



Research Methods *for* **Business**

**A Skill-
Building
Approach**

SEVENTH EDITION

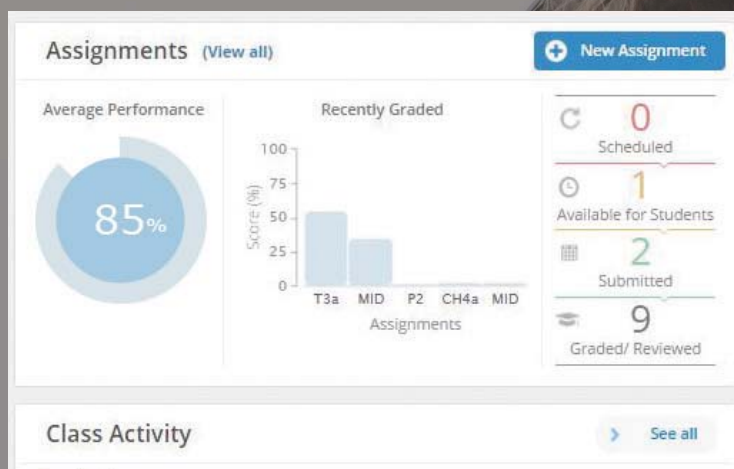
Uma Sekaran and Roger Bougie

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Research Methods for Business

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A Skill-Building Approach

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Uma Sekaran
and
Roger Bougie

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PREFACE

I have used previous editions of this book in various research methods courses with great success. For many years the book has helped thousands of my own students (undergraduate students, graduate students, and executive students), as well as many more around the world, to carry out their research projects. The great strength of *Research Methods for Business* is that students find it clear, informal, easy to use and unthreatening. I have tried to maintain these strengths in this seventh edition.

CHANGES IN THE SEVENTH EDITION

The seventh edition of *Research Methods for Business* has been thoroughly revised.

- Chapter 3 (Defining and Refining the Problem), Chapter 4 (The Critical Literature Review), Chapter 6 (Elements of Research Design), Chapter 7 (Interviews), Chapter 9 (Administering Questionnaires), Chapters 14 and 15 (Quantitative Data Analysis), and Chapter 17 (The Research Report) have been substantially modified and updated in this edition.
- Examples, exercises, and other pedagogical features have been revised and updated in all the chapters.
- The structure of the book has not changed, but the storyline has been greatly improved. As in previous editions, the accessible and informal style of presenting information has been maintained and the focus on practical skill building preserved.
- Chapter 2 introduces and discusses alternative approaches to research. In the new edition, subsequent chapters follow up on this by reviewing a range of topics (such as research questions, research design, and measurement) from various perspectives. This allows users of this book to recognize and develop their *personal ideas* on research and how it should be done, to determine which kinds of research questions are important to them, and what methods for collecting and analyzing data will give them the best answers to their research questions.

The book provides numerous examples to illustrate the concepts and points presented. Users will also note the variety of examples from different areas of the world as well as different areas of business – human resources management, strategic management, operations management, management control, marketing, finance, accounting, and information management.

Most chapters in the book include managerial implications of the contents discussed, emphasizing the need for managers to understand research. The ethical considerations involved in conducting research are also clearly brought out. The dynamics of cross-cultural research in terms of instrument development, surveys, and sampling are discussed, which, in the context of today's global economy, will be useful to students.

We expect that students and instructors alike will enjoy this edition. Students should become effective researchers, helped by the requisite knowledge and skills acquired by the study of this book. Finally, it is hoped that students will find research interesting, unthreatening, and of practical use.

HOW TO USE THIS SEVENTH EDITION

You can read this book in a variety of ways, depending on your reasons for using this book.

If the book is part of a Business Research Methods course, the order in which you read the chapters will be prescribed by your instructor.

If you are reading the book because you are engaged in a project (a consultancy project, a research project, or a dissertation) then the order in which you read the chapters is your own choice. However, we recommend that you follow the structure of the book rather closely. This means that we advise you to start with reading the first three chapters that introduce research, various approaches to what makes good research, and the development of a problem statement and a research proposal. Based on the type of research questions and whether, as a result of your research questions, your study is either qualitative or quantitative in nature you may decide to read the book in the following way.

In the case of qualitative research:

4	The critical literature review
6	Research design
7, 8, and/or 9	Data collection methods
13	Sampling
16	Qualitative data analysis
17	The research report

In the case of quantitative research:

4	The critical literature review
5	Theoretical framework
6	Research design
9	Questionnaires
10	Experimental designs
11 and 12	Measurement and Scaling
13	Sampling
14 and 15	Quantitative data analysis
17	The research report

COMPANION WEBSITES

Lecturers and students have a dedicated companion website available at www.wiley.com/college/sekaran.

Lecturers will find a range of bespoke video material, developed by the author to provide extra explanation on difficult topics; videos are signposted in the text. The lecturer website also houses additional case studies related to each chapter, including accompanying cases for the three new chapters. There is also an extensive test bank for lecturers, a comprehensive set of PowerPoint slides to accompany the new edition, and an instructor's manual, which offers an up-to-date and valuable additional teaching aid.

Students will find an online glossary and flashcards, which are useful for self-study and revision. In addition, the student website provides self-test quizzes with over 250 questions for students to use while studying outside the classroom.

ACKNOWLEDGMENTS

Working on the seventh edition of *Research Methods for Business* has been a positive and rewarding experience. Many people have contributed to this in many different ways. Thank you colleagues at Tilburg University and the TIAS School for Business and Society for your feedback on earlier versions of this book. Thank you for providing me with a pleasant, professional and inspiring work environment. Thank you dear students for the lively and inspiring discussions we have had during the past twenty years; I have learned a lot from these discussions. Thanks everybody at John Wiley & Sons, in particular Steve Hardman, for your support, your patience, and your confidence. Thank you reviewers for your constructive and insightful comments on earlier drafts of this book.

Roger Bougie

Introduction to research

LEARNING OBJECTIVES

After completing Chapter 1 you should be able to:

1. Describe and define business research.
2. Distinguish between applied and basic research, giving examples, and discussing why they fall into one or the other of the two categories.
3. Explain why managers should know about research and discuss what managers should and should not do in order to interact effectively with researchers.
4. Identify and fully discuss specific situations in which a manager would be better off using an internal research team, and when an external research team would be more advisable, giving reasons for the decisions.
5. Discuss what research means to you and describe how you, as a manager, might apply the knowledge gained about research.
6. Demonstrate awareness of the role of ethics in business research.

INTRODUCTION

Just close your eyes for a minute and utter the word *research* to yourself. What kinds of images does this word conjure up for you? Do you visualize a lab with scientists at work with Bunsen burners and test tubes, or an Einstein-like character writing a dissertation on some complex subject such as ‘behavioral heterogeneity in economic institutions’, or someone analyzing large amounts of scanner data to assess the impact of a price reduction on sales? Most certainly, all these images do represent different aspects of research. However, research is not necessarily characterized by Bunsen burners, Einstein-like characters or Big Data. **Research**, a somewhat intimidating term for some, is simply the process of finding solutions to a problem after a thorough study and analysis of the situational factors. Along these lines, people (consumers, investors, managers) constantly engage themselves in exploring and examining issues – and hence are involved in some form of research activity- as they want to change mobile phone providers, buy a new car, go to the movies, invest in a business startup, or increase advertising expenditures in their role as a manager.

Research, in some form or another, may help *managers* in organizations to make decisions at the workplace. As we all know, sometimes they make good decisions and the problem gets solved; sometimes they make poor decisions and the problem persists; and on occasions they make such colossal blunders that they get stuck in the mire. The difference between making good decisions and committing blunders often lies in how we go about the decision-making process. In other words, good decision making fetches a “yes” answer to the following questions: Do we identify where exactly the problem lies? Do we correctly recognize the relevant factors in the situation needing investigation? Do we know what types of information are to be gathered and how? Do we know how to make use of the information so collected and draw appropriate conclusions to make the right decisions? And, finally, do we know how to implement the results of this process to solve the problem? This is the essence of research and to be a successful manager it is important to know how to go about making the right decisions by being knowledgeable about the various steps involved in finding solutions to problematic issues of interest to the organization and/or its stakeholders. This is what this book is all about.

Business research

Business research can be described as a systematic and organized effort to investigate a specific problem encountered in the work setting, which needs a solution. It comprises a series of steps that are designed and executed with the goal of finding answers to the issues that are of concern to the manager in the work environment. This means that the first step in research is to know where the problem areas exist in the organization, and to identify as clearly and specifically as possible the problems that need to be studied and resolved. Once the problem is clearly defined, steps can be taken to determine the factors that are associated with the problem, gather information, analyze the data, develop an explanation for the problem at hand and then solve it by taking the necessary corrective measures.

The entire process by which we attempt to solve problems is called research. Thus, research involves a series of well-thought-out and carefully executed activities that enable the manager to know how organizational problems can be solved, or at least considerably minimized. Research encompasses the processes of inquiry, investigation, examination, and experimentation. These processes have to be carried out systematically, diligently, critically, objectively, and logically. The expected end result would be a discovery that helps the manager to deal with the problem situation.

Identifying the critical issues, gathering relevant information, analyzing the data in ways that help decision making, and implementing the right course of action, are all facilitated by understanding business research. After all, decision making is simply a process of choosing from among alternative solutions to resolve a problem and research helps to generate viable alternatives for effective decision making. Knowledge of research thus enables you to undertake research yourself in order to solve the smaller and bigger problems that you will encounter in your (future) job as a treasurer, controller, brand manager, product manager, marketing manager, IT auditor, project manager, business analyst, or consultant. What’s more, it will help you to discriminate between good and bad studies published in (professional) journals, to discriminate between good and bad studies conducted by research agencies, to discriminate between good and bad research proposals of research agencies, and to interact more effectively with researchers and consultants.

We can now define business research as an *organized, systematic, data-based, critical, objective, inquiry or investigation into a specific problem*, undertaken with the purpose of finding answers or solutions to it. In essence, research provides the necessary information that guides managers to make *informed* decisions to successfully deal with problems. The information provided could be the result of a careful analysis of *primary* data gathered first-hand or of *secondary* data that are already available (in the company, industry, archives, etc.). These data can be *quantitative* (quantitative data are data in the form of numbers as generally gathered through structured questions) or *qualitative* (qualitative data are data in the form of words) as generated from the broad answers to questions in interviews, or from responses to open-ended questions in a questionnaire, or through observation, or from already available information gathered from various sources such as the Internet.

The role of theory and information in research

We have just explained that research comes in many forms and shapes. There are different types of questions research projects can address and there are many different approaches to collecting and analyzing different types of data. What's more, some research is aimed at building theory, whereas other research is designed to test a theory or to describe what is going on, using an existing framework, instrument, or model. Indeed, in one form or another, both theory and information play an important role in a research project.

The term 'theory' can mean a lot of different things, depending on whom you ask. Many people use the word 'theory' to mean an idea or hunch that someone has, for instance about the optimal formation of a soccer team, investment bankers' salaries, or the Apollo program and the associated moon landings ('the Apollo moon landing didn't happen'). For others, a theory is any concept, instrument, model, or framework that helps them to think about or solve a problem, to describe a phenomenon, or to better understand a topic of interest, such as competitive advantage, portfolio management, or the sociology of Canadian donut shops. To a scientist, a theory explains a certain phenomenon, and the idea is that this explanation will hold in a wide range of settings. For instance, expectancy theory proposes that people will choose how to behave depending on the outcomes they expect as a result of their behavior. In other words, people decide what to do based on what they expect the outcome to be. At work, for example, it might be that people work longer hours because they expect an increase in pay. Like this, a theory may generate testable – and sooner or later, tested – predictions. A theory (in the formal, scientific sense) may thus vary in the extent to which it has been conceptually developed and empirically tested. We will have more to say about the role of information and theory in the research process in subsequent chapters.

Research and the manager

Visit the companion website at www.wiley.com/college/sekaran for **Author Video: Research and the manager.**

An experience common to all organizations is that the managers thereof encounter problems, big and small, on a daily basis, which they have to solve by making the right decisions. In business, research is usually primarily conducted to resolve problematic issues in, or interrelated among, the areas of accounting, finance, management, and marketing. In *accounting*, budget control systems, practices, and procedures are frequently examined. Inventory costing methods, accelerated depreciation, time-series behavior of quarterly earnings, transfer pricing, cash recovery rates, and taxation methods are some of the other areas that are researched. In *finance*, the operations of financial institutions, optimum financial ratios, mergers and acquisitions, leveraged buyouts, intercorporate financing, yields on mortgages, the behavior of the stock exchange, the influence of psychology on the behavior of financial practitioners and the subsequent effect on markets, and the like, become the focus of investigation. *Management* research could encompass the study of employee attitudes and behaviors, human resources management, the impact of changing demographics on management practices, production operations management, strategy formulation, information systems, and the like. *Marketing* research could address issues pertaining to consumer decision making, customer satisfaction and loyalty, market segmentation, creating a competitive advantage, product image, advertising, sales promotion, marketing channel management, pricing, new product development, and other marketing aspects.

Exhibit 1 gives an idea of some commonly researched topical areas in business.

EXHIBIT 1

SOME COMMONLY RESEARCHED AREAS IN BUSINESS

1. Employee behaviors such as performance, absenteeism, and turnover.
2. Employee attitudes such as job satisfaction, loyalty, and organizational commitment.
3. Supervisory performance, managerial leadership style, and performance appraisal systems.
4. Employee selection, recruitment, training, and retention.
5. Validation of performance appraisal systems.
6. Human resource management choices and organizational strategy.
7. Evaluation of assessment centers.
8. The dynamics of rating and rating errors in the judgment of human performance.
9. Strategy formulation and implementation.
10. Just-in-time systems, continuous-improvement strategies, and production efficiencies.
11. Updating policies and procedures in keeping with latest government regulations and organizational changes.
12. Organizational outcomes such as increased sales, market share, profits, growth, and effectiveness.
13. Consumer decision making.
14. Customer relationship management.
15. Consumer satisfaction, complaints, customer loyalty, and word-of-mouth communication.
16. Complaint handling.
17. Delivering and performing service.
18. Product life cycle, new product development, and product innovation.
19. Market segmentation, targeting, and positioning.
20. Product image, corporate image.
21. Cost of capital, valuation of firms, dividend policies, and investment decisions.
22. Risk assessment, exchange rate fluctuations, and foreign investment.
23. Tax implications of reorganization of firms or acquisition of companies.
24. Market efficiency.
25. Banking strategies.
26. Behavioral finance: overconfidence, bounded rationality, home-bias.
27. Executive compensation.
28. Mergers and acquisitions.
29. Portfolio and asset management.
30. Financial reporting.
31. Cash flow accounting.
32. Accounting standards.
33. Outsourcing of accounting.
34. Sustainability reporting.

35. The implications of social networks on the capital markets.
36. Corporate governance.
37. Development of effective cost accounting procedures.
38. Installation of effective management information systems.
39. Advanced manufacturing technologies and information systems.
40. Auditor behavior.
41. Approaches and techniques of auditing.
42. The use of technology in auditing.
43. Decision making in auditing.
44. Installation, adaptation, and updating of computer networks and software suitable for creating effective information systems for organizations.
45. Installation of an effective data warehouse and data mining system for the organization.
46. The acceptance of new computer programs.
47. Tax audits.
48. Internal auditing.
49. Accounting fraud and auditor liability.
50. The quality of audit reports.

Not only are the issues within any subarea related to many factors within that particular system, but they must also be investigated in the context of the external environment facing the business. For example, economic, political, demographic, technological, competitive, and other relevant global factors could impinge on some of the dynamics related to the firm. These have to be scrutinized as well to assess their impact, if any, on the problem being researched.

TYPES OF BUSINESS RESEARCH: APPLIED AND BASIC

Research can be undertaken for two different purposes. One is to solve a current problem faced by the manager in the work setting, demanding a timely solution. For example, a particular product may not be selling well and the manager might want to find the reasons for this in order to take corrective action. Such research is called **applied research**. The other is to generate a body of knowledge by trying to comprehend how certain problems that occur in organizations can be solved. This is called **basic, fundamental, or pure research**.

It is quite possible that some organizations may, at a later stage, apply the knowledge gained by the findings of basic research to solve their own problems. For instance, a university professor may be interested in investigating the factors that contribute to absenteeism as a matter of mere academic interest. After gathering information on this topic from several institutions and analyzing the data, the professor may identify factors such as inflexible work hours, inadequate training of employees, and low morale as primarily influencing absenteeism. Later on, a manager who encounters absenteeism of employees in his organization may use this information to determine if these factors are relevant to that particular work setting.

In sum, research done with the intention of applying the results of the findings to solve specific problems currently being experienced in an organization is called applied research. Research done chiefly to make a contribution to existing knowledge is called basic, fundamental, or pure research. The findings of such research contribute to the building of knowledge in the various functional areas of business; they teach us something we did not know before. Such knowledge, once generated, is usually later applied in organizational settings for problem solving.

Applied research

The following examples, following two situations cited in *Businessweek* and *The New York Times*, should provide some idea of the scope of business research activities.

EXAMPLE

1. Globally, colas account for more than 50% of all sodas sold. The challenge for the \$187 billion soft drink industry is giving consumers in developed markets the sugary taste they want without giving them the mouthful of calories they don't. Concerns about obesity and health have led to nine years of falling U.S. soda consumption. The soda giants can't rely on existing diet versions of their namesake colas, as consumers are shying away from the artificial sweeteners they contain. Critics have blamed the ingredients – rightly or not – for everything from weight gain to cancer. Diet Coke is losing U.S. sales at 7% a year, almost double the rate of decline of American cola sales overall. So Coke and Pepsi are turning to research to save their cola businesses, which take in about two-thirds of the industry's U.S. sales. "If you can crack the perfect sweetener, that would be huge," says Howard Telford, an analyst at researcher Euromonitor International.

Source: Stanford, D. (2015, March 19). *Scientists Are Racing to Build a Better Diet Soda*. Retrieved from <http://www.bloomberg.com/news/articles/2015-03-19/coke-pepsi-look-for-perfect-sweetener>

2. In classical mythology, Aquila is the eagle carrying Jupiter's thunderbolts skyward. At Facebook, it is the code name for a high-flying drone, indicative of the social networking company's lofty ambitions.

The V-shaped unmanned vehicle, which has about the wingspan of a Boeing 767 but weighs less than a small car, is the centerpiece of Facebook's plans to connect with the 5 billion or so people it has yet to reach. Taking to the skies to beam Internet access down from solar-powered drones may seem like a stretch for a tech company that sells ads to make money. The business model at Facebook, which has 1.4 billion users, has more in common with NBC than Boeing. But in a high-stakes competition for domination of the Internet, in which Google wields high-altitude balloons and high-speed fiber networks, and Amazon has experimental delivery drones and colossal data centers, Facebook is under pressure to show that it, too, can pursue projects that are more speculative than product. One of those offbeat ideas, or so the thinking goes, could turn out to be a winner. "The Amazons, Googles and Facebooks are exploring completely new things that will change the way we live," said Ed Lazowska, who holds the Bill and Melinda Gates Chair in Computer Science and Engineering at the University of Washington.

Source: Hardy, Q. & Goel, V. (2015, March 26). *Drones Beaming Web Access are in the Stars for Facebook*. Retrieved from <http://www.nytimes.com/2015/03/26/technology/drones-beaming-web-access-are-in-the-stars-for-facebook.html>

The two preceding examples illustrate the benefits of applied research.

Basic or fundamental research

EXAMPLE

Right from her days as a clerical employee in a bank, Sarah had observed that her colleagues, though extremely knowledgeable about the nuances and intricacies of banking, were expending very little effort to improve the efficiency and effectiveness of the bank in the area of customer relations and service. They took on the minimum amount of work, availed themselves of long tea and lunch breaks, and seemed unmotivated in their dealings with the customers and the management. That they were highly knowledgeable about banking policies and practices was clearly evident from their discussions as they processed applications from customers. Sarah herself was very hardworking and enjoyed her work with the customers. She always used to think what a huge waste it was for talented employees to goof off rather than to work hard and enjoy their work. When she left the bank and did the

dissertation for her PhD, her topic of investigation was Job Involvement, or the ego investment of people in their jobs. The conclusion of her investigation was that the single most important contributory factor to job involvement is the fit or match between the nature of the job and the personality predispositions of the people engaged in performing it. For example, challenging jobs allowed employees with high capabilities to get job-involved, and people-oriented employees got job-involved with service activities. Sarah then understood why the highly intelligent bank employees could not get job-involved or find job satisfaction in the routine jobs that rarely called for the use of their abilities.

Subsequently, when Sarah joined the Internal Research Team of a Fortune 500 company, she applied this knowledge to solve problems of motivation, job satisfaction, job involvement, and the like, in the organization.

The above is an instance of basic research, where knowledge was generated to understand a phenomenon of interest to the researcher. Most research and development departments in various industries, as well as many professors in colleges and universities, do basic or fundamental research so that more knowledge is generated in particular areas of interest to industries, organizations, and researchers. Though the objective of engaging in basic research is primarily to equip oneself with additional knowledge of certain phenomena and problems that occur in several organizations and industries with a view to finding solutions, the knowledge generated from such research is often applied later for solving organizational problems.

As stated, the primary purpose of conducting basic research is to generate more knowledge and understanding of the phenomena of interest and to build theories based on the research results. Such theories subsequently form the foundation of further studies on many aspects of the phenomena. This process of building on existing knowledge is the genesis for theory building, particularly in the management area.

Several examples of basic research can be provided. For instance, research into the causes and consequences of global warming will offer many solutions to minimize the phenomenon, and lead to further research to determine if and how global warming can be averted. Although research on global warming might primarily be for the purpose of understanding the nuances of the phenomenon, the findings will ultimately be applied and useful to, among others, the agricultural and building industries.

Many large companies, such as Apple, BMW, General Electric, Google, Microsoft, and Shell, also engage in basic research. For instance, fundamental research carried out at the German BMW facilities is aimed at further reducing the fleet's greenhouse gas emissions and promoting electromobility innovations. High-tech companies such as Apple, Microsoft, Google, and Facebook study online behavior and interactions to gain insights into how social and technological forces interact. This allows them to build new forms of online experiences around communities of interest and to increase their understanding of how to bring people together.

University professors engage in basic research in an effort to understand and generate more knowledge about various aspects of businesses, such as how to improve the effectiveness of information systems, integrate technology into the overall strategic objectives of an organization, assess the impact of marketing action, increase the productivity of employees in service industries, monitor sexual harassment incidents at the workplace, increase the effectiveness of small businesses, evaluate alternative inventory valuation methods, change the institutional structure of the financial and capital markets, and the like. These findings later become useful for application in business situations.

As illustrated, the main distinction between applied and basic business research is that the former is specifically aimed at solving a currently experienced problem within a specific organization, whereas the latter has the broader objective of generating knowledge and understanding of phenomena and problems that occur in various organizational settings. Despite this distinction, both types of research may benefit from following the same steps of systematic inquiry to arrive at solutions to problems. For this reason, both basic and applied research are often carried out in a scientific manner (discussed in the next chapter) so that the findings or results generated by them can be relied upon to effectively solve the problem investigated.

MANAGERS AND RESEARCH

Why managers need to know about research

Managers with knowledge of research have an advantage over those without. Though you yourself may not be doing any major research as a manager, you will have to understand, predict, and control events that are dysfunctional within the organization. For example, a newly developed product may not be “taking off,” or a financial investment may not be “paying off” as anticipated. Such disturbing phenomena have to be *understood* and explained. Unless this is done, it will not be possible to *predict* the future of that product or the prospects of that investment, and how future catastrophic outcomes can be *controlled*. A grasp of research methods enables managers to understand, predict, and control their environment.

A thought that may cross your mind is that, because you will probably be bringing in researchers to solve problems instead of doing the research yourself, there is no need to bother to study research. The reasons for its importance become clear when one considers the consequences of failing to do so. With the ever-increasing complexity of modern organizations, and the uncertainty of the environment they face, the management of organizational systems now involves constant troubleshooting in the workplace. It would help if managers could sense, spot, and deal with problems *before* they got out of hand. Knowledge of research and problem-solving processes helps managers to identify problem situations before they get out of control. Although minor problems can be fixed by the manager, major problems warrant the hiring of outside researchers or consultants. The manager who is knowledgeable about research can interact effectively with them. Knowledge about research processes, design, and interpretation of data also helps managers to become discriminating recipients of the research findings presented, and to determine whether or not the recommended solutions are appropriate for implementation.

Another reason why professional managers today need to know about research methods is that they will become more discriminating while sifting through the information disseminated in business journals. Some journal articles are more scientific and objective than others. Even among the scientific articles, some are more appropriate for application or adaptation to particular organizations and situations than others. This is a function of the sampling design, the types of organizations studied, and other factors reported in the journal articles. Unless the manager is able to grasp fully what the published empirical research really conveys, she or he is likely to err in incorporating some of the suggestions such publications offer. By the same token, managers can handle with success their own problems at considerable cost savings by studying the results of “good” (discussed in the next chapter) published research that has addressed similar issues.

There are several other reasons why professional managers should be knowledgeable about research and research methods in business. First, such knowledge sharpens the sensitivity of managers to the myriad variables operating in a situation and reminds them frequently of the multicausality and multifinality of phenomena, thus avoiding inappropriate, simplistic notions of one variable “causing” another. Second, when managers understand the research reports about their organizations handed to them by professionals, they are equipped to take intelligent, educated, calculated risks with known probabilities attached to the success or failure of their decisions. Research then becomes a useful decision-making tool rather than generating a mass of incomprehensible statistical information. Third, if managers become knowledgeable about scientific investigations, vested interests inside or outside the organization will not prevail. For instance, an internal research group within the organization will not be able to distort information or manipulate the findings to their advantage if managers are aware of the biases that can creep into research and know how data are analyzed and interpreted. As an example, an internal research team might state that a particular unit to which it is partial (for whatever reason) has shown increased profits and hence should be allocated more resources to buy sophisticated equipment to further enhance its effectiveness. However, the increased profit could have been a one-time windfall phenomenon due to external environmental factors such as market conditions, bearing no relation whatever to the unit’s operating efficiency. Thus, awareness of the different ways in which data may be camouflaged will help the manager to make the right decision. Fourth, knowledge about research helps the manager to relate to and share pertinent information with the researcher or consultant hired for problem solving.

In sum, being knowledgeable about research and research methods helps professional managers to:

1. Identify and effectively solve minor problems in the work setting.
2. Know how to discriminate good from bad research.
3. Appreciate and be constantly aware of the multiple influences and multiple effects of factors impinging on a situation.
4. Take calculated risks in decision making, knowing full well the probabilities associated with the different possible outcomes.
5. Prevent possible vested interests from exercising their influence in a situation.
6. Relate to hired researchers and consultants more effectively.
7. Combine experience with scientific knowledge while making decisions.

The manager and the consultant–researcher

Managers often need to engage a consultant to study some of the more complex, time-consuming problems that they encounter, as in the case of Facebook mentioned earlier. It is thus important to be knowledgeable about how to effectively interact with the consultant (the terms researcher and consultant are used interchangeably), what the manager–researcher relationship should be, and the advantages and disadvantages of internal versus external consultants.

During their careers, it often becomes necessary for managers to deal with consultants. In such cases, the manager must not only interact effectively with the research team, but must also explicitly delineate the roles for the researchers and the management. The manager has to inform the researchers what types of information may be provided to them and, more importantly, which of their records will *not* be made available to them. Such records might include the personnel files of the employees, or certain trade secrets. Making these facts explicit at the very beginning can save a lot of frustration for both parties. Managers who are very knowledgeable about research can more easily foresee what information the researchers might require, and if certain documents containing such information cannot be made available, they can inform the research team about this at the outset.