marketing METRICS

The Manager's Guide to Measuring Marketing Performance

Third Edition

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

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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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ACKNOWLEDGMENTS

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 percent 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 a recent 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*, Farris, Bendle, 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, Lincoln Filene Professor of Business Administration and Senior Associate Dean for International Development, Harvard Business School

FOREWORD TO THE THIRD EDITION

At Google, we have a saying we use quite frequently: "Data beats opinion." This mantra inspires us to constantly think about how we can increase the ratio of fact to speculation. What do we *actually* know vs. what do we only *think* we know? The best approach we've found is to determine our key performance indicators, and then measure how we are doing against them on a regular basis. This allows us to optimize and expand those programs that are working, while pulling back on those that are 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 two 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 third 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 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
Vice President, Americas Customer Solutions, Google

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1

INTRODUCTION

In recent years, data-based marketing has swept through the business world. In its wake, measurable performance and accountability have become the keys to marketing success. However, 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.

More than a decade ago, 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 third 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 (1891–94)*[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, numerical 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. Witness 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, however. 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. Additionally, 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 in this book.

Fortunately, although both the range and type of marketing metrics may vary between countries,[7] these differences are shrinking rapidly. Ambler,[8] for example, reports 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 a marketer needs to establish is a clear definition of what they are trying to measure.

Watt and van den Berg distinguish theoretical and operations 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." Watt and van den Berg (p. 11)*

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? 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 numerical 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 below in Table 1.1.

Table 1.1 Common Metrics Used to Track Important Concepts

Concept	Metric(s)
Loyalty	Share of Requirements (SOR), Willingness to Pay (WTP)
Distribution	All Commodity Volume (ACV), Total ACV
Market Concentration	Three-firm concentration ratio, Herfindahl Index

Note in Table 1.1 that willingness to pay (WTP) measures both a consumer's loyalty in the sense of attachment and differentiation, the fact that the product is very different and so there isn't a close competitor that a consumer can purchase from instead. It is important to consider what exactly you are measuring and what metric fits your precise definition best.

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 let us know if you see areas where we can improve (just in case there is a fourth 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 allows 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 Project. This project to improve the measurement of marketing, specifically making measurement in the discipline more consistent, is being undertaken by MASB (the Marketing Accountability Standards Board, http://www.themasb.org/), along with MSI (the Marketing Science Institute, http://www.msi.org/), ANA (the Association of National Advertisers, https://www.ana.net/), and AMA (the American Marketing Association, https://www.ama.org). We encourage readers to learn more about, and support, the initiative.

1.6 Value of Information

There exists almost an infinite number of metrics that could be calculated. Even the most quantitative marketer will recognize that more calculations don'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 is what we have a profusion of in the world of big data. Data is 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 is simply being stored is 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 the marketer should ensure they have the legal and ethical right to use the data in this manner. Consent is usually a key consideration, but discussing law and ethics is beyond the scope of our book. The Direct Marketing Association has resources to aid such thinking, http://thedma.org/.)

One way to increase the value of information is thus 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, e.g., Tableau software, www.tableau.com, that specialize in translating information into visual representations. Such visual depictions are an excellent aid to allowing the user 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 us take an action. Information is valuable only if it allows us to make a better decision. To cast this in terms of metrics, a metric's value arises from its ability to improve our decisions in some way. Note this is a very pragmatic approach as the value of the metric depends upon what the user can do with the result. A 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, e.g., safety 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. 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, you generally get the same result if nothing changes. This approach makes sense if it is critical for you to be very precise, 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, 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'll spread your testing budget across a wider range of tests and are 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 12 and 13 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 data-based 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 data-based 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 have read the earlier editions from cover to cover, it is safe to say 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 aimed 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.

Also, 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 Web 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 cost more to obtain than the value of the information they provide. The size of the organization will thus matter. Small organizations will 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 mature products.

Fourth, we believe that some metrics currently ranked lower by managers will ultimately prove to be very useful, after managers fully understand the pros and cons of a particular metric. For example, advocates believe that Economic Value Added (EVA) 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 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 so that readers could learn what metrics other managers thought were potentially useful. However, we are now less convinced that the survey results are useful, because metric use and understanding remains an awfully long way from where we want to be. In this third edition we have therefore concentrated on adding more metrics and explaining some metrics in greater detail. Deleting the managerial survey results from the second edition gave us the space to do this.

Here we simply note the key points from the survey. These were that managers value the profit related metrics, net profit, ROI, and margin most highly, even though these metrics had less to do with day-to-day marketing decisions. We presume this is because those are the metrics they are asked about by those 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's New in the Third Edition?

We have used the space gained in removing the survey to go deeper into areas that have risen in importance in the years since the second edition. The biggest change is our new chapter on online metrics, which seeks to clarify an area where there is no shortage of data and a profusion of measures. Unfortunately it remains an area in which it can be extremely difficult for a manager to understand what is happening often due to lack of standardization of definitions. We have also added a new section on neuro-marketing to allow managers to gain some familiarity with exciting developments in this field. Other significant changes include adding more detail on brand valuation, advertising elasticity, and clarifying the concept of double jeopardy.

New metrics are particularly in need of a careful appraisal with respect to their reliability and validity as metrics to inform management decisions. This edition expands our discussion of these concepts as well.

A closely related concept is "the value of information"—e.g., is it worth doing more market research or testing?—which is a critical input to many managerial decisions. As such we have also added more detail on the value of information and how managers can use estimates of its value to make better informed decisions. We have added a discussion of the Gross Model for budget allocation and outlined our own variant of the budgeting model which describes how a manager can decide when to stop creating and testing further advertising copy and roll out the current best candidate. The space devoted to this model for advertising copy and media funds is not because this particular decision is more important than other decisions, but because it illustrates a general approach to thinking about how using marketing metrics can improve marketing decisions.

We hope that you enjoy the new edition of *Marketing Metrics*.

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 distribution, for example. Each chapter is composed of sections devoted to specific concepts and calculations.

We must present these metrics in a sequence that will appear somewhat arbitrary. 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:* The metrics behind product strategy, including measures of trial, growth, cannibalization, and brand equity.
- *Chapter 5—Customer Profitability:* The value of individual customers and relationships.

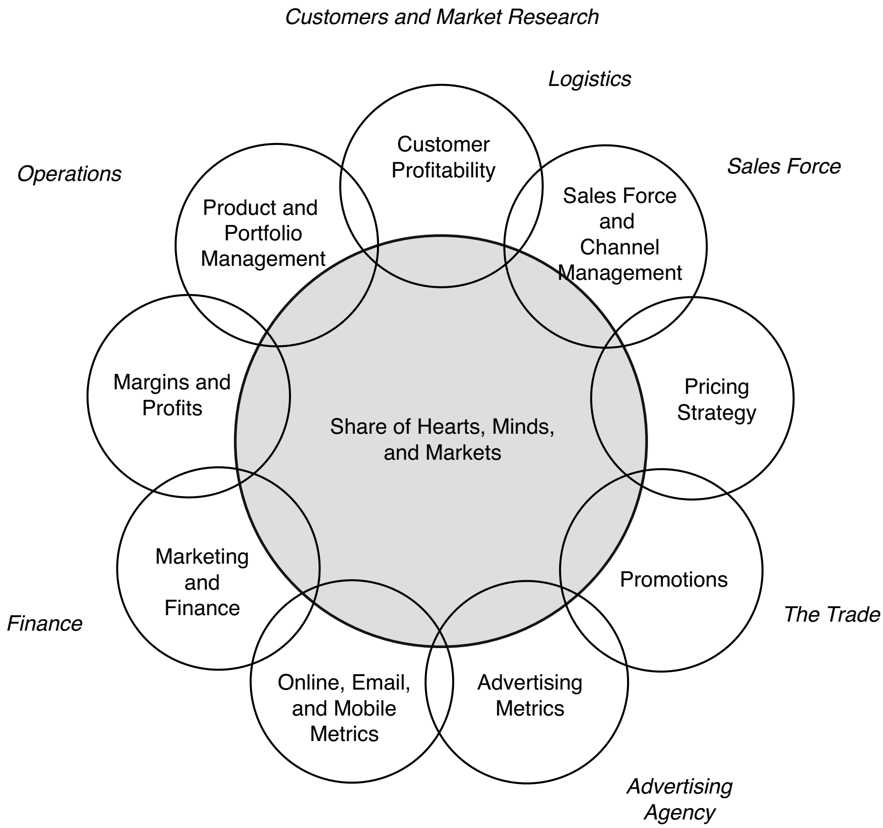

Figure 1.1 Marketing Metrics: Marketing at the Core of the Organization

- *Chapter 6—Sales Force and Channel Management:* Sales force organization, performance, and compensation. Distribution coverage and logistics.
- *Chapter 7—Pricing Strategy:* Price sensitivity and optimization, with an eye toward setting prices to maximize profits.
- *Chapter 8—Promotion:* Temporary price promotions, coupons, rebates, and trade allowances.
- *Chapter 9—Advertising Metrics:* The central measures of advertising coverage and effectiveness, including reach, frequency, rating points, and impressions. Models for consumer response to advertising.
- *Chapter 10—Online, Email, and Mobile Metrics:* Specialized metrics for Web-based, Mobile, and Email campaigns.

- *Chapter 11—Marketing and Finance:* Financial evaluation of marketing programs.
- *Chapter 12—The Marketing Metrics X-Ray:* The use of metrics as leading indicators of opportunities, challenges, and financial performance.
- *Chapter 13—System of Metrics:* Decomposing marketing metrics into component parts can 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 passage 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 each section with a brief survey of **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
Share of Hearts, Minds, and Markets		3.2	Channel Margins
2.1	Revenue Market Share	3.3	Average Price per Unit
2.1	Unit Market Share	3.3	Price Per Statistical Unit
2.2	Relative Market Share	3.4	Variable and Fixed Costs
2.3	Brand Development Index	3.5	Marketing Spending
2.3	Category Development Index	3.6	Contribution per Unit
2.4–2.6	Decomposition of Market Share	3.6	Contribution Margin (%)
2.4	Market Penetration	3.6	Break-Even Sales
2.4	Brand Penetration	3.7	Target Volume
2.4	Penetration Share	3.7	Target Revenues
2.5	Share of Requirements	*Product and Portfolio Management*	
2.6	Usage Index	4.1	Trial
2.7	Hierarchy of Effects	4.1	Repeat Volume
2.7	Awareness	4.1	Penetration
2.7	Top of Mind	4.1	Volume Projections
2.7	Ad Awareness	4.2	Year-on-Year Growth
2.7	Knowledge	4.2	Compound Annual Growth Rate (CAGR)
2.7	Consumer Beliefs	4.3	Cannibalization Rate
2.7	Purchase Intentions	4.3	Fair Share Draw Rate
2.7	Purchase Habits	4.4	Brand Equity Metrics
2.7	Loyalty	4.5	Conjoint Utilities
2.7	Likeability	4.6	Segment Utilities
2.8	Willingness to Recommend	4.7	Conjoint Utilities and Volume Projections
2.8	Customer Satisfaction	*Customer Profitability*	
2.9	Net Promoter	5.1	Customers
2.10	Willingness to Search	5.1	Recency
2.11	Neuro-Marketing	5.1	Retention Rate
Margins and Profits		5.2	Customer Profit
3.1	Unit Margin	5.3	Customer Lifetime Value
3.1	Margin (%)	5.4	Prospect Lifetime Value

Continues

Table 1.2 *Continued*

Section	Metric	Section	Metric
5.5	Average Acquisition Cost	7.4	Optimal Price
5.5	Average Retention Cost	7.5	Residual Elasticity
Sales Force and Channel Management		*Promotion*	
6.1	Workload	8.1	Baseline Sales
6.1	Sales Potential Forecast	8.1	Incremental Sales/ Promotion Lift
6.2	Sales Goal	8.2	Redemption Rates
6.3	Sales Force Effectiveness	8.2	Costs for Coupons and Rebates
6.4	Compensation	8.2	Percentage Sales with Coupon
6.4	Break-Even Number of Employees	8.3	Percent Sales on Deal
6.5	Sales Funnel, Sales Pipeline	8.3	Pass-Through
6.6	Numeric Distribution	8.4	Price Waterfall
6.6	All Commodity Volume (ACV)	*Advertising Metrics*	
6.6	Product Category Volume (PCV)	9.1	Impressions
6.6	Total Distribution	9.1	Gross Rating Points (GRPs)
6.6	Category Performance Ratio	9.2	Cost per Thousand Impressions (CPM)
6.7	Out of Stock	9.3	Net Reach
6.7	Inventories	9.3	Average Frequency
6.8	Markdowns	9.4	Frequency Response Functions
6.8	Direct Product Profitability (DPP)	9.5	Effective Reach
6.8	Gross Margin Return on Inventory Investment (GMROII)	9.5	Effective Frequency
Pricing Strategy		9.6	Share of Voice
7.1	Price Premium	9.7	Advertising Elasticity of Demand
7.2	Reservation Price		
7.2	Percent Good Value		
7.3	Price Elasticity of Demand		

Table 1.2 *Continued*

Section	Metric	Section	Metric
Online, Email, and Mobile Metrics		*Marketing and Finance*	
10.1	Pageviews	11.1	Net Profit
10.2	Rich Media Display Time	11.1	Return on Sales (ROS)
10.2	Rich Media Interaction Rate	11.1	Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA)
10.3	Clickthrough Rate	11.2	Return on Investment (ROI)
10.4	Cost per Click	11.3	Economic Profit (aka EVA®)
10.4	Cost per Order	11.4	Payback
10.4	Cost per Customer Acquired	11.4	Net Present Value (NPV)
10.5	Visits	11.4	Internal Rate of Return (IRR)
10.5	Visitors	11.5	Marketing Return on Investment (MROI)
10.5	Abandonment Rate		
10.6	Bounce Rate (Web site)		
10.7	Friends/Followers/ Supporters		
10.7	Likes		
10.7	Value of a Like		
10.8	Downloads		
10.9	Average Revenue per User		
10.10	Email Metrics		

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 followed this 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. Example: the consumer price index. Indexes are often interpreted as a percentage.*

$—Dollar. %—Percentage. #—Count. R—Rating. I—Index.

References and Suggested Further Reading

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