

# Business manager in research

[Business](#), [Management](#)



Further complications are added by uncontrollable environmental factors such as general economic conditions, technology, public policies and laws, political environment, competition, and social and cultural changes. Another factor in this mix is the complexity of consumers. Marketing research helps the marketing manager link the marketing variables with the environment and the consumers. It helps remove some of the uncertainty by providing relevant information about the marketing variables, environment, and consumers.

In the absence of relevant information, consumers' response to marketing programs cannot be predicted reliably or accurately. Ongoing marketing research programs provide information on controllable and non-controllable factors and consumers; this information enhances the effectiveness of decisions made by marketing managers. Traditionally, marketing researchers were responsible for providing the relevant information and marketing decisions were made by the managers. However, the roles are changing and marketing researchers are becoming more involved in decision making, whereas marketing managers are becoming more involved with research.

The role of marketing research in managerial decision making is explained further using the framework of the "DECIDE" model: steps. The decision process begins by precisely defining the problem or opportunity, along with the objectives and constraints. Next, the possible decision factors that make up the alternative courses of action (controllable factors) and uncertainties (uncontrollable factors) are enumerated. Then, relevant information on the alternatives and possible outcomes is collected. The next step is to identify

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and select the best alternative based on chosen criteria or measures of success.

Then a detailed plan to develop and implement the alternative selected is developed and put into effect. Last, the outcome of the decision and the decision process itself are evaluated. What is the Role of Research?

Managers and CEOs often want to base their brand decision on measurable market research. So, how much market research should you do? Research can never give you all the answers, but it can be effectively used to understand how target audiences might receive a new idea, or to find a new market opportunity.

Operations research applies sophisticated statistical analysis and mathematical modeling to solve an array of business and organizational problems, as well as improve decision-making. As the business environment grows more complex, companies and government agencies rely on analysis to inform decisions that were once based largely on management intuition. Originally developed by the U. S. Department of Defense during World War II, operations research has helped many large companies and government agencies make better decisions, boost performance and reduce risk. Also read which formal research source is best to obtain firsthand information?

Modern challenges associated with a global economy and the growth of technology has increased the complexity of the business environment. Modern corporations often strive to serve a global, rather than a regional or national, customer base and face worldwide competition. By relying on sophisticated mathematical models and advanced software tools, operations

research can assess all available options facing a firm, project possible outcomes and analyze risks associated with particular decisions.

The result is more complete information on which management can make decisions and set policy, according to the Institute for Operations Research and the Management Sciences, INFORMS for short, a national organization of operations research professionals. Maximizing Data Companies collect large amounts of data but may feel overwhelmed by the volume and lack the time or expertise to fully analyze these data, transforming them into useful information on which to base decisions. Read about all the wrong moves

Operations research uses advanced mathematical and statistical techniques, such as linear programming and regression analysis, to help organizations make the most of their data, according to INFORMS' Science of Better website. Through detailed analysis of the data, operations research analysts can help uncover options that lead to higher profits, more-efficient Adding Value In its executive guide to operations research, "Seat-of-the-pants-Less," INFORMS reports that operations research has added value to organizations in the public and private sector alike.

For example, INFORMS reported that UPS used operations research to redesign its overnight delivery network in such a way that saved more than \$80 million between 2000 and 2002. Meanwhile, New Haven, Connecticut, used operations research to determine the extent to which the city's needle exchange program reduced HIV infection rates. Considerations INFORMS outlines five signs for organizations that could benefit from operations research. These indicators are facing complex decisions, having problems

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with processes, having trouble with risk, not making the most of available data and needing to overcome stiff competition.

Operations research analysts can help organizations overcome these challenges. Q2. Being a researcher in manufacturing organization, how can you search opportunities and monitor the threats of your products?

Opportunities: Exploring new-product opportunities involves the generation, development, and evaluation of ideas for new products. The fundamental steps include understanding the needs for new products, discovering existing and potential sources of ideas, describing internal and external requirements, and assessing the opportunities.

The steps include reflecting on goals and priorities, examining guidelines, resolving problems and conflicts, evaluating ideas, and selecting candidates for further development. Idea generation represents the genesis of the new-product development (NPD) process. While new-product development is a continuum in many organizations with ideas constantly flowing from individuals, teams, and business units, the Idea Generation Phase is the formal starting point of the NPD process where the ideas are identified, assessed, evaluated, ranked, and screened.

New-product ideas are obtained from every facet of the business environment and the organization. The exploration of new-product opportunities requires an extensive study of external and stakeholder expectations. It also requires a thorough assessment of the internal strengths and weaknesses with respect to the existing product portfolio and capabilities. Occasionally, luck plays a role as well; ideas simply become

apparent or occasionally mistakes in the laboratory turn into opportunities. M's Post-it Notes are an example of a product line that evolved from the failure to develop a super adhesive. The semi-sticky substance that resulted from the experiments became the perfect material for making detachable notes.

Threats:

Threat 1: The most valuable assets of a restaurant are the food and the service. One way a restaurant can capitalize on threat #1 is to create a website with photos, a blog and post sample recipes online. The benefit to posting photos is potential customers get to see the inside of the restaurant, i. e, the staff, patrons, décor, etc.

A blog would allow the chef or owner to share thoughts and "stories" with potential guests. These would be the same types of thoughts and conversations she would share with the people sitting at her tables. Finally, by posting sample recipes, this would allow customers to actually get a "taste" of the actual food being served.

Threat #2: Most of us are familiar with the type of offline advertisements, so I won't rehash this information.

Threat #3: Leveraged distribution: A restaurant could bottle and distribute its best-selling salad dressing to regional or national distributors.

This additional distribution would allow people all over the country to taste this one-of-a-kind recipe. As you can see, any type of business can be a triple

threat to its competitors. Yes, it takes a little extra effort and time to implement these new ideas, but the reward will be worth the effort.

Q3. Develop a correlation between concept, hypothesis and theory. Discuss the significant features ; classifications of developing theory? There is not usually any difference between a hypothesis and a model in science. A model is basically our hypothesis of the nature of a phenomenon. However, not every hypothesis need be a model; some hypotheses are not related to the nature of things, but only to the existence or nonexistence of a certain phenomenon. In technical fields, models are intended so that study of their behaviour in cases where this is advantageous or even necessary can replace study of the behaviour of the ctual, modeled object. Models are created in science so that we can test their validity and thus reject the relevant hypothesis. A theory is actually a more interconnected hypotheses. The usual concept of lay persons that a hypothesis is an insufficiently verified theory certainly does not hold true.

Hypothesis: A testable statement about the natural world that can be used to build more complex inferences and explanations.

Theory: In science, a well-substantiated explanation of some aspect of the natural world that can incorporate facts, laws, inferences, and tested hypotheses. " Both hypotheses and theories are statements about the physical universe. There is no clear or sharp dividing line between them. Hypotheses tend to be more specific statements. An example would be: Fibroblast growth factor (FGF) is a growth factor for human skin fibroblasts.

FGF is a protein that stimulates the division of human skin fibroblasts. Now you test the hypothesis in an attempt to show it to be wrong or false. If you fail, then the hypothesis is a supported hypothesis. If you succeed, the hypothesis is a falsified hypothesis. In this case, the hypothesis is supported; FGF got its name because it did stimulate the division of human skin fibroblasts. Theories tend to be more general statements. This is where the gray area comes in. How general does a statement have to be before it moves from hypothesis to theory? There is no clear cut answer.

An example of a theory would be: Fibroblast growth factor is a growth factor for all mammalian mesodermal cells. Fibroblasts are a mesodermal cell but other mesodermal cells are bone cells, cartilage cells, and the cells that make up blood vessels. Now, the supported hypothesis of FGF for human skin fibroblasts becomes part of the theory. Laws involving cell replication also are part of the theory. The theory can be either supported or falsified. But a theory doesn't stop being a theory when it is falsified. It simply moves from the short list of supported theories to the very long list of falsified theories.

As it turns out, FGF is a growth factor for all the cell types I named in both humans and a number of other mammalian species: rats, mice, monkeys, and rabbits. So the theory that FGF is a growth factor for mammalian mesodermal cells is a supported theory. Notice we have not tested FGF on all mesodermal cell types from all mammals. The theory could still turn out to be wrong in part. Then it would be modified. Laws are very well supported



theories. As the NAS definition implies, they are restricted to part of the universe and precisely stated circumstances.

They tend to take the general form "all A's are B" and are often mathematical. The classic examples are Newton's Laws of Motion. The Second Law of Motion is "The relationship between an object's mass  $m$ , its acceleration  $a$ , and the applied force  $F$  is  $F = ma$ . Acceleration and force are vectors; in this law the direction of the force vector is the same as the direction of the acceleration vector. was to find Laws. However, when Einstein came along and showed that Newton's Laws of Motion were a subset of the equations of Special and General Relativity, the idea of "laws" dropped out of favor in science.

Thus, Einstein's Special Theory of Relativity is still referred to as a "theory" and has never been called "Einstein's Special Law of Relativity". This despite that it holds the same regard as did Newton's "laws". Some theories once referred to as "law" are not referred that way any longer. For instance, in genetics there was the Hardy-Weinberg Law that basically said that, in large populations without gene flow and random mating, the frequency of alleles remained constant from generation to generation. This is now referred to as the Hardy-Weinberg Principle.

Q4. Discuss in detail the research data procedure. Elaborate the nature and types of primary and secondary data resources? Data can be defined as the quantitative or qualitative values of a variable. Data is plural of Datum which literally means to give or something given. Data is thought to be the lowest unit of information from which other measurements and analysis can be

done. Data can be numbers, images, words, figures, facts or ideas. Data in itself cannot be understood and to get information from the data one must interpret it into meaningful information.

There are various methods of interpreting data. Data sources are broadly classified into primary and secondary data. Importance of Data and Data Collection: Data is one of the most important and vital aspect of any research studies. Researchers conducted in different fields of study can be different in methodology but every research is based on data which is analyzed and interpreted to get information. Data is the basic unit in statistical studies. Statistical information like census, population variables, health statistics, and road accidents records are all developed from data.

Data is important in computer science. Numbers, images and figures in computer are all data.

Types of Data Primary Data: Data that has been collected from first-hand-experience is known as primary data. Objective. Primary data has not been changed or altered by human beings; therefore its validity is greater than secondary data. Importance of Primary Data: Importance of Primary data cannot be neglected. A research can be conducted without secondary data but a research based on only secondary data is least reliable and may have biases because secondary data has already been manipulated by human beings.

In statistical surveys it is necessary to get information from primary sources and work on primary data: for example, the statistical records of female

population in a country cannot be based on newspaper, magazine and other printed sources. One such source are old and secondly they contain limited information as well as they can be misleading and biased. Validity: Validity is one of the major concerns in a research. Validity is the quality of a research that makes it trustworthy and scientific. Validity is the use of scientific methods in research to make it logical and acceptable.

Using primary data in research can improves the validity of research. First hand information obtained from a sample that is representative of the target population will yield data that will be valid for the entire target population.

Authenticity: Authenticity is the genuineness of the research. Authenticity can be at stake if the researcher invests personal biases or uses misleading information int he research. Primary research tools and data can become more authentic if the methods chosen to analyze and interpret data are valid and reasonably suitable for the data type..

Primary sources are more authentic because the facts have not been overdone. Primary source can be less authentic if the source hides information or alters facts due to some personal reasons. There are methods that can be employed to ensure factual yielding of data from the source.

Reliability: Reliability is the certainty that the research is enough true to be trusted on. For example, if a research study concludes that Junk food consumption does not increase the risk of cancer and heart diseases. This conclusion should have to be drawn from a sample whose size, sampling technique and variability is not uestionable.

Reliability improves with using primary data. In the similar research mentioned above if the researcher uses experimental method and questionnaires the results will be highly reliable. On the other hand, if he relies on the data available in books and on internet he will collect information that does not represent the real facts.

Sources of Primary Data: Sources for primary data are limited and at times it becomes difficult to obtain data from primary source because of either scarcity of population or lack of cooperation. authentic and reliable data source. Following are some of the sources of primary data.

Experiments: Experiments require an artificial or natural setting in which to perform logical study to collect data. Experiments are more suitable for medicine, psychological studies, nutrition and for other scientific studies. In experiments the experimenter has to keep control over the influence of any extraneous variable on the results. Survey: Survey is most commonly used method in social sciences, management, marketing and psychology to some extent. Surveys can be conducted in different methods.

Questionnaire: is the most commonly used method in survey.

Questionnaires are list of questions open-ended or close-ended for which the respondent gives answers. Questionnaire can be conducted via telephone, mail, live in a public area, or in an institute, through electronic mail or through fax and other methods. Interview: Interview is a face-to-face conversation with the respondent. In interview the main problem arises when the respondent deliberately hides information otherwise it is an in depth

source of information. The interviewer can not only record the statements the interviewee speaks but he can observe the body language, expressions and other reactions to the questions too.

This enables the interviewer to draw conclusions easily.

**Observations:** Observation can be done while letting the observing person know that he is being observed or without letting him know. Observations can also be made in natural settings as well as in artificially created environment. **Secondary Data:** Data collected from a source that has already been published in any form is called as secondary data. The review of literature in nay research is based on secondary data. Mostly from books, Journals and periodicals.

**Importance of Secondary Data:** Secondary data can be less valid but its importance is still there.

Sometimes it is difficult to obtain primary data; in these cases getting information from secondary sources is easier and possible. Sometimes primary data does not exist in such situation one has to confine the research on secondary data. Sometimes primary data is present but the respondents are not willing to reveal it in such case too secondary data can suffice: for example, if the research is on the psychology of transsexuals first it is difficult to find out transsexuals and second they may not be willing to give published sources.

**Sources of Secondary Data:** Secondary data is often readily available.

After the expense of electronic media and internet the availability of secondary data has become much easier.

**Published Printed Sources:** There is variety of published printed sources. Their credibility depends on many factors. For example, on the writer, publishing company and time and date when published. New sources are preferred and old sources should be avoided as new technology and researches bring new facts into light.

**Books:** Books are available today on any topic that you want to research. The use of books starts before even you have selected the topic.

After selection of topics books provide insight on how much work has already been done on the same topic and you can prepare your literature review.

Books are secondary source but most authentic one in secondary sources.

**Journals/periodicals:** Journals and periodicals are becoming more important as far as data collection is concerned. The reason is that Journals provide up-to-date information which at times books cannot and secondly, Journals can give information on the very specific topic on which you are researching rather talking about more general topics.

**Magazines/Newspapers:** Magazines are also effective but not very reliable.

Newspaper on the other hand is more reliable and in some cases the information can only be obtained from newspapers as in the case of some political studies.

**Published Electronic Sources:** As internet is becoming more advance, fast and reachable to the masses; it has been seen that much information that is

not available in printed form is available on internet. In the past the credibility of internet was questionable but today it is not.

The reason is that in the past Journals and books were seldom published on internet but today almost every Journal and book is available online. Some are free and for others you have to pay the price.

e-Journals: e-Journals are more commonly available than printed Journals. Latest journals are difficult to retrieve without subscription but if your university has an e- library you can view any Journal, print it and those that are not available you can make an order for them.

General websites: Generally websites do not contain very reliable information so their content should be checked for the reliability before quoting from them.

Weblogs: Weblogs are also becoming common. They are actually diaries written by Unpublished Personal Records: Some unpublished data may also be useful in some cases.

Diaries: Diaries are personal records and are rarely available but if you are conducting a descriptive research then they might be very useful. The Anne Frank's diary is the most famous example of this.