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The Manager's Guide
to Measuring Marketing
Performance

Fourth Edition



Neil T. Bendle ■ Paul W. Farris
Phillip E. Pfeifer ■ David J. Reibstein

MARKETING METRICS

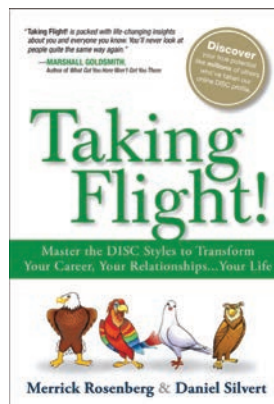
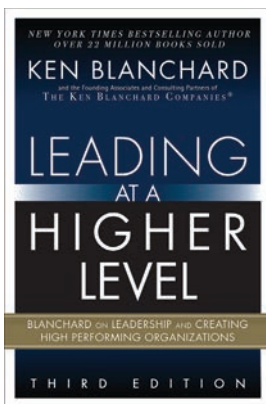
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*We dedicate this book to our students, colleagues,
and consulting clients, who convinced us that
a book like this would fill a real need.*

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We hope this book will be a step, however modest, toward clarifying the language, construction, and meaning of many of our important marketing metrics. If we have succeeded in making such a step, we owe thanks to a number of people.

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FOREWORD

Despite its importance, marketing is one of the least understood, least measurable functions at many companies. With sales force costs, it accounts for 10% or more of operating budgets at a wide range of public firms. Its effectiveness is fundamental to stock market valuations, which often rest upon aggressive assumptions for customer acquisition and organic growth. Nevertheless, many corporate boards lack the understanding to evaluate marketing strategies and expenditures. Most directors—and a rising percentage of Fortune 500 CEOs—lack deep experience in this field.

Marketing executives, for their part, often fail to develop the quantitative, analytical skills needed to manage productivity. Right-brain thinkers may devise creative campaigns to drive sales but show little interest in the wider financial impact of their work. Frequently, they resist being held accountable even for top-line performance, asserting that factors beyond their control—including competition—make it difficult to monitor the results of their programs.

In this context, marketing decisions are often made without the information, expertise, and measurable feedback needed. As Procter & Gamble’s Chief Marketing Officer has said, “Marketing is a \$450 billion industry, and we are making decisions with less data and discipline than we apply to \$100,000 decisions in other aspects of our business.” This is a troubling state of affairs. But it can change.

In an article in *The Wall Street Journal*, I called on marketing managers to take concrete steps to correct it. I urged them to gather and analyze basic market data, measure the core factors that drive their business models, analyze the profitability of individual customer accounts, and optimize resource allocation among increasingly fragmented media. These are analytical, data-intensive, left-brain practices. Going forward, I believe they’ll be crucial to the success of marketing executives and their employers. As I concluded in the *Journal*:

Today’s boards want chief marketing officers who can speak the language of productivity and return on investment and are willing to be held accountable. In recent years, manufacturing, procurement and logistics have all tightened their belts in the cause of improved productivity. As a result, marketing expenditures account for a larger percentage of many corporate cost structures than ever before. Today’s boards don’t need chief marketing officers who have creative flair but no financial discipline. They need ambidextrous marketers who offer both.

In *Marketing Metrics*, Bendle, Farris, Pfeifer, and Reibstein have given us a valuable means toward this end. In a single volume, and with impressive clarity, they have outlined the sources, strengths, and weaknesses of a broad array of marketing metrics. They have explained how to harness those data for insight. Most importantly, they have explained how to act on this insight—how to apply it not only in planning campaigns but also in measuring their impact, correcting their courses, and optimizing their results. In essence, *Marketing Metrics* is a key reference for managers who aim to become skilled in both right- and left-brain marketing. I highly recommend it for all ambidextrous marketers.

John A. Quelch

Leonard M. Miller University Professor and Vice Provost, University of Miami; and Dean, Miami Herbert Business School

FOREWORD TO THE FOURTH EDITION

At Google, we had a saying we used quite frequently: “Data beats opinion.” This mantra inspired us to constantly think about how we could increase the ratio of fact to speculation. What do we *actually* know versus what do we only *think* we know? The best approach we found was to determine our key performance indicators and then measure how we were doing against them on a regular basis. This allowed us to optimize and expand those programs that were working, while pulling back on those that were not.

In today’s hyper-competitive business landscape, most marketers are compelled to take a similar approach. No longer can marketers rely on conventional wisdom, rules of thumb, or intuition that may have been sufficient in the past.

The challenge, however, for all marketers is knowing *what* to measure and exactly *how* to measure it.

That’s where *Marketing Metrics* comes in. In its first three editions, I’ve found it to be the most comprehensive and authoritative guide to defining, constructing, and using the metrics every marketer needs today. It’s a book I keep handy on my shelf and refer to frequently.

As marketing continues to rapidly evolve, *Marketing Metrics* continues to stay at the cutting edge. This fourth edition updates and adds more detail on a number of the key metrics, including brand metrics and ROI. Given the increasing importance of online and social metrics, this new edition now dedicates a chapter to them that is separate from traditional advertising metrics. Herein you will also find a section about the metrics for the emerging area of neuro-marketing.

In our experience at Google, marketers who move with speed, make their messages highly relevant, and use data (it beats opinion!) are best positioned for success with today’s buyers and modern media vehicles. I therefore heartily recommend *Marketing Metrics* as the foundation of the data portion of this three-pronged recipe for marketing success!

Jim Lecinski

Clinical Associate Professor of Marketing, Northwestern University, and former Vice-President of Customer Solutions at Google

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INTRODUCTION

Data-based marketing swept through the business world and was followed by the era of big data. Measurable performance and accountability have become the keys to marketing success. However, even now, few managers appreciate the range of metrics by which they can evaluate marketing strategies and dynamics. Fewer still understand the pros, cons, and nuances of each.

In the early years of the millennium, we recognized that marketers, general managers, and business students needed a comprehensive, practical reference on the metrics used to judge marketing programs and quantify their results. This book was the result and seeks to provide that reference. This is now the fourth edition of the book, and we continue to wish our readers great success using this book to improve their understanding of marketing.

1.1 What Is a Metric?

A metric is a measuring system that quantifies a trend, dynamic, or characteristic.¹ In virtually all disciplines, practitioners use metrics to explain phenomena, diagnose causes, share findings, and project the results of future events. Throughout the worlds of science, business, and government, metrics encourage rigor and objectivity. They make it possible to compare observations across regions and time periods. They facilitate understanding and collaboration.

1.2 Why Do You Need Metrics?

“When you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind: it may be the beginning of knowledge, but you have scarcely, in your thoughts, advanced to the stage of science.”—Lord Kelvin, Popular Lectures and Addresses (1891–1894)²

Lord Kelvin, a British physicist and the manager in charge of laying the first successful transatlantic cable, was one of history's great advocates for quantitative investigation. In his day, however, mathematical rigor had not yet spread widely beyond the worlds of science, engineering, and finance. Much has changed since then.

Today, numeric fluency is a crucial skill for every business leader. Managers must quantify market opportunities and competitive threats. They must justify the financial risks and benefits of their decisions. They must evaluate plans, explain variances, judge performance, and identify leverage points for improvement—all in numeric terms. These responsibilities require a strong command of measurements and of the systems and formulas that generate them. In short, they require metrics.

Managers must select, calculate, and explain key business metrics. They must understand how each is constructed and how to use it in decision making. Consider the following, more recent quotes from management experts:

*“...every metric, whether it is used explicitly to influence behavior, to evaluate future strategies, or simply to take stock, will affect actions and decisions.”*³

*“If you can't measure it, you can't manage it.”*⁴

1.3 Marketing Metrics: Opportunities, Performance, and Accountability

Marketers are by no means immune to the drive toward quantitative planning and evaluation. Marketing may once have been regarded as more an art than a science. Executives may once have cheerfully admitted that they knew they wasted half the money they spent on advertising, but they didn't know which half. Those days, however, are gone.

Today, marketers must understand their addressable markets quantitatively. They must measure new opportunities and the investment needed to realize them. Marketers must quantify the value of products, customers, and distribution channels—all under various pricing and promotional scenarios. Increasingly, marketers are held accountable for the financial ramifications of their decisions. Observers have noted this trend in graphic terms:

*“For years, corporate marketers have walked into budget meetings like neighborhood junkies. They couldn't always justify how well they spent past handouts or what difference it all made. They just wanted more money—for flashy TV ads, for big-ticket events, for, you know, getting out the message and building up the brand. But those heady days of blind budget increases are fast being replaced with a new mantra: measurement and accountability.”*⁵

1.4 Choosing the Right Numbers

The numeric imperative represents a challenge. In business and economics, many metrics are complex and difficult to master. Some are highly specialized and best suited to specific analyses. Many require data that may be approximate, incomplete, or unavailable.

Under these circumstances, no single metric is likely to be perfect. For this reason, we recommend that marketers use a portfolio or “dashboard” of metrics. By doing so, they can view market dynamics from various perspectives and arrive at “triangulated” strategies and solutions. In addition, with multiple metrics, marketers can use each as a check on the others. In this way, they can maximize the accuracy of their knowledge.⁶ They can also estimate or project one data point on the basis of others. Of course, to use multiple metrics effectively, marketers must appreciate the relations between them and the limitations inherent in each.

When this understanding is achieved, however, metrics can help a firm maintain a productive focus on customers and markets. They can help managers identify the strengths and weaknesses in both strategies and execution. Mathematically defined and widely disseminated, metrics can become part of a precise, operational language within a firm.

Data Availability and Globalization of Metrics

A further challenge in metrics stems from wide variations in the availability of data between industries and geographies. Recognizing these variations, we have tried to suggest alternative sources and procedures for estimating some of the metrics presented in this book.

Fortunately, although both the range and type of marketing metrics may vary between countries,⁷ these differences are shrinking rapidly; the inter-country differences have shrunk considerably since the first edition of this book. Ambler and colleagues,⁸ for example, report that performance metrics have become a common language among marketers and that they are now used to rally teams and benchmark efforts internationally.

1.5 What Are We Measuring?

Measuring marketing is highly challenging. For example, marketers generally agree that a firm’s brand is a key marketing asset, but different marketers all have subtly different views of what is meant by a brand. It is hard to measure something when you don’t know what exactly you are trying to measure. We, therefore, suggest that the first thing marketers need to establish is a clear definition of what they are trying to measure.

Watt and van den Berg distinguish theoretical and operational definitions in a way that we find useful:

*“Concepts represent the ‘real world’ phenomena being explained by the theory. The scientific method requires that the nature of these concepts be unambiguously communicated to others. This requirement mandates the creation of theoretical definitions....Concepts must also be objectively observed. This requires that we create operational definitions, which translate the verbal concepts into corresponding variables which can be measured.”*⁹

The same authors differentiate constructs from concepts, arguing that the former are even more abstract than concepts and cannot be directly observed. They use “source credibility” as an example of a construct that comprises concepts such as expertise, status, and objectivity. Of course, constructs can also be operationalized in a number of ways.

To see what this means, note that marketing has a number of basic ideas that capture real-world phenomena; let us call these *concepts*. These basic ideas are very important to marketers and can be explained—and even formally defined—verbally. These concepts are, however, not the same as metrics. For example, loyalty is a critical concept for many marketers, but my idea of loyalty may differ from yours. Is loyalty demonstrated when I visit a grocery store every week? What if that grocery store is the only one I can easily get to? In that case, I might not feel loyal to the store, but I still visit it every week. Someone else might feel highly loyal to the same store but live much further away and only be able to visit irregularly. Which, if any, of these consumers are loyal?

We must make concrete our abstract concept of loyalty by providing an operational definition, a precise specification in numeric terms of what exactly we mean. This allows us to create metrics to keep track of how a firm is performing against the operational definitions specified. This book aims to improve measurement validity—how well you translate your ideas into numbers; we do not seek to provide new ways of looking at marketing or argue which concepts are more important than any others.

Some common ways of translating concepts into metrics are shown in Table 1.1.

Table 1.1 Common Metrics Used to Track Important Concepts

Concept	Metric(s)
Loyalty	Share of Requirements (SOR)
Distribution	All Commodity Volume (ACV), Total ACV
Market concentration	Three-Firm Concentration Ratio, Herfindahl Index

Keeping a clear distinction between concepts, operational definitions, and metrics is surprisingly hard. In any given marketing team or organization, one can expect to see a certain level of confusion. We hope our book helps reduce this confusion and promote a common language, but we are realists. Indeed, we are happy to acknowledge that we also make mistakes and inadvertently refer to metrics by the name of the concept. We are trying to be clear but please contact Neil Bendle if you see areas where we can improve (just in case there is a fifth edition).

There will continue to be healthy (or at least vigorous) debates in marketing on what *should* be meant by various theoretical concepts and constructs. However, at the level of measurement and reporting, we believe that the field should be striving for consistency, accuracy, and reliability that allow us to at least understand what other people mean, even if we disagree with what they are suggesting. No shared understanding can happen without clear operational definitions. Providing these definitions is the primary focus of the Common Language Marketing Dictionary. The aim of this project is to improve the measurement of marketing, specifically making measurement in the discipline more consistent. It has been undertaken by MASB (Marketing Accountability Standards Board, www.themasb.org), along with MSI (Marketing Science Institute, www.msi.org), ANA (Association of National Advertisers, www.ana.net), and AMA (American Marketing Association, www.ama.org). We encourage readers to learn more about, and support, the initiative, which can be accessed at marketing-dictionary.org. We add a special plea to any professors reading the book to encourage your students to use the Common Language Marketing Dictionary (for example, by adding a link in any syllabi).

1.6 Value of Information

An almost infinite number of metrics could be calculated. Even the most quantitative marketer will recognize that having more calculations doesn't always help make better decisions. Thus, one question a marketer may want to start with is "When is a metric useful?"

A classic distinction is between data versus information versus knowledge. Data are what we have a profusion of in the world of big data. Data are in raw form and doesn't tell us anything without being manipulated in some way. Information is data that has been converted into something that can be used by a human reader. Ideally, information gets converted into knowledge when a user understands and internalizes the information. Thus, one way of thinking about the value of information is whether it creates knowledge or not. Data that are simply being stored are not currently valuable but often has the potential to be valuable if approached in the right way. How can we extract the information from the data we have? (Clearly marketers should ensure that they have legal and ethical rights to use the data in this manner. Consent is usually a key consideration, but discussing law and ethics is beyond the scope of this book.)

One way to increase the value of information is to make it easier for users to convert it to knowledge. To do this, we recommend considering how the information you have extracted, such as the metrics you have calculated, can be presented in a user-friendly way. There are now many companies, such as Tableau software (www.tableau.com), that specialize in translating information into visual representations. Such visual depictions are an excellent aid to allowing users to more easily extract the message from the information you provide them.

An alternative way of thinking about the value of information is whether the information helps take an action. Information is valuable only if it allows us to make better decisions. To cast this in terms of metrics, a metric's value arises from its ability to improve our decisions in some way. Note that this is a very pragmatic approach, as the value of the metric depends upon what the user can do with the result. A chief marketing officer (CMO) might find estimates of the value of the brand she controls invaluable when arguing for increasing the marketing budget with her C-suite colleagues. A more junior marketer, however, may feel that he can't impact brand value in any significant way, so knowing this number is of no value to him. The more junior marketer can, however, impact whether the product is on the retailers' shelves and so may find distribution measures invaluable.

A related point is that people sometimes equate the value of information with the range of possible alternatives that the metric can take. Knowing the precise number for a metric that swings wildly can be very informative and thus valuable. If the metric never changes significantly, knowing its precise reading at any given point is unlikely to be very valuable. For example, information on the sales of a fashion item where consumer reaction is unpredictable can be exceptionally valuable for stock planning. Estimates for items with more predictable sales (such as matches) are less valuable because knowing the precise sales number is less likely to change the inventory order you would make without the more refined sales estimate. For items with very stable sales, your estimate based upon last year is likely to be good regardless of whether you calculate the precise metric for this year.

Testing is a critical component of marketing plans, but where should you spend your testing budget? What gives you the most information for your money? Scott Armstrong notes that this depends upon what you are trying to achieve.¹⁰ Sometimes you will want to emulate much academic research and drill down into a very specific topic. This can lead to very consistent estimates, also known as being "reliable." This means every time you measure, you get a similar result because you measure exactly the same thing each time you measure. In everyday life, the electronic scale that weighs you every morning is reliable, and you generally get the same result if nothing changes. This approach makes sense if it is critical for you to be very precise and if small changes in a metric would radically alter your plans.

More often, however, you aren't sure you are measuring the right thing. You want to know how the firm is performing generally, but you have a less-than-perfect understanding of what performance means exactly. You might be interested in your general health rather

than your precise weight. Your weight is likely to be connected to your general health but is far from the complete picture. In such situations, you are interested in whether the measures you are using are valid and whether the measures accurately capture what you want them to capture. To assess validity, you are likely to want multiple measures, in which case you will spread your testing budget across a wider range of tests and will be more tolerant of conflicting results. To assess your health, you might look at your weight, your blood pressure, your blood sugar, the ease of your breathing, etc. These will sometimes point in different directions, but put together they give a more comprehensive picture than fixating upon a single metric—however reliably the single metric can be measured.

To have valid estimates of hard-to-define concepts, such as performance, we often recommend a variety of tests and the use of multiple metrics. As we will discuss in Chapters 13 and 14, it is often possible to have one metric look very good while the true value of the company is destroyed. Testing multiple different areas and assessing different metrics may give you a less precise picture (it is less reliable) but is much less likely to miss a major problem (it is more valid).

1.7 Mastering Metrics

Being able to “crunch the numbers” is vital to success in marketing. Knowing which numbers to crunch, however, is a skill that develops over time. Toward that end, managers must practice the use of metrics and learn from their mistakes. By working through the examples in this book, we hope our readers will gain both confidence and a firm understanding of the fundamentals of quantitative marketing. With time and experience, we trust that you will also develop an intuition about metrics and learn to dig deeper when calculations appear suspect or puzzling.

Ultimately, with regard to metrics, we believe many of our readers will require not only familiarity but also fluency. That is, managers should be able to perform relevant calculations on the fly—under pressure, in board meetings, and during strategic deliberations and negotiations. Although not all readers will require that level of fluency, we believe it will be increasingly expected of candidates for senior management positions, especially those with significant financial responsibility. We anticipate that a mastery of quantitative marketing will become a means for many of our readers to differentiate and position themselves for career advancement in an ever-more-challenging environment.

1.8 Where Are the “Top Ten” Metrics?

Working on this book, we received many requests to provide a short list of the “key” or “top ten” marketing metrics. The intuition behind this request is that readers (managers and students) want to be able to focus their attention on the “most important” metrics.

Although some readers may have enjoyed reading the earlier editions from cover to cover, it is safe to say that none of the authors have had that pleasure. We view the book as a reference book—something to keep on the shelf and use when confronted with a new or less familiar metric. The list of metrics covered is therefore long so as to be useful for those occasions. It is not intended to be a guide to the *X* number of metrics you must apply to monitor marketing. It is this view of the book as a reference guide that helps explain why we do not rate or rank the long list of metrics. We see you pulling the book from the shelf as needed rather than us pushing our preferred metrics upon you.

Specifically, the reasons for us not providing the short list of “really important” metrics are as follows.

First, we believe that any ranking of marketing metrics from most to least useful should depend on the type of business under consideration. Thus, what metrics you prefer depend upon what you need them for. For example, marketers of business-to-business products and services that go to market through a direct sales force don’t need metrics that measure retail availability or dealer productivity.

Second, even what might begin as a short list tends to expand rapidly as metrics come in matched sets. For example, if customer lifetime value is important to your business (let’s say, financial services), then you are also likely to use measures of retention and acquisition costs. The same notion applies to retail, media, sales force, and internet traffic metrics. If some of these are important to you, others in the same general categories are likely to be rated as useful, too.

Third, businesses don’t always have access (at a reasonable cost) to the metrics they would like to have. Inevitably, some of the rankings presented will reflect the cost of obtaining the data that underlie the particular metrics. Some metrics may be interesting to know but are not worth considering if they cost more to obtain than the value of the information and insight they provide. The size of the organization thus matters. Small organizations may use metrics that are cheaper to obtain, whereas larger organizations are more likely to be able to realize the full value from expensive, proprietary, or custom-created metrics. The same goes for stages in the product life cycle. Managers of newly launched products often have different concerns and metrics to monitor them than do managers of mature products.

Fourth, we believe that some metrics currently ranked lower by managers will ultimately prove to be very useful when managers fully understand the pros and cons of a particular metric. For example, for many years, advocates for Economic Value Added (EVA) have argued it is the “gold standard” of profitability metrics, but when we discuss it with many managers, it ranks far below other financial performance measures, such as Return on Investment (ROI). We believe one reason for the low ranking of EVA is that this metric is less applicable at the “operating level” than for overall corporate performance. So even within the same business, depending on where a manager sits in the organization, some metrics are more relevant than others. Also, like EVA, many

metrics that we have included are relatively new to marketing, and many managers don't understand them well or know how they might be relevant to their particular business. Customer Lifetime Value is another metric that is gaining acceptance but is still unfamiliar to many managers. If all these metrics were perfectly understood, there would be no need for a book of this type.

We included the results of our survey of marketing managers in the second edition of this book so that readers could learn what metrics other managers thought were potentially useful. However, we became less convinced that the survey results were useful because metric use and understanding remain an awfully long way from where we want them to be. In the third and fourth editions, we have not included the survey and have instead used the space to explore more metrics.

Here we simply note the key points from the survey. For one thing, managers value the profit-related metrics Net Profit, ROI, and Margin most highly, even though these metrics have less to do with day-to-day marketing decisions. We presume this is because those are the metrics they are asked about by the people who control budgets. Customer Satisfaction was the most popular "non-financial" metric. Sales-related metrics, such as Sales Total, also proved popular.

1.9 What Is New in the Fourth Edition?

The fourth edition of this book has significant changes. In addition to reviewing and clarifying the text from the third edition, we have included a number of major additions.

First, we now have a dedicated focus on sponsorship metrics, which we have included in Chapter 10. How much firms benefit from sponsorship is a topic that is both fiendishly difficult to measure and also critical for many of them. One need only think of how much Visa, Coke, and various beer companies invest in their partnerships. Sponsorship is often a strategic decision involving large commitments of resources over extended periods of time, such as when naming a stadium or sponsoring a golf or tennis tournament. We hope that this new edition will positively contribute to bringing more standardization and accountability to sponsorship so marketers can feel more confident in their investments.

Second, we have added sections in Chapter 12 on the interface among financial markets, accounting, and marketing metrics. We have provided this information for marketers who are involved in C-suite decisions or who hope to be in the future. Chapter 12 outlines difficulties in assessing the impact of marketing on the ultimate financial objectives of a publicly listed for-profit firm. We also note challenges marketers face in using financial accounting data for their decisions.

Third, in the 15 years since the first edition of this book was published, "omni-channel" has become a major marketing concept. In a new section, we outline how marketers can

measure their activities where there are multiple channels and sources of communication that consumers may access as part of a single purchase decision. We look at channel dependencies, how search and distribution interact, and online distribution metrics. We have broken off distribution measures from sales and created a new Chapter 7 featuring the new metrics.

Fourth, a completely new section of the book outlines changes that have occurred in the world of marketing metrics and accountability. We note progress that is being made by MASB on creating more discipline in marketing measurement. We highlight work by the International Organization for Standardization (ISO) at a multi-country level to improve brand evaluation.

Finally, in addition to these major changes, we have added some individual metrics such as Return on Advertising Spend.

We very much hope you enjoy this new edition of *Marketing Metrics*.

1.10 New Developments in the World of Marketing Metrics

Since the first edition of this book was published in 2006, there has been considerable progress in the world of marketing metrics. This section of the book outlines some of these developments and mentions some bigger issues related to the topic.

MASB

The Marketing Accountability Standards Board (MASB) is an independent body that aims to set standards for marketing accountability (see themasb.org). MASB was launched in 2007 from “The Boardroom Project,” with the involvement of a number of major figures in the world of marketing accountability, including Meg Blair (founding President of The ARS Group) and Dave Stewart (President’s Chair in Marketing and Law at Loyola Marymount University and former editor of the *Journal of Marketing* and the *Journal of the Academy of Marketing Science*).

Three of your authors (Paul, Dave, and Neil) have been heavily involved in MASB. Indeed, earlier editions of this book have had an influence on the Common Language Marketing Dictionary, a project of MASB that seeks to standardize marketing language (see marketing-dictionary.org). We see this as a major contribution to standardizing marketing. We hope managers and educators will encourage those they deal with to use terms that are widely recognized. The Common Language Marketing Dictionary is an evolving repository of marketing terms. Please share ideas for terms and edits of dictionary items with MASB or one of us.

MASB has a YouTube channel (www.youtube.com/c/masbmarketingaccountabilitystandardsboard) that houses videos explaining key marketing accountability-related

topics. Please view these videos if you are interested in more information about topics related to marketing accounting.

MASB is also involved in discussing the way marketing is presented in financial accounting, with the ultimate aim of improving the reporting of marketing's contribution to firm performance and generating greater accountability for marketing.

ISO 20671: Brand Evaluation—Principles and Fundamentals

One of MASB's key roles has been to represent the United States (under the delegated authority of the American National Standards Institute [ANSI]) at the ISO with respect to brand measurement. In 2019, the group launched ISO 20671: Brand Evaluation—Principles and Fundamentals. Anyone who works with brands should read this standard, which contains best practice advice on brand evaluation and management. (For more details, see www.iso.org/standard/68786.html). This standard includes the key advice that firms should hold regular brand audits.

SASB

The Sustainability Accounting Standards Board (SASB) has had considerable success in developing company reporting—specifically with respect to sustainability. SASB's concentration on sustainability issues means the organization experiences many similar issues to those faced by accountable marketers. One area of overlap is that measures adopted in financial accounting tend to avoid harder-to-assess values or values involving long time frames. This means financial accounting leaves a more limited picture of the firm and its sustainability both in the sense of the firm “being green” and the firm being run with a long-term mindset (such as investing in the brand). For more information on SASB, see www.sasb.org.

Organization of the Text

This book is organized into chapters that correspond to the various roles played by marketing metrics in enterprise management. Individual chapters are dedicated to metrics used in promotional strategy, advertising and sponsorship, and distribution, for example. Each chapter is composed of sections devoted to specific concepts and calculations.

We present these metrics in a sequence that may appear somewhat arbitrary, but there is a rationale behind it. In organizing this text, we have sought to strike a balance between two goals: (1) to establish core concepts first and build gradually toward increasing sophistication and (2) to group related metrics in clusters, helping our readers recognize patterns of mutual reinforcement and interdependence. In Figure 1.1, we offer a graphical presentation of this structure, demonstrating the interlocking nature of all marketing metrics—indeed of all marketing programs—as well as the central role of the customer.

The central issues addressed by the metrics in this book are as follows:

- *Chapter 2, “Share of Hearts, Minds, and Markets”*: Customer perceptions, market share, and competitive analysis
- *Chapter 3, “Margins and Profits”*: Revenues, cost structures, and profitability
- *Chapter 4, “Product and Portfolio Management”*: Metrics behind product strategy, including measures of trial, growth, cannibalization, and brand equity
- *Chapter 5, “Customer Profitability”*: The value of individual customers and relationships

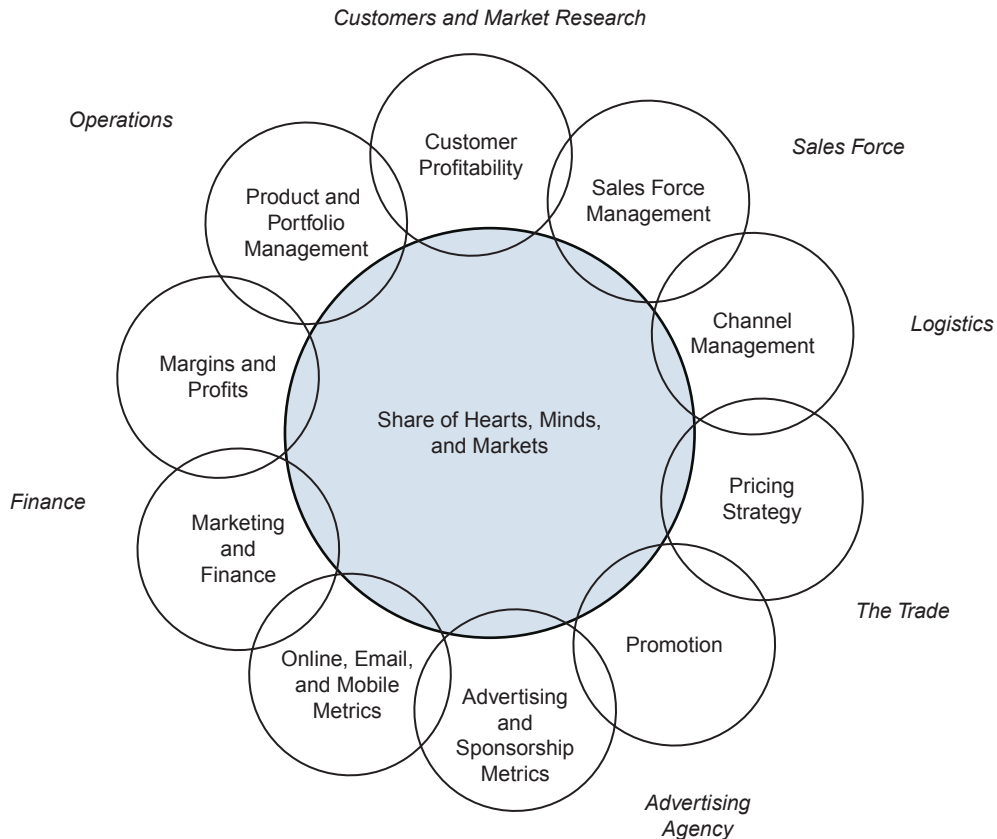


Figure 1.1 Marketing Metrics: Marketing at the Core of the Organization

- *Chapter 6, “Sales Force Management”*: Sales force organization, performance, and compensation
- *Chapter 7, “Channel Management”*: Distribution coverage and logistics

- *Chapter 8, “Pricing Strategy”*: Price sensitivity and optimization, with an eye toward setting prices to maximize profits
- *Chapter 9, “Promotion”*: Temporary price promotions, coupons, rebates, and trade allowances
- *Chapter 10, “Advertising and Sponsorship Metrics”*: The central measures of advertising coverage and effectiveness, including reach, frequency, rating points, and impressions; models for consumer response to advertising; and sponsorship-relevant metrics
- *Chapter 11, “Online, Email, and Mobile Metrics”*: Specialized metrics for web-based, mobile, and email campaigns
- *Chapter 12, “Marketing and Finance”*: Financial evaluation of marketing programs
- *Chapter 13, “The Marketing Metrics X-Ray and Testing”*: The use of metrics as leading indicators of opportunities, challenges, and financial performance
- *Chapter 14, “System of Metrics”*: Decomposing marketing metrics into component parts to improve measurement accuracy, add managerial insight into problems, and assist marketing model building

Components of Each Chapter

As shown in Table 1.2, the chapters are composed of multiple sections, each dedicated to specific marketing concepts or metrics. Within each section, we open with definitions, formulas, and a brief description of the metrics covered. Next, in a passage titled “Construction,” we explore the issues surrounding these metrics, including their formulation, application, interpretation, and strategic ramifications. We provide examples to illustrate calculations, reinforce concepts, and help readers verify their understanding of key formulas. That done, in a section titled “Data Sources, Complications, and Cautions,” we probe the limitations of the metrics under consideration and potential pitfalls in their use. Toward that end, we also examine the assumptions underlying these metrics. Finally, we close many sections with a brief survey section titled “Related Metrics and Concepts.”

In organizing the text in this way, our goal is straightforward: Most of the metrics in this book have broad implications and multiple layers of interpretation. Doctoral theses could be devoted to many of them—and have been written about some. In this book, however, we want to offer an accessible, practical reference. If the devil is in the details, we want to identify, locate, and warn readers against him but not to elaborate his entire demonology. Consequently, we discuss each metric in stages, working progressively toward increasing levels of sophistication. We invite our readers to sample this information as they see fit, exploring each metric to the depth that they find most useful and rewarding.

With an eye toward accessibility, we have also avoided advanced mathematical notation. Most of the calculations in this book can be performed by hand, on the back of the proverbial envelope. More complex or intensive computations may require a spreadsheet. Nothing further should be needed.

Table 1.2 Major Metrics List

Section	Metric	Section	Metric
<i>Share of Hearts, Minds, and Markets</i>		<i>Margins and Profits</i>	
2.1	Revenue Market Share	3.1	Unit Margin
2.1	Unit Market Share	3.1	Margin (%)
2.2	Relative Market Share	3.2	Channel Margins
2.3	Brand Development Index	3.3	Average Price per Unit
2.3	Category Development Index	3.3	Price per Statistical Unit
2.4–2.6	Decomposition of Market Share	3.4	Variable and Fixed Costs
2.4	Market Penetration	3.5	Marketing Spending
2.4	Brand Penetration	3.6	Contribution per Unit
2.4	Penetration Share	3.6	Contribution Margin (%)
2.5	Share of Requirements	3.6	Break-Even Sales
2.6	Usage Index	3.7	Target Volume
2.7	Hierarchy of Effects	3.7	Target Revenues
2.7	Awareness	<i>Product and Portfolio Management</i>	
2.7	Top of Mind	4.1	Trial
2.7	Ad Awareness	4.1	Repeat Volume
2.7	Knowledge	4.1	Penetration
2.7	Consumer Beliefs	4.1	Volume Projections
2.7	Purchase Intentions	4.2	Year-on-Year Growth
2.7	Purchase Habits	4.2	Compound Annual Growth Rate (CAGR)
2.7	Loyalty	4.3	Cannibalization Rate
2.7	Likeability	4.3	Fair Share Draw Rate
2.8	Willingness to Recommend	4.4	Brand Equity Metrics
2.8	Customer Satisfaction	4.5	Conjoint Utilities
2.9	Net Promoter	4.6	Segment Utilities
2.10	Willingness to Search	4.7	Conjoint Utilities and Volume Projections
2.11	Neuro-Marketing		

Table 1.2 *Continued*

Section	Metric	Section	Metric
	<i>Customer Profitability</i>	7.5	Combining Search and Distribution
5.1	Customers	7.6	Understanding Channel Dependencies
5.1	Recency		
5.1	Retention Rate		<i>Pricing Strategy</i>
5.2	Customer Profit	8.1	Price Premium
5.3	Customer Lifetime Value	8.2	Reservation Price
5.4	Prospect Lifetime Value	8.2	Percent Good Value
5.5	Average Acquisition Cost	8.3	Price Elasticity of Demand
5.5	Average Retention Cost	8.4	Optimal Price
	<i>Sales Force Management</i>	8.5	Residual Elasticity
6.1	Workload		<i>Promotion</i>
6.1	Sales Potential Forecast	9.1	Baseline Sales
6.2	Sales Goal	9.1	Incremental Sales/Promotion Lift
6.3	Sales Force Effectiveness	9.2	Redemption Rates
6.4	Compensation	9.2	Costs for Coupons and Rebates
6.4	Break-Even Number of Employees	9.2	Percentage Sales with Coupon
6.5	Sales Funnel, Sales Pipeline	9.3	Percent Sales on Deal
	<i>Channel Management</i>	9.3	Pass-Through
7.1	Numeric Distribution	9.4	Price Waterfall
7.1	All Commodity Volume (ACV)		<i>Advertising and Sponsorship Metrics</i>
7.1	Product Category Volume (PCV)	10.1	Impressions
7.1	Total Distribution	10.1	Gross Rating Points (GRPs)
7.1	Category Performance Ratio	10.2	Cost per Thousand Impressions (CPM)
7.2	Out of Stock	10.3	Net Reach
7.2	Inventories	10.3	Average Frequency
7.3	Markdowns	10.4	Frequency Response Functions
7.3	Direct Product Profitability (DPP)	10.5	Effective Reach
7.3	Gross Margin Return on Inventory Investment (GMROI)	10.5	Effective Frequency
7.4	Online Distribution Metrics	10.6	Share of Voice
		10.7	Advertising Elasticity of Demand

Continues

Table 1.2 *Continued*

Section	Metric	Section	Metric
10.8	Return on Advertising Spend (ROAS)	11.7	Value of a Like
10.9	Media Impressions from Sponsorship	11.8	Downloads
10.10	Return on Objective (ROO)	11.9	Average Revenue per User
10.11	Sponsorship Return on Investment (ROI)	11.10	Email Metrics
<i>Online, Email, and Mobile Metrics</i>		<i>Marketing and Finance</i>	
11.1	Pageviews	12.1	Net Profit
11.2	Rich Media Display Time	12.1	Return on Sales (ROS)
11.2	Rich Media Interaction Rate	12.1	Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA)
11.3	Clickthrough Rate	12.2	Return on Investment (ROI)
11.4	Cost per Click	12.3	Economic Profit (aka EVA®)
11.4	Cost per Order	12.4	Payback
11.4	Cost per Customer Acquired	12.4	Net Present Value (NPV)
11.5	Visits	12.4	Internal Rate of Return (IRR)
11.5	Visitors	12.5	Marketing Return on Investment (MROI)
11.5	Abandonment Rate	12.6	Financial Market Measures
11.6	Bounce Rate (websites)	12.7	Combined Market and Accounting Measures
11.7	Friends/Followers/Supporters		
11.7	Likes		

Reference Materials

Throughout this text, we have highlighted formulas and definitions for easy reference. We have also included outlines of key terms at the beginning of each chapter and section. Within each formula, we have used the following notation to define all inputs and outputs:

\$—(Dollar Terms): *A monetary value. We have used the dollar sign and “dollar terms” for brevity, but any other currency, including the euro, yen, dinar, or yuan, would be equally appropriate.*

%—(Percentage): *Used as the equivalent of fractions or decimals. For readability, we have intentionally omitted the step of multiplying decimals by 100 to obtain percentages.*

#—(Count): *Used for such measures as unit sales or number of competitors.*

R—(Rating): *Expressed on a scale that translates qualitative judgments or preferences into numeric ratings. Example: A survey in which customers are asked to assign a rating of “1” to items that they find least satisfactory and “5” to those that are most satisfactory. Ratings have no intrinsic meaning without reference to their scale and context.*

I—(Index): *A comparative figure, often linked to or expressive of a market average (for example, the consumer price index). Indices are often interpreted as percentages.*

Further Reading

Abela, Andrew, Bruce H. Clark, and Tim Ambler. (2004). “Marketing Performance Measurement, Performance, and Learning,” working paper.

Ambler, Tim, and Chris Styles. (1995). “Brand Equity: Toward Measures That Matter,” working paper No. 95-902, London Business School, Centre for Marketing.

Armstrong, J. Scott. (1974). “Eclectic Research and Construct Validation,” in Jagdish N. Sheth (Ed.), *Models of Buyer Behavior: Conceptual, Quantitative, and Empirical* (pp. 3–14), Harper & Row.

Barwise, Patrick, and John U. Farley. (2003). “Which Marketing Metrics Are Used and Where?” Marketing Science Institute working paper.

Clark, Bruce H., Andrew V. Abela, and Tim Ambler. (2004). “Return on Measurement: Relating Marketing Metrics Practices to Strategic Performance,” working paper.

Hauser, John, and Gerald Katz. (1998). “Metrics: You Are What You Measure,” *European Management Journal*, 16(5), 517–528.

Kaplan, R. S., and D. P. Norton. (1996). *The Balanced Scorecard: Translating Strategy into Action*, Harvard Business School Press.

Watt, James H., and Sjef van den Berg. (1995). *Research Methods for Communication Science*, Allyn & Bacon.

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SHARE OF HEARTS, MINDS, AND MARKETS

Introduction

Key concepts covered in this chapter:

Market Share	Usage Index
Relative Market Share	Awareness, Attitudes, and Usage (AAU)
Market Concentration	Customer Satisfaction
Brand Development Index (BDI)	Willingness to Recommend
Category Development Index (CDI)	Net Promoter
Penetration	Willingness to Search
Share of Requirements	Neuro-Marketing

“...Walmart now has about 15% of total retail sales in grocery, home furnishings, electronics, apparel, sporting goods, general merchandise and office suppliers, and has been adding an average of about \$10.6 billion in incremental sales per year. In grocery, Walmart dominates with a 23% share, about 2.5 times the next largest retailer. It’s also winning in e-groceries, with 17% of consumers saying they ordered from Walmart.com last year, compared with 15% in 2017.”¹

It is common for businesspeople to discuss market share, as illustrated above. At first glance, market share appears to involve a relatively simple calculation: “us/(us + them).” But think more deeply, and this simple calculation raises a host of questions. Who, for

example, does “them” refer to? That is, how broadly do we define our competitive universe? Which units are used? Where in the value chain do we capture our information? What time frame will maximize our signal-to-noise ratio? In a metric as important as market share, and in one as closely monitored for changes and trends, the answers to such questions are crucial. In this chapter, we will address them and also introduce key components of market share, including penetration share, usage index, and share of requirements.

Probing the dynamics behind market share, we’ll explore measures of awareness, attitude, and usage—major factors in the decision-making process by which customers select one brand over another. We’ll discuss customer satisfaction with products and dealers, the quantification of which is growing in importance among marketing professionals. Finally, we’ll consider metrics measuring the depth of consumer preference and satisfaction, including customers’ willingness to search (that is, go to another store) if a brand is unavailable and their disposition to recommend that brand to others. Increasingly, marketers rely on these as leading indicators of future changes in share.

	Metric	Construction	Considerations	Purpose
2.1	Revenue Market Share	Sales revenue as a percentage of market sales revenue.	Scope of market definition. Channel level analyzed. Before/after discounts. Time period covered.	Measure of competitiveness.
2.1	Unit Market Share	Unit sales as a percentage of market unit sales.	Scope of market definition. Channel level analyzed. Time period covered.	Measure of competitiveness.
2.2	Relative Market Share	Brand market share divided by largest competitor’s market share.	Can use either unit or revenue shares.	Assesses comparative market strength.
2.3	Brand Development Index	Brand sales in a specified segment, compared with sales of that brand in the market as a whole.	Can use either unit or revenue sales.	Regional or segment differences in brand purchases and consumption.

	Metric	Construction	Considerations	Purpose
2.3	Category Development Index	Category sales in a specified segment, compared with sales of that category in the market as a whole.	Can use either unit or revenue sales.	Regional or segment differences in category purchases and consumption.
2.4	Decomposition of Market Share	Penetration	Time period covered.	Calculation of market share. Competitive analysis. Historical trends analysis. Formulation of marketing objectives.
2.5		Share * Share of Requirements		
2.6		* Usage Index.		
2.4	Category Penetration	Purchasers of a product category as a percentage of total population.	Based on population. Therefore, unit/revenue consideration not relevant.	Measures category acceptance by a defined population. Useful in tracking acceptance of new product categories.
2.4	Brand Penetration	Purchasers of a brand as a percentage of total population.	Based on population. Therefore, unit/revenue consideration not relevant.	Measures brand acceptance by a defined population.
2.4	Penetration Share	The ratio of brand penetration to category penetration.	Also the percentage of category buyers who bought the brand. A component of the market share formula.	Comparative acceptance of the brand within its category.
2.5	Share of Requirements	Brand purchases as a percentage of total category purchases by buyers of that brand.	Purchases can be either units or revenues.	Level of commitment to a brand by its existing customers.
2.6	Usage Index	The ratio of average category purchases of customers of the brand to the overall average category purchases per category customer.	Can be used with both unit or revenue sales.	Measures relative usage of a category by customers of a specific brand.

Continues

	Metric	Construction	Considerations	Purpose
2.7	Hierarchy of Effects	Involves awareness; attitudes, beliefs; importance; intentions to try; buy; trial, repeat purchase.	Strict sequence is often violated and can be reversed.	Set marketing and advertising objectives. Understand progress in stages of customer decision process.
2.7	Awareness	Percentage of total population that is aware of a brand.	Is this prompted or unprompted awareness?	Consideration of who has heard of the brand.
2.7	Top of Mind	First brand to consider.	May be subject to most recent advertising or experience.	Saliency of brand.
2.7	Ad Awareness	Percentage of total population that is aware of a brand's advertising.	May vary by schedule, reach, and frequency of advertising.	One measure of advertising effects. May indicate "stopping power" of ads.
2.7	Knowledge	Percentage of population with knowledge of product, recollection of its advertising.	Not a formal metric. Is this prompted or unprompted knowledge?	Extent of familiarity with product beyond name recognition.
2.7	Consumer Beliefs	Customers' / consumers' view of product, generally captured via survey responses, often through ratings on a scale.	Customers/ consumers may hold beliefs with varying degrees of conviction.	Perception of brand by attribute.
2.7	Purchase Intentions	Probability of intention to purchase.	To estimate probability of purchase, aggregate and analyze ratings of stated intentions (for example, top two boxes).	Measures pre-shopping disposition to purchase.
2.7	Purchase Habits	Frequency of purchase. Quantity typically purchased.	May vary widely among shopping trips.	Helps identify heavy users.

	Metric	Construction	Considerations	Purpose
2.7	Loyalty	Measures include share of requirements, willingness to pay premium, willingness to search.	“Loyalty” itself is not a formal metric, but specific metrics measure aspects of this dynamic. New product entries may alter loyalty levels.	Indication of base future revenue stream.
2.7	Likeability	Generally measured via ratings across a number of scales.	Often believed to correlate with persuasion.	Shows overall preference prior to shopping.
2.8	Willingness to Recommend	Generally measured via ratings across a 1–5 scale.	Nonlinear in impact.	Shows strength of loyalty, potential impact on others.
2.8	Customer Satisfaction	Generally measured on a 1–5 scale, in which customers declare their satisfaction with brand in general or specific attributes.	Subject to response bias. Captures views of current customers, not lost customers. Satisfaction is a function of expectations.	Indicates likelihood of repurchase. Reports of dissatisfaction show aspects that require improvement to enhance loyalty.
2.9	Net Promoter	Percentage of customers willing to recommend to others less the percentage unwilling to recommend the product or service.	Requires a survey of intentions.	Some claim it to be the single best metric for marketers.
2.10	Willingness to Search	Percentage of customers willing to delay purchases, change stores, or reduce quantities to avoid switching brands.	Hard to capture.	Indicates importance of distribution coverage.
2.11	Neuro-marketing Measures	Technological advances have allowed marketers to gain greater insight into how consumers think.	Requires expertise and sometimes expensive equipment.	Can help illuminate reactions that consumers find hard to verbalize.

2.1 Market Share

Market share is the percentage of a market (defined in terms of either units or revenue) accounted for by a specific entity.

$$\text{Unit Market Share (\%)} = \frac{\text{Unit Sales (\#)}}{\text{Total Market Unit Sales (\#)}}$$

$$\text{Revenue Market Share (\%)} = \frac{\text{Sales Revenue (\$)}}{\text{Total Market Revenue (\$)}}$$

Unit Market Share is also known as Volume Share. Revenue Market Share is also known as Value Share. Marketers need to be able to translate sales targets into market share because this will demonstrate whether forecasts can be attained by growing the market or by capturing share from competitors. The latter will almost always be more difficult to achieve. Market share is closely monitored for signs of change in the competitive landscape, and it frequently drives strategic or tactical action.

Purpose: Key indicator of market competitiveness.

Market share is an indicator of how well a firm is doing against its competitors. This metric, supplemented by changes in sales revenue, helps managers evaluate both primary and selective demand in their market. That is, it enables them to judge not only total market growth or decline but also trends in customers' selections among competitors. Generally, sales growth resulting from primary demand (total market growth) is less costly and more profitable than that achieved by capturing share from competitors. Conversely, losses in market share can signal serious long-term problems that require strategic adjustments. Firms with market shares below a certain level may not be viable. Similarly, within a firm's product line, market share trends for individual products are considered early indicators of future opportunities or problems.

Construction

Market Share: *The percentage of a market accounted for by a specific entity.*

Unit Market Share: *The units sold by a particular company, as a percentage of total market sales, measured in the same units.*

$$\text{Unit Market Share (\%)} = \frac{\text{Unit Sales (\#)}}{\text{Total Market Unit Sales (\#)}}$$

This formula, of course, can be rearranged to derive either unit sales or total market unit sales from the other two variables, as illustrated in the following:

$$\text{Unit Sales (\#)} = \text{Unit Market Share (\%)} * \text{Total Market Unit Sales (\#)}$$

$$\text{Total Market Unit Sales (\#)} = \frac{\text{Unit Sales (\#)}}{\text{Unit Market Share (\%)}}$$

Revenue Market Share: *This differs from Unit Market Share in that it reflects the prices at which goods are sold. In fact, a relatively simple way to calculate relative price is to divide revenue market share by unit market share (see Section 8.1).*

$$\text{Revenue Market Share (\%)} = \frac{\text{Sales Revenue (\$)}}{\text{Total Market Sales Revenue (\$)}}$$

As with the unit market share, this equation for revenue market share can be rearranged to calculate either sales revenue or total market sales revenue from the other two variables.

Data Sources, Complications, and Cautions

Market definition is never a trivial exercise: If a firm defines its market too broadly, it may dilute its focus. If it does so too narrowly, it will miss opportunities and allow threats to emerge unseen. To avoid these pitfalls, as a first step in calculating market share, managers should define the served market in terms of unit sales or revenues for a specific list of competitors, products, sales channels, geographic areas, customers, and time periods (for example, “Among grocery stores, we are the revenue market share leader in sales of frozen Italian food entrées in the Northeastern U.S.”).

Data parameters must be carefully defined: Although market share is likely the single most used marketing metric, there is no generally acknowledged best method for calculating it. This is unfortunate, as different methods may yield not only different computations of market share at a given moment but also widely divergent trends over time. The reasons for these disparities include variations in the lenses through which share is viewed (units versus dollars), where in the channel the measurements are taken (shipments from manufacturers versus consumer purchases), market definition (scope of the competitive universe), and measurement error. In the situation analysis that underlies strategic decisions, managers must be able to understand and explain these variations.

We illustrate the complexities involved in quantifying market share by looking at the competitive dynamics in the automobile industry and at General Motors in particular:

“With market share sliding in the first two months of the year, from 27.2% to 24.9%—the lowest level since a two-month strike shut the company down in 1998—GM as a whole expects a net loss of \$846 million the first quarter.”²

Reviewing this statement, drawn from *Business Week* in 2005, a marketing manager might immediately pose a number of questions:

- Do these figures represent unit (autos sold) or revenue (dollar) market shares?
- Does this trend hold for both unit and revenue market shares at GM?
- Was revenue market share calculated before or after rebates and discounts?
- Do the underlying sales data reflect factory shipments, which relate directly to the manufacturer's current income statement, or sales to consumers, which are buffered by dealer inventories?
- Does the decline in market share translate to an equivalent percentage decrease in sales, or has the total market size changed?

Managers must determine whether a stated market share is based on shipment data, channel shipments, retail sales, customer surveys, or some other source. On occasion, share figures may represent combinations of data (a firm's actual shipments, for example, set against survey estimates of competitors' sales). If necessary, managers must also adjust for differences in channels.

The time period measured will affect the signal-to-noise ratio: In analyzing short-term market dynamics, such as the effects of a promotion or a recent price change, managers may find it useful to measure market share over a brief period. Short-term data, however, generally carry a low signal-to-noise ratio. By contrast, data covering a longer period will be more stable but may obscure important recent changes in the market. Applied more broadly, this principle also holds in aggregating geographic areas, channel types, or customers. When choosing markets and time periods for analysis, managers must optimize for the type of signal that is most important.

Potential bias in reported shares: One way to find data for market sizing is through surveys of customer usage (see Section 2.7). In interpreting these data, however, managers must bear in mind that shares based on reported (versus recorded) sales tend to be biased toward well-known brands.

Related Metrics and Concepts

Served Market: *The portion of the total market for which a firm competes. This may exclude geographic regions or product types. In the airline industry, for example, as of early 2020, Ryanair did not fly to the United States. Consequently, the United States would not be considered part of its served market.*

2.2 Relative Market Share and Market Concentration

Relative market share indexes a firm's or a brand's market share against that of its leading competitor.

$$\text{Relative Market Share (I)} = \frac{\text{Brand's Market Share (\%)}}{\text{Brand's Largest Competitor's Market Share (\%)}}$$

Market concentration, a related metric, measures the degree to which a comparatively small number of firms account for a large proportion of the market.

These metrics are useful in comparing a firm's or a brand's relative position across different markets and in evaluating the type and degree of competition in those markets.

Purpose: To assess a firm's or a brand's success and its position in the market.

A firm with a market share of 25% would be a powerful leader in many markets but a distant number two in others. Relative market share offers a way to benchmark a firm's or a brand's share against that of its largest competitor, enabling managers to compare relative market positions across different product markets. Relative market share gains some of its significance from studies—albeit controversial ones—suggesting that major players in a market tend to be more profitable than their competitors. This metric was further popularized by the Boston Consulting Group (BCG) in its famous matrix of relative share and market growth (see Figure 2.1).

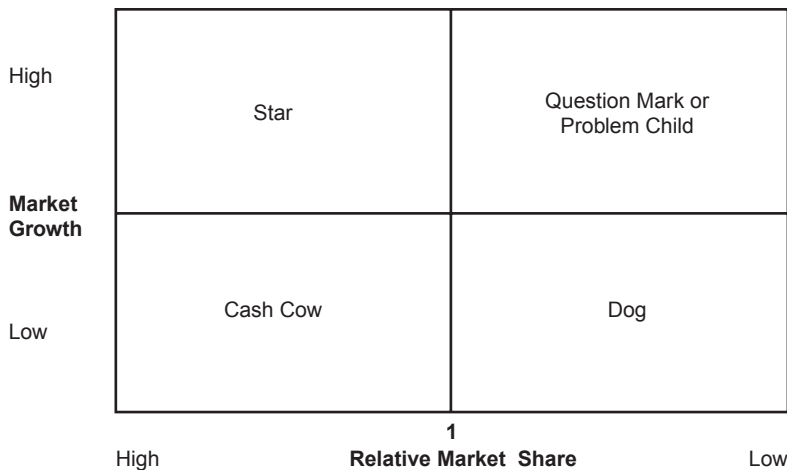


Figure 2.1 The BCG Matrix

In the BCG matrix, one axis represents relative market share—a surrogate for competitive strength. The other represents market growth—a surrogate for potential. Along each dimension, products are classified as high or low, and each is placed in one of four quadrants. In the traditional interpretation of this matrix, products with high relative market shares in growing markets are deemed stars, suggesting that they should be supported with vigorous investment. The cash for that investment may be generated by cash cows, products with high relative shares in low-growth markets. Problem child products may have potential for future growth but hold weak competitive positions. Finally, dogs have neither strong competitive position nor growth potential.

Construction

$$\text{Relative Market Share (I)} = \frac{\text{Brand's Market Share (\%)}}{\text{Brand's Largest Competitor's Market Share (\%)}}$$

Relative market share can also be calculated by dividing brand sales (#, \$) by largest competitor's sales (#, \$) because the common factor of total market sales (or revenue) cancels out.

EXAMPLE: The market for small urban cars consists of five players (see Table 2.1).

Table 2.1 Market for Small Urban Cars

	Units Sold (Thousands)	Revenue (Thousands)
Zipper	25	€375,000
Twister	10	€200,000
A-One	7.5	€187,500
Bowlz	5	€125,000
Chien	2.5	€50,000
Market Total	50.0	€937,500

In the market for small urban cars, managers at A-One want to know their firm's market share relative to its largest competitor. They can calculate this on the basis of revenues or unit sales.

In unit terms, A-One sells 7,500 cars per year. Zipper, the market leader, sells 25,000. A-One's relative market share in unit terms is thus 7,500/25,000, or 0.30. We arrive at the same number if we first calculate A-One's share (7,500/50,000 = .15) and Zipper's share (25,000/50,000 = .50) and then divide A-One's share by Zipper's share (.15/.50 = .30).

In revenue terms, A-One generates €187.5 million in car sales each year. Zipper, the market leader, generates €375 million. A-One’s relative market share in revenue terms is thus €187.5m/€375m, or 0.5. Due to its comparatively high average price per car, A-One’s relative market share is greater in revenue than in unit terms.

Related Metrics and Concepts

Market Concentration: *The degree to which a relatively small number of firms accounts for a large proportion of the market. This is also known as the concentration ratio. It is often calculated for the largest three or four firms in a market. The eight-firm concentration ratio is also popular.³*

Three- (Four-) Firm Concentration Ratio: *A metric that is the total (sum) of the market shares held by the leading three (four) competitors in a market.*

EXAMPLE: In the small urban car market, the three-firm concentration ratio is composed of the market shares of the top three competitors: Zipper, Twister, and A-One (see Table 2.2).

Table 2.2 Market Share—Small Urban Cars

	Units Sold (Thousands)	Unit Share	Revenue (Thousands)	Revenue Share
Zipper	25.0	50%	€375,000	40.0%
Twister	10	20%	€200,000	21.3%
A-One	7.5	15%	€187,500	20.0%
Bowlz	5.0	10%	€125,000	13.3%
Chien	2.5	5%	€50,000	5.4%
Market Total	50.0	100%	€937,500	100%

In unit terms, the three-firm concentration ratio is $50\% + 20\% + 15\% = 85\%$.

In revenue terms, it is $40\% + 21.3\% + 20\% = 81.3\%$.

Herfindahl Index: *A market concentration metric derived by adding the squares of the individual market shares of all the players in a market. As a sum of squares, this index tends to rise in markets dominated by large players.*

EXAMPLE: The Herfindahl Index dramatically highlights market concentration in the small urban car market (see Table 2.3).

Table 2.3 Calculation of the Herfindahl Index for Small Urban Cars

	Units Sold (Thousands)	Unit Share	Squared Share	Revenue (Thousands)	Revenue Share	Squared Share
Zipper	25.0	50%	0.25	€375,000	40%	0.16
Twister	10	20%	0.04	€200,000	21%	0.0455
A-One	7.5	15%	0.0225	€187,500	20%	0.04
Bowlz	5.0	10%	0.01	€125,000	13%	0.0178
Chien	2.5	5%	0.0025	€50,000	5%	0.0028
Market Total	50.0	100%	0.325	€937,500	100%	0.2661

On a unit basis, the Herfindahl Index is equal to the square of the unit market share of Zipper ($50\% ^ 2 = 0.25$), plus that of Twister ($20\% ^ 2 = 0.04$), plus those of A-One, Bowlz, and Chien = 0.325.

On a revenue basis, the Herfindahl Index comprises the square of the revenue market share of Zipper ($40\% ^ 2 = 0.16$), plus those of all its competitors = 0.2661.

As demonstrated by the Herfindahl Index, the market for small urban cars is slightly more concentrated in unit terms than in revenue terms. The reason for this is straightforward: Higher-priced cars in this market sell fewer units.

Note: For a given number of competitors, the Herfindahl Index would be lowest if shares were equally distributed. In a five-firm industry, for example, equally distributed shares would yield a Herfindahl Index of $5 * (20\% ^ 2) = 0.2$.

Data Sources, Complications, and Cautions

As ever, appropriate market definition and the use of comparable figures are vital prerequisites for developing meaningful results.

Related Metrics and Concepts

Market Share Rank: *The ordinal position of a brand in its market, when competitors are arranged by size, with 1 being the largest.*

Share of Category: *This metric is derived in the same manner as market share but is used to denote a share of market within a certain retailer or class of retailers (for example, mass merchandisers).*

2.3 Brand Development Index and Category Development Index

The brand development index (BDI) quantifies how well a brand is performing within a specific group of customers, compared with its average performance among all consumers.

$$\text{Brand Development Index (I)} = \frac{\text{Brand Sales to Group (\#, \$)} / \text{Households in Group (\#)}}{\text{Total Brand Sales (\#, \$)} / \text{Total Households (\#)}}$$

The category development index (CDI) measures the sales performance of a category of goods or services within a specific group, compared with its average performance among all consumers.

$$\text{Category Development Index (I)} = \frac{\text{Category Sales to Group (\#, \$)} / \text{Households in Group (\#)}}{\text{Total Category Sales (\#, \$)} / \text{Total Households (\#)}}$$

The brand and category development indexes are useful for understanding specific customer segments relative to the market as a whole. Although defined here with respect to households, these indexes could also be calculated for customers, accounts, businesses, or other entities.

Purpose: To understand the relative performance of a brand or category within specified customer groups.

The brand and category development indexes help identify strong and weak segments (usually demographic or geographic) for particular brands or categories of goods and services. For example, by monitoring the category development index (CDI), marketers might determine that Midwesterners buy twice as many country music CDs per capita as Americans in general, while consumers living on the East Coast buy fewer than the national average. This would be useful information for targeting the launch campaign for a new country music performer. Conversely, if managers found that a particular product had a low brand development index in a segment that carried a high CDI for its category, they might ask why that brand suffered relatively poor performance in such a promising segment.