometric or emotional basis brand can be thought of as consisting of three groups of attributes:

1.8.4.1. Prestige - Product can convey value by their very possession. This is the basis of prestige which is analogous to "pleasure" from an emotional perspective. It is an inherent property of a brand or product that the owner believes provides him with "status".

1.8.4.2. Nostalgia – Familiarity and awareness has a value of its own. It provides a level of comfort in being a viable source of products.

1.8.4.3. Risk Reduction – While familiarity and prestige may provide a general level of comfort, they do not act to protect the purchasers from uncertainties. These uncertainties can be specific or potential unknowns.

Key features of brands, particularly in business-to-business transactions, are these inherent and often unspoken properties. A firm that is known as the technology leader for example will convey an inherent protection from product obsolescence. Alternatively, a firm known to stand behind its products, will act to protect the buyer against unknown consequences of its use.

1.8.5. Return on Advertising and Promotion

The effectiveness of advertising and promotion has traditionally been in terms of changes in awareness or what is sometimes referred to as “mind-share,” the fraction of identifiable options and alternatives. However, the bottom-line in business is earnings and sales, not mind-share or awareness. Recently there has been a major effort to link promotional expenses to increases in revenue and more importantly to increased profits. This is often computed as a return on investment or, in this case, a return on advertising. Simply this is the ratio of the increase in earnings to the costs of advertising and promotion. While this may seem a straightforward computation, it is usually difficult to estimate the increased returns due to confounding effects of sales, pricing and promotional efforts which ae usually linked to the advertising programs.

1.9. THE "TOTAL QUALITY" PERSPECTIVE[21]

The Total Quality Management approach provides a different perspective on the management of resources in respect to customer value and thereby the purchase process. According to Edwards Deming, the all-time guru of Total Quality Management (TQM), obtaining Quality is “exceeding customers’ expectations,” or simply “delighting the customer.” While this would appear to be a simple requirement, it is difficult to make happen. From a marketing perspective, we appreciate the statement. However, in practice Total Quality Management has tended to focus on process improvement to reduce waste and costs through improved process consistency. It should be noted that in many cases this is synonymous with meeting customers’ expectations. The automotive industry, as part of their Quality standard (QS9000) requires a plan from its vendors to reduce prices. This then requires cost reduction. Though in other cases, customers may be less concern about prices explicitly, they are interested in products that consistently perform.

1.9.1. IMPORTANCE OF EXISTING CUSTOMERS

Underlying the Total Quality Management approach is the importance of existing customers. Various statistics have been presented to illustrate the importance of existing customers (for example “90% of all new business comes from existing customers”). Such statistics, of course, depend strongly on the nature of the business and its situation. However, the bottom-line is that, existing customers are a vital resource to the business. Keeping good existing customers is always easier and usually better than to finding new ones.

The focus of TQM is on the maintaining of existing customers. It is their expectations that are intended to be exceeded. They loyalty is the real measure of success in Quality management.

1.9.2. A PROCESS AND STATISTICAL FOCUS

Quality management focuses on establishing processes that produce products that should exceed customer’s expectations. The way of establishing those processes is through control and attention to measurement. “If you can’t measure it, you can’t control it,” is a byword of TQM. Of course, from a marketing analytics perspective, measurement of customer’s needs as well as the measurement of the manufacturing process is critical.

Unfortunately, most of TQM concerns has been on the manufacturing process side of the business. Marketing and service Quality has only recently become of concern. This has led to a gap between the product development and the recognition of customer benefits.

[21] There are any number of books and reference available that presents the principles of Total Quality Management. However, most are oriented to presenting theory and tools. One exception is that I have found very useful is the “The Team Handbook” by Peter R. Scholtes published by the Joiner Organization (1989). It focuses on team- work and processes to implement of TQM.

1.9.3. "SIX SIGMA"

"Six Sigma" programs refer to the concept of almost never allowing a product to get to the customer below specifications. The "Six Sigma" comes of the statistical requirement of specifications being at least six standard deviations from the mean of delivered performance of products. Implicit in this concept is that the market's expectations are at the product specifications. And thereby, meeting the "Six Sigma" requirement will result in delighted customers. While achieving these goals may be questionable, the philosophy of exceeding expectations is not. By assuring that the product exceeds all promises, the customer is more likely to be satisfied.

1.9.4. ROOT CAUSE THINKING

One of the key tools in Quality management is the differentiation between local and generic problems. This is a result of the process orientation of TQM. Some problems are true unique to a situation. However, many more are symptoms of fundamental process problems and issues. The underlying idea is that fundamental problems manifest themselves in a multitude of small and large problems and are causes of product and process variants. The trick is to determine what the "root causes" of these problems are and then work on correcting them rather than continuously focusing on symptoms. This is a useful perspective for marketing problems as well as the traditional process engineering issues.

1.9.5. THE STANDARDIZED AND CONTROLLED PROCESSES

In order to correct a process, that process must be standardized and under "control." Standardization here means that whatever is being done is repeated. Without standardization each product or service or action done will be unique. The "control" of a process in this sense is the linkage between inputs of a process and results. This is necessary in order to be able to assign a change in the results of a process to its inputs. These are basic "engineering" principles for designing and correcting processes. It should be noted that standardization of the process is necessary before you can deal with control.

1.9.6. THE "MARKETING PROCESSES"

Total Quality Management procedures are as appropriate for marketing processes as they are for manufacturing and distribution where they are heavily applied. However, to apply to marketing issues, the underlying processes need to be standardized and under control. This is a little more complicated an issue in marketing, since as a function, it justifiably fosters individual initiative and creativity. The following are business processes that are usually considered to be a part of the marketing function.

1.9.6.1. **<u>Sales Operations</u>** captures the behavior and function of the sales force. Included here are the processes of selecting candidate customers and determining the sales process as well as the creation of promotional aids. Typically, customer satisfaction studies are used in the Quality development of the sales function.

1.9.6.2. **Advertising Development** is typically handled jointly by the business and its advertising agencies. It is usually a fairly complex process often involving extensive marketing research.

1.9.6.3. **New Product Development Process** have been standardized in many organizations and usually controlled by the Research and Development function of the business. These activities are sometime referred to as "Stage Gate Processes" since they involve period review points called "Gates." It should be noted that usually most firms have "growth imperatives" which requires new products and the entry into new markets as a critical part of the marketing strategy.

1.9.6.4. **Marketing Planning** usually involves pricing and resource allocation. Occasionally, this would also involve acquisition and divestiture decisions. Once again, the issue of marketing research is critical to assure Quality decisions.

1.10. STRATEGIES[22]

Business and marketing strategies are the framework for business planning. In the previous sections, the underlying marketing and business analysis concepts and definitions have been discussed and potential actions have been outlined in terms of the four P's of marketing. These principles form the structure by which strategy is formulated. Marketing research analysis is often undertaken to confirm or refute these strategies. Only the most basic business and marketing strategies will be outlined here. The pursuit of these strategies often becomes the basis of the interpretation of marketing research information.

1.10.1. PRAGMATIC AND STRATEGIC PERSPECTIVES

Before discussing specific strategies it is necessary to put them in context of business needs. Strategies exist to perform two functions, providing resources and growth in the short term, within a year to two and then to assure health and survival in the long run. These two objectives are not always congruent. However, they always should be mutually supportive. It should be noted that the strategies that are discussed subsequently apply to both the short-term and the long-term perspectives but in different ways.

1.10.1.1. The Short-term Imperative

The business needs to make money. This is a short-term pragmatic imperative. If it does not make money over a significant period of time, it will not survive. Making money is not a balancing act. It is a requirement. This short-term strategic focus represents the operational game plan of running the business. Furthermore, it is generally a requirement to obtain sufficient resources from operations in the short-term in order to capture longer-term opportunities.

1.10.1.2. Long-term Survival and Growth

While the economic adage "*the long-term never comes*" is a truism in that we are always planning into some continuing imagined future, ignoring the future is foolish. Our institutions are expected to survive. Ignoring the future will inevitably lead the business to a precipice for the firm. The question is only when. It is the goal of the strategic approach not only to avoid disaster, but rather to take advantage of the opportunities that the future represents.

1.10.2. MARKET STRATEGIES

Market strategies focus on actions in the marketplace. In particular, building and maintaining brands and competitive advantage are usually goals. These strategies are not

[22] There are several sources for the concepts discussed in this section. However, the most influential is Michael E. Porter from his classic book *"Competitive Strategy - Techniques for Analyzing Industries and Competitors*", The Free Press (1980)

always mutually exclusive nor are they independent of the competitive and pricing strategies.

1.10.2.1. Segmenting the Market – Creating differences or segments in the market by use of product and service changes is referred to as segmentation. It is the action of creating products that thereby produces the interested groups of customers. By doing so, the resulting segments are particularly well served by the firm that created the unique products and thereby obtaining local competitive advantage.

1.10.2.2. Market Creation and Building – Occasionally it is feasible to create and build markets that did not previously exist. This is similar to segmentation, but goes far further, in that infrastructure of the market may need to be likewise created. However, when a firm creates the market, it also can create huge competitive advantage.

1.10.2.3. Niche Marketing – Niches are submarkets that a firm can focus on while not competing across all applications and segments. It is a "Focused" strategy, serving a limited set of customers, providing a limited line of products and delivering specific values. By specializing the business, avoids the intensive attention that a direct competitor would have**.**

1.10.2.4. "Going" Vertical – This is a type of niche marketing but based on a sets of applications or "industries" with identifiable participants and needs. These submarkets are usually "isolatable" with unique characteristics and promotional and purchase channels. Typically vertical marketing focuses creating unique offerings and separate promotional programs.

1.10.2.5. Horizontal Marketing – Efforts to extend the "product-line" is often referred to as horizontal marketing. This may be simply the expansion of existing product forms or it may be extension into new categories of products such as services. In any event, its goal is to expand the "customer share" within the existing participating markets.

1.10.2.6. Micro Marketing – The distinction between sales and marketing is blurred with micro or direct marketing. This is a focus on the sales process where information and tools are provided specifically on the individual customer. In a way it can be viewed as the ultimate niche marketing where each customer is viewed as their own segment.

1.10.2.7. Reverse Marketing – This strategy reverses the role of the seller and the buyers. The buyers are encouraged to seek out the product sources. This had become a traditional structure in socialist economies with limited supplies. However, it is a useful description of internet-based marketing schemes where the marketing effort is to lead a searching buyer to sources**.**

1.10.3. Competitive Strategies

Competitive strategies focus on the importance of the competition and alternatives in the marketplace. These are based on leveraging competitive strengths to provide advantage. The competitive strategies are aimed at the competitors rather than at the market with the focus on maintaining competitive advantage. There are a large number of possible positions and actions that can be taken. The major ones include:

1.10.3.1. Leadership Position – Being the largest competitor or the firm with the greatest resources tend to provide inherent strength. While being first into a market usually provides this position in terms of share, it is often difficult to hold. Analysis of some competitive data and theory also indicates that the leadership position may not always be the most profitable. But in general, due partial to economies of scale, it is among the most profitable.

1.10.3.2. Second Source - Being the second source provides advantages. Market shares are usually stable and prices may be higher. However, maintaining this position can be difficult[23].

1.10.3.3. Service Delivery – Value or service delivery focuses on the cultivation of favored customers. These strategies are similar to niche marketing but focus on specific segments rather than offerings and applications. Here customization is critical for maintaining a competitive advantage.

1.10.3.4. Low Cost Supplier – Having a cost advantage is always useful; however, it can be the basis the competitive strategy. While this position often leads to a "Price Leadership" pricing strategy, it is not necessarily so. It should also be noted, that low cost implies a manufacturing efficiency and a cost reduction focus with pressure to provide narrow product portfolios.

1.10.4. Pricing Strategies[24]

Price is always a key problem for business strategy. Strategically, price is incorporated into the desired pricing policies and more specifically in the formulation of the aims of those policies. The pricing strategy may be at odds with the competitive strategies as the firm tries to meet conflicting goals. Furthermore, several pricing strategies may be a work in a business at the same time. Among the major pricing strategies are:

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[23] In the potentially regulated environment in the US economy, the second source position may be aided by the market leader to avoid a monopoly position.

[24] A discussion of the implications of these pricing strategies on profits is available based on the PIMS (Profit Impact through Marketing Strategies) database in the separate document on Business Behavior. http://www.lieb.com/Documents/BusinessBehavior.pdf

1.10.4.1. Optimum Pricing – From a short-term operational basis it is often desirable to try to optimize price. That is, to select a price that will maximize earnings. Unfortunately, short-term optimum price may not yield long term maximum earnings or satisfy long-term goals. However, it is often a basis to start the process of developing a pricing strategy.

1.10.4.2. Price Leadership – The leadership or premium strategy is to develop position of the product at a relatively high price. This is particularly advantageous when the major measure of product quality is price. High price here delivers both high revenue and high product image. However, this strategy may come at a reduced share.

1.10.4.3. Creaming Strategies - These strategies are similar to Price Leadership in that prices are held high compared to other strategies but without the advantages of perceived high value. Under these conditions, share is expected to fall. These approaches are particularly useful as market exit strategies or when manufacturing capacity is limited.

1.10.4.4. Value Pricing – These strategies leverage on the ability to differentiate among customers and charge different prices. The objective of these strategies is to maximize prices by providing unique value in the isolated segments. Prices are then set by the associated value of the products in the segments.

1.10.4.5. Share Building – This strategy is based on "buying the market[25]." That is, by keeping prices low, a firm would obtain a share leadership position, obtaining the *low cost producer* position due to economies of scale. The final result would be a dominant market position with high profitability. Unfortunately, this is not an easy or inexpensive strategy nor has it been historically always successful.

1.10.5. Brand Strategy

Unlike other marketing strategy issues, brand strategy is not exclusive that is more than one strategy may be excluded simultaneously. In fact, it may be better to consider each of the strategies as separate though interconnected.

1.10.5.1. Brand Creation – Brands are created! Most products are named and thereby branded for development. Firms change names and formulate new brands. It is critical to understand that with such a change brand equity may be lost and not transferred. It should be noted that brand creation is usually an expensive process. It not only requires the

[25] This strategy had been proposed during the 1970's by the Boston Consulting Group and adopted by Texas Instruments with catastrophic results in their hand held calculator business.

establishment or awareness of the name but the establishment of its reputation.

1.10.5.2. Building Brands - Brands represent a marketing investment. As such, a goal to build the brand, as a bulwark against competition, should be viewed as a long-term strategy. Brands are built by performance and promotion. Product performance adds to the esteem of the brand. And promotion of the brand increases its awareness. Building brands is equivalent to expand the expectations.

1.10.5.3. Brand Maintenance - While market memory is not fleeting, it does diminish over time. That memory must be renewed to maintain the brand. Furthermore, just as you can build a brand you can also diminish its value by failure to meet expectations. This reduces its value. As such, meeting or exceeding product and service expectations is critical to maintain the brand.

1.10.5.4. Brand Expansion - A key characteristic of a brand is that it transcends the products covered by it. Additional products and services may be placed under the brand. As long as the brand already covers these new products, the brand is not really expanded. However, when the brand covers new categories of products and services it becomes expanded. General Electric and General Motors both expanded their brand into financial services. The flip side to brand expansion is its dilution. As a brand expands it may become less valuable, its inherent equity may decline.

1.10.5.5. Brand Exploitation - Brands provide access and can command price premiums. As such, marketing strategies can utilize the brand for the benefit of the business. One exploits the brand by using it. There is a mixed issue here in that one can build, expand and exploit the brand simultaneously. The process by introducing new products and services under a brand does exploit it but may also strengthen it.

1.10.5.6. Harvesting Brands – As you can invest in brands, you may extract their value. That is brands represent investments of time, effort and resources. The resulting value can be extracted gaining higher prices with reduced marketing expenses. These policies, however, should be viewed as exit strategies.

1.11. MARKETING INTELLIGENCE

Market intelligence has long been recognized as the fundamental basis for all effective business and product planning. Whatever set of strategic approaches and directions business leadership follows, the inclusion of market information is critical for the resulting strategy and plans to be effective.

It is the nexus of integrated marketing intelligence is to develop marketing information and decision support systems in order to turn that knowledge into actions. The concept of integrated marketing intelligence[26] rests on a need for a means to deliver a "Pervasive Marketplace Awareness" that facilitates customer information driven business development based on sustainable marketing research.

Integrated marketing intelligence is based on specific types of quantitative information obtained from the marketplace. Each business and market is, of course, somewhat different and each business situation needs to focus on specific issues critical to its success. As such, the types of information and the means of market measurements may differ. However, integrated marketing intelligence is based on capturing information on a broad range of issues. Furthermore the underlying concept is to be able to obtain the market information affordably.

As previously noted integrated marketing intelligence focuses on the use of quantitative marketing research information. However, this does not diminish the importance of qualitative and subjective market information. Quantitative information is necessary to understand the extent of issues and opportunities. Before quantitative marketing research studies can be successfully undertaken, a general knowledge of market awareness of issues and conditions is necessary as well as the specific language that should be used. This knowledge may be already known to the business but should be verified by some form of qualitative or voice of the customer research.

There is no universally "best" method of capturing quantitative customer opinions. All methods and approaches require a balance of key issues along with the nature of the purchase process. Costs and timing considerations are almost always critical. Because of the need to cover the full range of market issues the breadth and depth of information needed are critical.

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[26] The capability to provide this type of integrated market intelligence decision support is referred *Your-Marketing-Toolkit*[SM]. These toolkits are design to provide the "hands-on" testing of ideas and answering the "what-if" questions inherent to the effective planning process. The underlying philosophy in the building of this toolkit is to obtain the maximum useful and significant information feasible from marketing intelligence.

In almost all cases, there are eight types of information or intelligence that tend to be needed. However, some information is more pressing than others. In many cases, sufficient information is available from other sources such as the sales and support staff, published or syndicated studies and previous proprietary research.

1.11.1. Characteristics of the respondents – The characteristics or attributes of the respondents and (for industrial products) their firms specifies the market information. These are often referred to as "demographics", but extend into the uses of products and the operations of the firm. For industrial products, the firm's products and processes may be needed along with the identity of their customers. While all survey information must be fundamentally thought of as being opinions, this data is actually considered to be "factual" in that it represents the actual conditions associated with the respondents.

1.11.2. Awareness of products and firms – The awareness of product alternatives including product and brand names are always a key measure for the market. However, measures of awareness may also be extended to value propositions and technologies in order to test the effectiveness of communications.

1.11.3. Competitive attribute assessment – Competitive position rests on the relative performance and importance of competing product attributes. This requires understanding product performance as outcomes, and product and service attributes along with their relative importance in the purchase decision. In regards to communications research and branding, product claims may also need to be evaluated under the same basis.

1.11.4. Pricing information – Pricing is always a critical action in the marketplace. There are a number to methods to obtain overall price acceptability. These include price concept testing[27] as well as more sophisticated competitive choice testing.

1.11.5. The value of features and benefits – Feature and benefit value is estimated in a number of ways depending on what the value is intended to represent. Perceived value measurement[28] is used to estimate the impact of the feature or benefit on the purchase process. Economic value or Value-In-Use is used to provide an input into the promotional process[29]. Feature profiles[30] are used to estimate the desired product design.

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[27] Price Concept Testing includes the Van Westendorp method discussed in the section on Pricing Research.

[28] Methods and analysis of perceived feature and benefit value is covered in a separate section of these notes.

[29] Value-In-Use is covered in a section on Value in the notes

[30] Profiling is covered as various methods in the section on Perceived Value

1.11.6. Structure of the purchase process – Marketing actions focus on intervening within the purchase process. This requires understanding the nature of the purchase process and the influencers from the perspective of the market.

1.11.7. Sources and value of information – Promotion rests on communications media. It is importance to understand the sources of information to the purchase decision makers. Note that this now includes electronic (Internet), and direct communications as well as the traditional modes.

1.11.8. Attitudes and opinions – As previously noted survey information is considered to be opinions; however, there is some questions that are by their nature attitudes of the respondents. These usually focus on the acceptability of new products, future events, potential risks and attitudes regarding “non-cognitive” opinions such as paradigms on operations.

1.12. THE MARKETING RESEARCH PROCESS

In the previous section, we have discussed the concepts of marketing and strategy that are the basis for undertaking marketing and survey research. Information in sought to verify and support strategies based on conceptual models of how the world works. Now we need to discuss the process of marketing research itself.

While some marketing research can be done with internal resources, most, particularly, large studies are undertaken using specialists. Using outside supplying firms tend to provide an aura of objectivity which in many cases is real, and usually provides an economic advantage. In any event, it is worthwhile to structure the process to assure that the end result of seeking marketing information provides valuable input to the business decision process.

1.12.1. DEFINING THE BUSINESS PROBLEM

Doing marketing research requires resources. This is a simple concept with a host of implications. First, there should be a worthwhile reason to undertake the research effort. While marketing research may be initiated by some senior management edict or as a part of the generally planning process, it will not be effective unless there is some need or business problem that is being examined. The starting point for all marketing research projects should start with the identification of business problem.

The key, however, is that the business problem must lead to action. Without an action there is little value to the information and knowledge. Potential actions make the business problems real. If there are no likely actions that are to be taken then the study is merely academic and should be reconsidered. As such, a well formed business problem not only consists of the issues at stake but the range of potential outcomes and actions.

1.12.2. IDENTIFYING THE RESEARCHABLE PROBLEM

Market information is not the sole source of knowledge to handle business problems. While the results of marketing research studies can provide a great deal of useful knowledge for solving the business problem, they rarely if ever should be the sole source decision making information. Only a piece of the information puzzle will be amendable to marketing research. It is necessary to define the researchable problem with its associated goals, objectives and scope; and to a lesser extent its value. The marketing research program starts with a proper definition.

1.12.2.1. Marketing Research Goals – The terms research goals and objectives are often used interchangeably. However, the research goals usually are general and read directly on the business problem. They describe the aims of the research and the value of the results. The goals should describe the expected use of the information**.**

1.12.2.2. Marketing Research Objectives – The specific research objectives describe what the results of the study should be. They focus on the actual physical results. It is useful for them to be as specific as possible.

However, this is no requirement that they be narrowing structured nor should they be read directly on methods to be used.

1.12.2.3. Marketing Research Deliverables - In the preparation of the requests for proposals, a separate section specifying the deliverables is usually included. These may give specific types of reports and analyses that are required**.**

1.12.2.4. Scope and Frame – The scope or the research frame of the project specifies the depth and breath of coverage. This is the range of information and the targeted groups of respondents that will be covered. The specification of the groups of respondents is absolutely critical for the success of the research effort**.**

1.12.2.5. Timing – Information not available for the decision has little value. Timing is critical. The problem with timing is that it may change. A time critical problem, at the initiation of a study, may no longer be so by the end of the project. As such, the importance of timing may change. However, in the process of planning the research, timing must be taken into consideration and specified at the onset of the project. Timing will effect not only the concentration of sources required but also the methodologies that can be used.

1.12.3. RESPONDENTS AND SAMPLING

Who will answer the questions is as important as what questions are going to be asked. Defining the problems requires understanding who should be the respondents and how many need to be involved.

1.12.3.1. Respondent Lists & Sources – The quality of the research sample is usually dictated by the nature of the list or the source of respondents. Finding a quality list, an up-to-date list of qualified respondents is not simple. While there are commercially available lists for professionals, these are not either tightly defined or up-to-date. In some cases over 50% of the respondents from these lists are rejected or can not be contacted. Customer lists are often used, but these tend to be clearly biased if they are to represent a competitive market.

1.12.3.2. Incentives - It is now thought to be customary and necessary to offer to respondents some type of incentive or honorarium for participation in surveys. Financial incentives of this type can greatly increase the cost of the study and poses some ethical issues. However, it has become so customary that in some areas such as in surveying physicians, it is required.

1.12.3.3. Stratification – It is often useful to separate the market into subgroups that should be sampled separately. This is particularly important if subgroups differ significantly in size. Without separate sampling due to the nature of random selection, far fewer members of the smaller groups will be chosen. Under random sampling conditions, the precision of values for these smaller groups will be distinctly lower than the other groups. To assure a sufficient number of respondents in these subgroups, the sample is "stratified" whereby a separate sample is selected for each sub-group. It is important that this need to stratify the sample is identified early in the study.

1.12.3.4. Sample Size – The precision of the results of a study depends mainly on the size of the sample. Only if there is a small total population does the population size affect the precision. Note that the required precision varies significantly among projects. Typically qualitative projects have low precision requirements, for example. However, it should be noted that there are a number of other factors that need to be considered in determining the size of the group that is needed including the**:**

(1) Difficulty in getting to them,
(2) Number of sub-groups that need to be considered and
(3) Expenses

1.12.3.5. Specification and Screens – How are the participants going to be selected? What criteria are going to be used? These issues define the respondents. The tighter the criteria the more difficult it will be to find appropriate respondents. However, selecting inappropriate respondents may be worse then useless.

1.12.4. SETTING RESEARCH RESOURCES

It would be nice to have infinite funds to undertake research. But that is not the reality of the world. Whether undertaking product, process research, market research, there always needs to be a balance between the value of the knowledge gains and the cost of obtaining it. Often a budget may be provided which limits the extent of research efforts. In many other cases, some range is expected.

1.12.5. THE PROCESS OUTLINES

Marketing research projects are usually separated into qualitative studies focusing on identify the "What" in the market and quantitative studies for evaluating "How Much". Typically quantitative studies are preceded by qualitative work. However, many studies only require qualitative activities. Though qualitative studies are typically less expensive than quantitative, they tend to represent half of the total expenditures on proprietary marketing research.

Below we will discuss the typical processes used to undertake marketing research. The purpose of a formal structure is to help reduce the major problems in the process. For marketing research to provide quality results, attention to detail is necessary. The formal structures provide a means of exercising that attention.

1.12.6. QUALITATIVE RESEARCH

Qualitative research is usually smaller scaled activities, which are characterized by subjective approaches. These studies are undertaken to explore the scope of issues and to obtain insight into market behavior and interests. This is often referred to as Voice of the Customer (VOC). As noted above, most quantitative studies should be preceded by qualitative phases to assure that the appropriate issues are covered.

It should be noted that, there is no requirement of consistency in qualitative research. Typically, the questions asked will evolve as information about the market and behavior is uncovered. Product and advertising concepts are allowed to evolve during this type of research. These types of questions are referred to as "open-ended" or subjective. However, due to the lack of consistency, these results in qualitative research can not be extrapolated to represent the total market. That is the job of quantitative studies. There has been a recent movement to include some analytical or closed-end questions with qualitative studies allow for some estimate of overall market characteristics. However, the sample sizes of these studies often preclude the development of predictive models.

The following are the general steps in the conduct of qualitative research.

1.12.6.1. Goal Identification - For qualitative research we start with goals for the information and insight being sought. The goals may be very specific, such as the selection of advertising copy, or more general as to determine the drivers of purchasing a product.

1.12.6.2. Request for proposals – Many qualitative studies are conducted using internal resources, however, many are not. The Request for Proposals (RFP) is a formal mechanism to solicit proposals from the professional independent vendors. These RFP's will vary in the detail given from requests for well-structured projects, to those that only describe the desired outcomes. In either case, the centerpiece of the Request for Proposals for qualitative research is the goal of the research.

1.12.6.3. Methodology and Vendor Selection - The choice of the vendor often rests on the decision on the methodology that will be used. Typically, the choice methodology for qualitative studies reflects how the critical information is going to be sought. Vendors specialize in different methods and approaches. Therefore, the choice of either vendor or methodology usually sets the other. This will affect the eventual costs and structure of the project. Focus groups for example require a different set of resources than in-depth personal interviews.

1.12.6.4. Sample Selection – The selection of who is to be interviewed determines the fundamental quality of the results. It is important to clearly specify who qualifies to be a respondent and how we will know. The number and location of respondents tends to define the costs of the qualitative research program. It is, therefore, important to clearly understand the trade-offs between the value of the results and the size of the sample. Note, however, that it is not the intent of qualitative research to provide a representative sample of opinions, only to capture the extent of issues. As such, a representative sample is not necessary. Once again a key issue here is the source of the respondents and how the list is derived. For consumer research, the outside vendor generally obtains the respondents**.**

1.12.6.5. Execution Structure - Qualitative studies are unlikely to be consistent and, therefore, the order by which the studies are conducted is important. Typically information is gained during the process which changes the questions discussed and the stimuli used. As such, it is important during sample selection to determine the order of the study.

1.12.6.6. Discussion Guides (Outline) Development – The in-depth interviews and focus groups are conducted based on a discussion outline. These outlines describe what information is being sought and the experiments that will be conducted. The actual conduct of the interviews or focus group discussions follows the aims of the discussion outline rather than the order. Unless the results of the discussions are to be analyzed semantically, the wording of the questions may also vary following the flow of the discussion.

1.12.6.7. Design of Experiments - Experiments, in these cases, refer to the measurement of responses to stimuli such as advertising copy or product concepts. These experiments may be informal presentations or formally designed conjoint, tests. As in the case of the discussion outline, these experiments may change through the process of the study based on prior results. It is a continuing process of refinement. Once again, consistency is less important than focus.

1.12.6.8. Management Review – In general, the discussion outlines with the proposed initial experiments are presented to the client for approval. This usually results in additional material being suggested and some corrections in wording.

1.12.6.9. Execution – Typically qualitative research studies is open to the client for observation (normally through a one-way mirror), or video or audio recorded. Recently, web-cam transmissions have been used with focus groups. Telephone and teleconference methods have also been used but tend to be limited to discussion purposes without experimental materials. Because of the observation, particularly during the early interviews, clients occasionally request changes in both the facilitation and the discussion guide.

1.12.6.10. Results Preparation – Depending on the nature of the qualitative study, the results are analyzed subjectively and analytically. Subjective analysis or interpretation summarizes the results and connect the discussion items with the decision issues. Analytical tools are used to clarify positions, analyze results of experiments and occasionally to explore "semantic" meaning from the discussion transcripts.

1.12.7. QUANTITATIVE RESEARCH DESIGN

As previously noted, the purpose of quantitative studies is to determine the "how much". These studies are undertaken to measure the "market" beliefs and behavior. Often qualitative research is first undertaken to determine what issues are critical and to select the appropriate language needed to describe them. Under these circumstances the quantitative study is often handled as a second phase and a broad marketing research project. However, in most cases, the two studies are handled separately.

1.12.7.1. Objective Identification - As in the case of qualitative research, the process must start with the identification of research objectives. However, in the case of quantitative research, those objectives must be clear and analytical. The purpose of quantitative research is to describe the market. It is critical that the scope and the target market be part of the objective statements.

1.12.7.2. Request for Proposals (RFP) – Quantitative research is often (if not almost always) conducted using outside vendors. This allows for anonymous conduct of the survey as well as being economical[31]. The RFP is designed to solicit methodological suggestions and bids from vendors on the project. However, in many cases the RFP process is collaborative, where the bidding vendors work with the client during the proposal preparation.

1.12.7.3. Methodology and Vendor Selection - The methods and philosophies of research differ among vendors. Clients often encourage widely different approaches to expand the possibilities. Depending on the needs and to some extent the financial resources, a vendor will be selected based on the preferred approach and costs. It should be noted that costs often are not the key criteria, but is almost always viewed as important.

1.12.7.4. Sample Selection – While the size of the sample is often suggested in the RFP and definitely specified in the proposals, a review of the sample size, the target respondents and the quality of the list needs to be made. The objective of the respondent selection process is to obtain a representative sample from which estimates of the market or market segments can be obtained. The final specifications must include screening procedures of potential respondents to assure proper selection. It should

[31] Executing quantitative studies using internal resources usually is more expensive than using an outside vendors due to the economies scale for the specialize agency.

be noted that the size of the sample is a balance between the required precision of the key questions and costs.

1.12.7.5. Questions and Experiments Development – The vast majority of the questions in quantitative studies are "close-ended" with a number of all inclusive and mutually exclusive responses. These are developed to cover the full range of issues that are specified by the client. Typically these involve: perception of products and services, preference or importance in the decision making process, descriptions of behavior and conditions, attitudes and opinions, and characteristics including demographic, psychographic, and live-style information. Experiments also need to be designed and tested.

1.12.7.6. Questionnaire Design – It is an art form to create a questionnaire that is sufficiently concise and well structured to allow easy execution and subsequent analysis. Usually the number of questions that could be asked creates a questionnaire that is far too long for practical application. The questions need to be limited only to those critical to the study. The order of the questions is then set to reduce bias and the need to do excessive branching. Finally the coding of the results need to be set and integrated into the questionnaire form**.**

1.12.7.7. Questionnaire Approval – Approval of the questionnaire is usually sought before pre-testing and then again after pre-testing to assure that the instrument will meet the objectives of the study.

1.12.7.8. Pre-testing - All quantitative study questionnaires need to be pre-tested to determine whether they can be effectively executed. This process focuses mainly on the understanding of wording of questions and the required time for execution. It usually involves a dozen or more trials. This is particularly important when experiments are being used since they tend to be complex and fault intolerant and for international studies where translation is critical. Typically, however, only minor changes are usually needed.

1.12.7.9. Fielding - After final approval, the questionnaire is executed. This may involve a multiple stage process starting with recruitment and screening, followed by the execution of the main questionnaire. For simple phone studies this is done in one stage. However, for more complex studies such as those involving distributing material or using the Internet, recruitment is separated from the execution.

1.12.7.10. Coding and Tabulation - Data from the study is coded and tabulated in terms of frequencies, averages and cross tables by the field execution firms. However, open-ended questions may or may not be coded. The coding of subjective responses is often done separately by the "full service" provider. Cross tables are defined by banner and stub variables.

The stub variables usually consist of most of the data taken in the study. The banner variables are used as segmentation definitions and are usually supplied by the client.

1.12.7.11. Analysis – Subsequent multivariate and statistical analysis may or may not be called for. However, if experiments are being undertaken or if detailed insight into market behavior is called for statistical modeling is often done. This includes identification of market segments, product positioning, price optimization, and market simulation. This work is usually undertaken concurrently to the preparation of the tabular reports.

1.12.7.12. Interpretation – In order to convert the data from the study into useful knowledge that the client can act upon, the results need to be interpreted. This involves putting the results into the context of the project's objectives and the market situation. Tabular reports are usually forwarded to the client prior to the final analysis and usually act as a basis of discussion. It should be noted, at this point that the client always has information beyond the scope of the study or experience of the vendor. As such, the interpretation is usually a two way process.

1.12.7.13. Report Preparation and Presentation - Some formal report of the results is usually forwarded to the client. This is usually the last deliverable required in the proposal and triggers the final payment. The nature of the report depends on the needs and specifications of the client. Typically, the final presentation of results is done by the client to his senior management or to the business management team. The function of the vendor is often, therefore, to supply the client with presentation materials and charts. The final report, is then, a hard copy version of that presentation. However, in other cases, a full hard copy report is required detailing analyses and models. The costs for the preparation of the final report are usually included in the proposal.

1.12.7.14. Subsequent Analysis – Occasionally clients request further analysis of the data. This would include the development of additional tabulations, models and multivariate analysis such as segmentation. While most suppliers are happy to provide some additional support, when this becomes substantial, the costs are expected to be covered by the client.

1.13. CRITERIA FOR DESIGNING SURVEYS AND SELECTING METHODS

Designing questionnaires is a complex but critical step in the marketing research process. This involves choosing the questions and the methods of measurement that will be used in the survey. There are usually multiple methods and structures that can be used for each survey. No single method or form is universally "best". Each approach encourages errors in some form and reduces others. Each study requires a different consideration of the sources of problems or criteria for selecting the forms and methods best for that application. The criteria that should be considered include:

1.13.1. SCOPE

Clearly the most critical is the need for specific marketing information. This is the scope of the study. The success of the study rests on its ability to obtain the full range of information desired.

1.13.1.1. Translating the Intelligence Ideas - The desired marketing intelligence consists of ideas of the kinds of knowledge that is wanted. The first and probably most critical chore is to convert these basic ideas into specific desired information or questions. This is not a simple process since ideas may have a multitude of meanings and eventual uses. The form of the resulting questions and options form the basis of the questionnaire and the methods that will be used to collect the information.

1.13.1.2. Information Value – Not all desired information, however, are equally important. In fact, the desire for information almost always exceeds the ability of any survey to capture. This is usually a critically important influence on the choice of survey methods and approaches; that is, the ability to capture the necessary information.

1.13.1.3. Robustness – The requirements on how the information is intended to be processed and used is another key influence on the choice of research methods and approaches. Typically for intensive analysis there is a *Need for Completene*ss. That is that there is value in having complete and consistent data on each respondent independently. This is particularly important, if marketing intelligence will require the merger and cross analysis of issues or if multiple but unspecified segmentation will be used.

1.13.2. ACCURACY

Traditionally, the term accuracy is a collection of all effects that influence the ability of a measurement to represent its underlying phenomena. For example, if we wish to know the value of a product feature by a respondent, we will ask a number of questions or have the respondent perform a number of tasks which are expected to produce an estimate of the relative importance or value of a feature. The idea of accuracy is the ability of that scheme to truly capture not only a measured value, but to predict its influence on the buying behavior consistently. It is a measurement metric, generally focusing on the individual data; however, it is also applied to the collective data and predictions.

It should be noted, that due to the nature of subjective measurement, no survey measure or method is absolutely accurate. There is a fundamental or inherent uncertainty here in that no survey information is without doubt. We always endeavor to improve accuracy but we can never achieve complete accuracy. As such, accuracy is always a relative issue.

1.13.2.1. Establishing Semantic (Task) Consistency – Consistency is critical in establishing accurate measures. In particular, it is the “quality” of the words or semantics that allow for consistency and reproducibility of measures. Words are important. This is particularly critical, when the words carry special and technical meanings. It is critical that questions and options should not be open for interpretation. Options should be independent and not overlapping. And care needs to be taken to assure that if multiple languages are used, the translations are correct as they are used.

1.13.2.2. Reducing Bias – The very structure of questions can induce bias. This is both a problem of semantics and order. Effort is usually needed to assure that order bias is not a problem. Note that even with rotation or random variation of questions, bias still may exist but may be hidden.

1.13.2.3. Capturing the Variability – A key issue is having sufficient range of allowed responses to capture the phenomena. This gets into the need for expanded or contracted scales. The scales of questions need to reflect the actual capability of respondents to express themselves regarding the specific questions and issues consistently.

1.13.2.4. Simulating the Process – There is a belief that the closer that a survey exercise is to the “real” process, the more accurate will be the results. In principle, this is not an unreasonable assumption. And there some very complex simulation exercises used to simulate buying situations, designed to mimic as close as possible to the actual situation. Unfortunately, these are usually extremely complex and inefficient. However, there are other processes designed while not to mimic purchases, to be closer to those processes.

1.13.2.5. Internal Validity – The ability of the method to reproduce values consistently is sometimes referred to as internal or method validity. Tests of validity in this way require comparisons of various results using multiple approaches. This is usually a fairly weak test of the validity since it depends on the nature of the comparisons.

1.13.2.6. Predictive Validity – The ability of the method or procedures to predict behavior may be referred to as Predictive Validity. This is the traditional strong test of the validity of a method. Unfortunately it is rarely available.

1.13.2.7. Multiple Measures – To assure some level of validity and accuracy, multiple measures are often used for key metrics. This redundancy can be highly useful, but is, of course, expensive.

1.13.3. Efficiency

While accuracy focuses on the ability of the measures, efficiency focuses on the costs. Here the costs refer to the ability of the study to collect the full range and intensity of information.

1.13.3.1. Real Estate – Surveys by their nature are limited in size. Long questionnaires (over 45 minutes) tend to result in early terminations and disengaged respondents. Large honorariums and engaging survey designs can allow for longer surveys, but are still limited. This puts a premium on the survey "real estate". The more efficient the survey method, the more questions can be included in the same time frame. This forces focus on the efficiency of the method. Note that perceived feature value measures (conjoint, profiling, and hybrid methods) can take from two or three minutes to more than 18 minutes to complete depending on the approach.

1.13.3.2. Simplicity – Complexity of methods general require greater time for execution. Here the old rule holds, KISS (Keep it simple). Simpler methods tend to be more efficient.

1.13.3.3. Precision – The ability of a sample statistic, such as an average value, to represent that expected population value is referred to as precision. It is, sometimes thought of as the "confidence" in the data and is driven by the sample size. However, the way that the data is collected also influences the nature of the precision. Split, stratified, or fragmented sampling all reduce the precision. Methods that use these types of broken samples require much larger sample sizes to capture the same precision as those that do not.

1.13.3.4. Costs – Traditionally efficiency is measured in terms of productivity or cost and in a practical sense they are interconnected. The more efficient the process the more information can be obtained for a fix cost. However, costs also enter-in separately with specific techniques being more expensive to execute either in terms preparation, in fielding, or in fees for use.

1.13.4. Response Quality

Ultimately, the value of the information must rest on the quality the responses to the survey. Accuracy and efficiency focuses on the optimum execution of the survey. These measures assume that the respondents are appropriate, execute the survey correctly and consistently in a reliable fashion. But in reality, respondents may not be appropriate and their may be failures in execution.

1.13.4.1. Sample – Key to any good result in having a quality sample. That is a sample that actually represents the influencers of interest. This unfortunately, is easier said then done. All lists and panels are in error. Some potential respondents are totally inappropriate and should be removed by screening. However, the screening procedures need to be executed consistently and accurately. The degree of difficulty in screening questions can greatly affect the quality of the sample. This is both a process problem and that of questionnaire design.

1.13.4.2. Disengagement – Respondents can and do lose interest in surveys that are long or inappropriate. The strongest measure of disengagement is, of course, the rate of early termination, which is a primary measure of inappropriate samples. However, less severe disengagement may affect the results of the survey. Disinterest produces inappropriate results. These may show up as constant valued responses (straight-lining), or very fast completions (Speeders). Design of the questionnaire can affect the degree of disengagement. Complex designs, hypothetical questions, and large numbers of routine (demographic) questions all tend to increase disengagement.

1.13.4.3. Fault Tolerance – Complicated procedures tend to be difficult to execute and may be "faulty". That is that it is easy to "screwed-up". Well designed survey instruments are design to be fault tolerant in that faults are not propagated, errors in responses can be noted and in many cases adjusted. With on-line and automated surveys potential faults can often be identified during execution and handled directly with the respondent.

1.13.4.4. Inconsistencies - Testing of internal consistency usually involve inclusion of "trap" questions or are included within testing methods. Trap questions require specific actions whose basis is included in the survey. So a respondent may be asked to respond to a question based on a previous response. Alternatively, two opposite questions could be used as a test. Finally, methods may contain factor and conditions that can be tested for consistency. For example, ranking requires consistent response. Failure to rank items properly indicates inconsistency.

1.13.4.5. Reliability – The ability to reproduce results is referred to as reliability. With well structured on-line panels (in the US) there is a battery of archived results which can be compared with solicited information. These are mainly demographics but may also include some purchasing and psychographic information. This information can be used to test the reliability of "respondents".

1.13.5. FACE VALIDITY

Face validity is the ability of the collected information to be a credible representation of what is being sought. It is simply the idea that the answers to the questions read directly on the issues. This is a property of the survey that affects both the users of the information and the respondents. Respondents wish to provide useful information. Hypothetical exercises or simple down-loading information that the respondent might believe is available otherwise should be expected to discourage or disengage the respondents. From the users' perspective, the resulting analysis should read on the information. As the information is apparently a valid measure of the underlying phenomena, the analysis becomes creditable.

1.14. PURCHASING RESEARCH AND PLANNING SERVICES

While some commercial and industrial firms have internal marketing research staffs, few are large enough to do their extensive marketing research projects. Internal research effort usually focuses on business issues or on initial qualitative research. Rapid new business assessment projects are often done internally with technical research personnel. However, any extensive marketing research project usually requires using outside resources and suppliers.

1.14.1. SUPPLIERS OF RESEARCH AND PLANNING SERVICES

There is a broad range of services and suppliers available to support marketing research and planning activities. The nature of the services rendered and the perceived value of those services tends to dictate their costs. It is useful to divide the services into four general categories:

- **"Full Service" Research Suppliers –** The term "Full Service" usually refers to the ability of a firm to take on the totality of executing a research study. While no firm, no matter how large, is best in performing all the tasks involved in research; some do provide a very broad spectrum of services. Most of the large full service firms have capabilities for execution of most small or medium size studies. However, even the largest firms, generally, relies on some outside services to complete most large projects. Larger firms, also tend to be able to undertake a larger portion of the research activities internally. However, fewer firms tend to try to do all of the activities internally due to economy of scale compared to using service companies.

- **Service and Field Companies -** There is a broad range of service firms that specialize in specific aspects of the research process. Most notable are the "field and tabulation houses" which specialize in the execution of studies and the preparation of tabulated reports. These would include what had been referred to as "WATS houses" which are suppliers of telephone banks for executing phone and phone-mail (fax or e-mail)-phone studies. Other firms specialize in provide qualitative research facilitation or recruitment. Still other firms specialize in statistical and special analyses and research design.

- **Respondent Sources -** Firms provide lists of potential respondents and access to on-line sources. These on-line sources include established panels and online "communities" as the basis for obtaining respondents. The most active of these panels focus on consumer markets and political polling. The quality in terms of representing the targeted population, being accurate, and not being overly used ("professional respondents) varies widely among sources and well as varying in price.

- **Specialty Consulting –** Firms also specialize by industry or targeted populations. These may provide marketing research expertise or marketing and business development support in specific markets. Some firms also specialize in techniques and others provide project managers special knowledge.[32] .

- **Management Consulting Firms -** There appears to be a separate group of "prestigious" management and research firms. These include contract development firms like A.D. Little and Battelle Memorial Institute as well as the traditional management consulting firms of: Bain & Co., McKinsey & Co, or Boston Consulting Group. These firms are usually much more expensive than the typical marketing research or local consultants[33]. They provide a high level of confidence to senior management particular in regards to major financial or strategic decisions.

Both small and large firms exist in all of these categories. However, the longer lived, more prestigious tend to be larger. There are several sources and lists of providers available both in hard copy and on-line. These include: http://www.greenbook.org and http://www.zarden.com. Typically, small firms can provide affordable long term support, but tend to be limited in their capabilities. Large firms tend to be more expensive but tend to be more capable.

1.14.2. Purchase Process

As previously noted, there are many research and planning services available. In some cases, such as in marketing research and research on acquisition candidates, using such services is required by the confidential nature of the activities. It should be noted, that these range from fairly routine services to those that are unique to the application. It should also be understood, that the organizations purchasing these activities may do so on a routine basis, dealing with in some cases hundreds of projects per year, or as a rare and special event. If the "client organization", that group that is actually going to be served by the outside supplier, does not routinely buy these services, it is advisable that some other group within the organization with experience in purchasing these services should be consulted[34].

Typically, the purchase and specification processes are merged for research activities. As previously noted, the process of seeking suppliers is merged with the process of seeking methods and approaches. The function of the proposal process is as much directed to formulate the research problem as it is to select a vendor and to control costs. The specific objectives of the proposal and purchase process typically should be to provide:

- Useful descriptions of the research aims;

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[32] Firms like ARBOR specialize in having Ph.D. level psychologists as project managers.

[33] These firms have been referred occasionally as the "Boston Bandits" to reflect their high perceived costs.

[34] We have found some problems, however, in the use of the corporate purchasing or logistics function for managing these purchases. These organizations typically deal with products and services that are very well specified. However, research and planning applications and services typically are not well specified.

- Effective methods and approaches to the research and planning;
- Clear specification of deliverables, responsibilities, and timing; and
- High value and competitive costs;

The last of these items need a little clarification in that it relates to the costs of the process itself. Suppliers usually are not paid for their effort in the proposal process. As such, these costs are carried along as on going expenses and effects the vendors business pricing strategy[35].

1.14.2.1. Cost Guide Lines

The costs of projects tend to be determined by four key factors:

- The difficulty and expense of getting proper respondents including the use of honorariums to encourage participation,
- The costs for fielding and tabulating the research, including the need for special moderators or interviews and reflects not only the size of the sample but the length of the interview,
- The complexity of the study as reflected by the difficulty of the design and the extent of the analysis and reporting, and
- The client support that is required.

In simple studies, the total supplier fees will run typically twice the recruitment and fielding costs. However, for more complex projects, the total cost may run three and even four times the fielding costs.

Most research proposals from full service suppliers include cost estimates which are normatively expected to be within 10% of the final costs. This implies that there will be no major changes in the specifications. Most suppliers usually include in their estimate some expected specification growths and flexibility in the process of research development. As such, estimates can be expected to be somewhat inflated. However, if tight estimates are required, adherence to the specifications and timing is expected.

The industry standard for payment to full service research suppliers is half down on the initiation of the study and the remainder on the delivery of the final report. It should be noted, however, that service firms such as field and tabulation houses require full payment prior to execution. Usually the initial fees are used to pay for field services. Internal expenses are usually not recovered until the completion of the project. This puts the suppliers into a major cash flow difficulty with slow client payment.

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[35] As a general principle, it is in the interest of the firm to keep its potential vendors financially healthy. Reducing the number of potential vendors typically result in increased costs.

1.14.3. The Proposal and Purchasing Processes

There are two general types of purchasing processes that are used: (1) single source relationship and (2) a competitive proposal process. In all cases, proposals are prepared as a basis for project design and control. The difference lies in either approaching one or a number of potential suppliers. Most organizations that make extensive use of research suppliers tend to use both approaches for different kinds of activities.

The function of using competitive proposals is to obtain research approaches and associated costs from multiple vendors. This allows multiple possibilities to be explored particularly where different routes exist with associated different costs. Vendors will approach the problem with different technologies and with different balances between quality, consulting effort and costs. Note that cost difference exist both because of different research designs and different business approaches[36].

1.14.3.1. Ethics and Practical Issues with Multiple Bidders

Most large firms doing extensive marketing research will use a bidding process for their larger projects. The threshold for a required bid various from industry to industry and firm to firm. Some industrial firms require bids for projects as small as $10,000 while some pharmaceutical firms set that level closer to $100,000. In almost all cases the bidding process is initiated by a “Request for Proposals” (RFP). This is similar to a Request for Quotes used in commercial acquisitions. The RFP may consist of a simple statement of the problem with the responding firms outlining how they would approach the problem, or it may be highly specified including the methods to be used, the sample size and the nature of the analysis required.

There are usually two purposes for the bidding process: (1) to obtain alternative approaches to the problem and (2) to be assured that the cost estimates are reasonable. In most cases the lowest bidder is not assured victory. Creativity and the assurance of quality carry significant weight.

Typically two to four bids are requested. The number is limited by: (1) the internal effort that is required to support the bidding process, (2) the effort in evaluating the bids and selecting the winning vendor, and (3) ethical considerations. There is significant effort required in preparing the bids on the part of the vendors and on the part of the internal staff. It should be noted that, the vendors need to include their opportunity costs in that only one of the firms will be the winner. The bidding process, inevitably, leads to higher costs if only to cover the additional expenses.

There are many ethical problems created by a bidding process for marketing research services. First, is the need to maintain viable vendors. As such, most client firms tend to use all bidding vendors for some research activities, though that will not be evenly divided. Usually, only a relatively small number of firms are usually included in the

[36] Large prestigious consulting firms will command 4 or even 10 times the price of smaller organizations.

process, with the exception of new firms for which the bidding process is used for qualification.

A more difficult problem arises with the use of research designs proposed by unsuccessful bidding firms. Fortunately, this problem arises less often than might be expected. The range of possible methods tends to be limited and used by most competing firms.

1.14.3.2. Reverse Auctions

Recently the concept of "Reverse Auctions" has come into vogue for purchasing of commodities by firms and associations. This involves placing a contract up for bids and allowing competitors to decrease their bids over a fixed time. A natural result of this process is to put cost pressure on the quality or non-specified properties of the offerings. While it should produce a reduced cost for well specified commodities, it is also likely to produce a lower "quality" for services with less well structured properties. The result of marketing research projects is uncertain. Major quality firms are unlikely to participate if low bid is the only criteria and those that do bid will probably start at a much higher cost estimate. The net effect may be a lower quality project at a higher price.

1.14.3.3. Sole Sourcing

Single sourcing is typically used when:

- Economies of learning and scale can be realized using a single source,
- The confidentiality of methods or information is an issue,
- The source is critical for credibility,
- A long-term relationship exists,
- Acceptable pricing is expected, and
- Arrangements for competitive proposals are difficult.

Typically, when single sourcing is being used there is a long-term relationship between the vendor and the client. By having operational knowledge of the client, these vendors endeavor to reduce their costs and increase the client's value by focusing effort and eliminating non-value-delivering activities. Confidentiality of methods and information is also a key problem, which tend to require sole sourcing. Under these conditions, little is lost and much gained by using a single source.

1.15. ETHICAL ISSUES IN MARKETING RESEARCH

This first chapter closes with summary of ethical issues concerned with undertaking marketing research. All commercial operations hold a set of ethical principles that help structure the conduct of business. These principles go beyond legal commitments to those that are general expectations of honest and trustworthy liaisons. The Council of American Survey Research Organizations[37] (CASRO) has established some key guidelines particularly focused on the responsibilities to respondents to surveys. Below are listed some ethical principles that are required through traditional contractual agreements or through expected conventions.

1.15.1. RESPONSIBILITIES TO THE RESPONDENTS

The CASRO principles regarding respondents were created as much to secure respondent information as to protect the reputation of the industry.

1.15.1.1. Confidentiality and Privacy of Source – The individual source of survey information is usually considered confidential. It is not to be revealed to the clients. The clients only have access to the statistical results and data excluding the identifying information. This is intended to both protect the source and to assure anonymous responses. Note, however, that full anonymity may not be required in the study. For industrial studies the respondent company may be released. Furthermore, permission for further contact may be solicited during the survey and if such permission is agreed to, anonymity no longer is an issue.

1.15.1.2. Honesty (Misrepresentation) – It is critical to properly present the survey's function and timing to potential respondents. With the advent of telemarketing and attempts to use surveys as an entry for sales, it has become increasing important to differentiate the two operations. It is considered dishonest in the survey research community to combine the two functions.

1.15.1.3. SPAM and other disputed issues – Recently there has been a dispute with CASRO over the use of unsolicited requests to participate in surveys. Several consumer groups have challenged the ethics of using unsolicited e-mail (SPAM) to get respondents[38].

1.15.2. EXPECTATIONS FROM SUPPLIERS

While contracts specify many of the requirements of suppliers, there are a number of other principles that are assumed.

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[37] For more details on these guideline see: http://www.casro.org

[38] See http://www.casro.com

1.15.2.1. Confidentiality – Agreements and contract clauses are usually included which specifies the confidentiality of business information. Typically, all business information either provided by the firm or obtained by the survey in proprietary studies are considered to be confidential.

1.15.2.2. Attention to Details – A key component of survey research must be attention to detail. It is not only desirable but also critical. Much of the process of survey research is undertaken outside of the view of the client. As such, there is an inherent assumption that due diligence has always been taken to assure an absence of error.

1.15.2.3. Tolerance for Changes – The development of surveys and particularly, the development of the questionnaires are often a long interactive process between the client and the vendor. Suppliers properly expect tolerance for changes in the questionnaire. While this is often frustrating to the vendor, it is a part of the process.

1.15.2.4. Keeping on Budget – Cost estimates for survey research are usually given as ± 10% (however, the actual costs rarely are less that +10% over the estimate). Clients demand that those cost estimates are kept.

1.15.2.5. Meeting Deadlines – Deadlines are critical, particularly if they are related to decision points in the marketing cycle. Research must meet those deadlines unless released by the client. In some cases, clients will change the scope of the study that reflect different needs and different time horizons.

1.15.2.6. Early Notification of Change in Scope – However, often clients insist on changes that represent major changes in the scope of the study. Such a change in scope also changes the expected costs. This can take place by changes in respondents, the questionnaire or in the mode of execution. Clients must rely on the vendors to inform them, as early as possible, when such a change in scope has taken place.

1.15.2.7. Early Notification of Execution Problems – It is very rare if a survey has no problems in execution. It is in the basic nature of survey research that studies will have problems either in obtaining respondents or in the execution of the questionnaire. It is vitally important that the client be informed about any major problems that might affect validity of results, timing or costs of the study.

1.15.2.8. Professional Analysis and Interpretation – Clients expect professional analysis of data and knowledgeable interpretation of the results. While specific marketing expertise within a targeted industry of the vendor may be limited, the analysis still should be competently done based on accepted statistical procedures and marketing principles.

1.15.2.9. All Assumptions Stated – As we have discussed in some detail, all analysis and modeling are build on assumptions. Those assumptions need to be explicit. **Black box methods**, where analytical assumptions are hidden from the client, are unacceptable.

1.15.2.10. Report, Instruments, and Data in a standard electronic format – The modern office is a computerized (paperless) environment. It is important that the reports, the questionnaires and the data are given in forms that can be used by the client at a later date. Typically, this involves *Microsoft Word*®, *PowerPoint*®, and *Excel*® for reports and a standard database formats (*SPSS*®, *SAS*®, or *Excel*) for data.

1.15.3. Ownership of Research

The clients own *proprietary* studies that include the data, questionnaires, and reports. However, unless contractually obligated, the suppliers usually own the methodologies. They are usually free to use the general procedures with other studies. *Omnibus* studies are undertaken for a number of clients where each client supplies questions to be included in the questionnaire. Usually the results from the questions are given only to the client that submitted them who own the questions.

Syndicated studies are undertaken by a vendor and sold to a number of clients. The study may be sold prior to exclusion or as a published report afterwards. The questionnaires, data, and reports are owned by the vendor unless special contractual arrangements had been made.

1.15.4. Expectations of Clients

Clients are under an ethical obligation to be reasonable and as easy to deal with as possible. From a vendor's perspective, clients can be divided into various groups based on three parameters: (1) profitability, (2) ease of working relationships, and (3) ethics. Profitability defines "how good a client is." Remember that just as the client is in business so is the vendor. Ease of the working relationship focus on the time and effort that is required to work with the client. This effects the costs and, thereby, the profits from the transaction. And finally, ethics! While few clients will accept the idea that their behavior is unethical, in some cases, it clearly is below the vendors' expectations. Contractual arrangements usually only cover the basic components of programs. But even here, clients deviate from the conditions. The following are some basic reasonable expectations of client behavior as viewed by marketing research vendors.

1.15.4.1. Confidentiality of Methods – Proposals contain the thoughts and designs of vendors. These proposals represent investments of time and effort. The methodologies discussed are the property of the vendors and should be protected by the clients and not shared with other vendors, particularly if they have not been purchased.

1.15.4.2. A Fair Vendor Decision Process – As previously mentioned, bidding processes are widely used in marketing research activities. It is a reasonable expectation of vendors that the process of vendor selection will be fair. That is that the basis of selection is known and not and truly available to all bidders. However, it is understood that in most cases, there are preferred bidders, but all bidders must have a reasonable chance to win the bidding of the project or be otherwise compensated.

1.15.4.3. Rapid Vendor Acceptance and Project Approval – The process of selecting vendors and approving projects should be as rapid as feasible. This requires that requests for proposals not be sent until the projects are funded or have full management approval**.**

1.15.4.4. An Existing and Consistency Management Team - It is always desirable to have a single individual contact with the authority to approve questionnaires and program changes. However, if a management team has the authority, it should be consistent and available.

1.15.4.5. Rapid Questionnaire and Methodology Approval – As previously discussed the commercial marketing research process is fairly long and requires several approvals by the client in order to forward. These stages often involve collection of internal information. It is expected, by the vendors, that these approvals take place as rapidly as feasible and should not inhibit the progress of the study.

1.15.4.6. Early Notification of Changes in Scope – Projects, particularly large ones, have a habit of having their scope change as the study develops. This may be due to changing business needs, changes in management, or market events. In any event, these changes should be communicated to the vendor as soon as they are available in order that activities can be halted until the changes can be incorporated.

1.15.4.7. Reasonable Compensation – While the initial cost estimate usually reflects the best assessment of the costs of the study, things change and assumptions are often not met. In particular, the difficulty in obtaining respondents and in execution may produce increased costs. Changes in scope may result in revisions of the questionnaire, increased execution time and analysis as well as changes in the sample. These all have cost impacts. Vendors reasonably expect clients to cover additional costs if the clients had given prior approval for the changes.

1.15.4.8. Timely Payment – Vendors are in business with staffs and expenses. They have reasonable expectations to be paid in accordance with the proposal irrespective of the clients' payment policies. In recent years, clients have extended they payment schedule from the traditional 30 days to 60 and sometimes more than 90 days. While this may appear as good financial practice, it results in increased costs, which get passed on to the clients in subsequent proposals.