MARKETING METRICS:

50+ Metrics Every Executive Should Master

MARKETING METRICS

"A 'must-read' for any business leader who wants to optimize the way they measure business activities and results in order to grow their business."

—**Kimberley B. Dedeker**, Vice President, Global Consumer & Market Knowledge, Procter & Gamble

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

Praise for *Marketing Metrics*

"Measurement is critical to the health of any business, and *Marketing Metrics* highlights key tools and techniques across many measurement landscapes—from the consumer, to the sales force, to the ever-changing media environment. It's a 'must-read' for any business leader who wants to optimize the way they measure business activities and results in order to grow their business."

—**Kimberley B. Dedeker**, Vice President, Global Consumer & Market Knowledge, Procter & Gamble

"Why read *Marketing Metrics*? Because better metrics lead to better decisions, which lead to better outcomes. This book does a superb job of helping marketers, and all executives, understand which metrics to use and how to use them."

—**Erv Shames**, former CEO, Kraft Foods

"Why was this book not written earlier? *Marketing Metrics* presents an excellent compendium of the metrics you *really* need to know, along with a structural framework that ties them together and helps you steer your business successfully."

—**Dr. Hans-Willi Schroiff**, Vice President, Market Research/Business Intelligence, Henkel

"Marketing is being challenged, as never before, to be accountable. This book, by describing metric options and their risks, will help address this challenge."

—**David Aaker**, author of *Brand Portfolio Strategy*

"Measurement is central to our business discipline. What gets measured matters, and having the right measures is key. *Marketing Metrics* provides an insightful compilation of what to measure and how to measure it for today's marketing-savvy executives."

—**Glenn Renwick**, CEO of the Progressive Corporation (Progressive Direct℠ and Drive® Insurance from Progressive)

"Marketing, as a function, is under increasing pressure to develop business-oriented metrics to justify marketing mix investments. *Marketing Metrics* offers clear advice on how to develop common marketing metrics that are relevant and accessible to both marketing and non-marketing decision makers."

—**Anil Menon**, Vice President, Marketing, Systems & Technology Group, IBM

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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 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

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.

In this environment, we have come to recognize that marketers, general managers, and business students need a comprehensive, practical reference on the metrics used to judge marketing programs and quantify their results. In this book, we seek to provide that reference. We wish our readers great success with it.

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."—William Thomson, Lord Kelvin, Popular Lectures and Addresses (1891–94)*[2]

Lord Kelvin, a British physicist and the manager of the laying of 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 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.

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.

Inevitably, we must present these metrics in a sequence that will appear somewhat arbitrary. In organizing this text, however, 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.
- *Chapter 6—Sales Force and Channel Management:* Sales force organization, performance, and compensation. Distribution coverage and logistics.

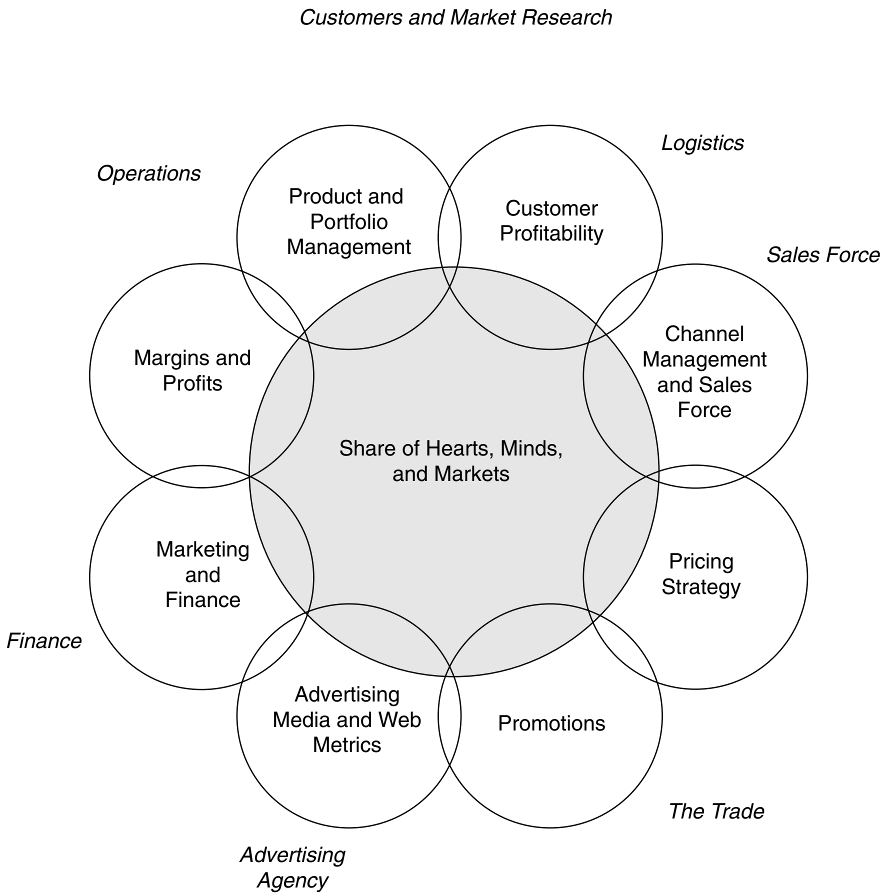
Customers and Market Research
Operations
Logistics
Sales Force
Product and Portfolio Management
Customer Profitability
Margins and Profits
Channel Management and Sales Force
Share of Hearts, Minds, and Markets
Marketing and Finance
Pricing Strategy
Finance
Advertising Media and Web Metrics
Promotions
The Trade
Advertising Agency

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

- *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 Media and Web Metrics:* The central measures of advertising coverage and effectiveness, including reach, frequency, rating points, and impressions. Models for consumer response to advertising. Specialized metrics for Web-based campaigns.
- *Chapter 10—Marketing and Finance:* Financial evaluation of marketing programs.
- *Chapter 11—The Marketing Metrics X-Ray:* The use of metrics as leading indicators of opportunities, challenges, and financial performance.

Components of Each Chapter

As shown in Table 1.1, 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.

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.

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Table 1.1 Major Metrics List

Section	Metric
Share of Hearts, Minds, and Markets	
2.1	Market Share
2.1	Unit Share
2.2	Relative Market Share
2.3	Brand Development Index
2.3	Category Development Index
2.4–2.6	Market Share
2.4	Market Penetration
2.4	Brand Penetration
2.4	Penetration Share
2.5	Share of Requirements
2.6	Heavy Usage Index
2.7	Hierarchy of Effects
2.7	Awareness
2.7	Top of Mind
2.7	Ad Awareness
2.7	Knowledge
2.7	Beliefs
2.7	Intentions
2.7	Purchase Habits
2.7	Loyalty
2.7	Likeability
2.8	Willingness to Recommend
2.8	Customer Satisfaction
2.9	Willingness to Search
Margins and Profits	
3.1	Unit Margin
3.1	Margin (%)
3.2	Channel Margins
3.3	Average Price per Unit
3.3	Price Per Statistical Unit
3.4	Variable and Fixed Costs
3.5	Marketing Spending
3.6	Contribution per Unit
3.6	Contribution Margin (%)
3.6	Break-Even Sales
3.7	Target Volume
3.7	Target Revenues
Product and Portfolio Management	
4.1	Trial
4.1	Repeat Volume
4.1	Penetration
4.1	Volume Projections
4.2	Growth—Percentage
4.2	Growth—CAGR
4.3	Cannibalization Rate
4.3	Fair Share Draw Rate
4.4	Brand Equity Metrics
4.5	Conjoint Utilities and Consumer Preferences
4.6	Segment Utilities
4.7	Conjoint Utilities and Volume Projections
Customer Profitability	
5.1	Customers
5.1	Recency
5.1	Retention Rate
5.2	Customer Profit
5.3	Customer Lifetime Value
5.4	Prospect Lifetime Value

Table 1.1 *Continued*

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

Continues

Table 1.1 *Continued*

Section	Metric	Section	Metric
9.9	Cost per Order	10.2	Return on Investment—ROI
9.9	Cost per Customer Acquired	10.3	Economic Profit—EVA
9.10	Visits	10.4	Payback
9.10	Visitors	10.4	Net Present Value (NPV)
9.10	Abandonment Rate	10.4	Internal Rate of Return (IRR)
Marketing and Finance		10.5	Return on Marketing Investment—ROMI; Revenue
10.1	Net Profit		
10.1	Return on Sales—ROS		

2

SHARE OF HEARTS, MINDS, AND MARKETS

Introduction

Metrics covered in this chapter:

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

> *"As Wal-Mart aggressively rolls out more stores, it continues to capture an increasing share of wallet. Three out of five consumers shopped for gifts at Wal-Mart this past holiday season. U.S. households now buy, on average, 22% of their groceries at Wal-Mart. A quarter of all shoppers indicate that they are spending more of their clothing budget at Wal-Mart now compared with a year ago. These ShopperScape findings lend credence to Retail Forward's premise that Wal-Mart will continue to push the boundaries of what consumers will allow it to be."*[1]

At first glance, market share appears to involve a relatively simple calculation: "us/(us + them)." But this raises a host of questions. Who, for example, are "they?" 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, heavy 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 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.

	Metric	Construction	Considerations	Purpose
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.
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 2.5 2.6	Decomposition of Market Share	Penetration Share * Share of Requirements * Heavy Usage Index.	Can be based on unit or revenue shares. Time period covered.	Calculation of market share. Competitive analysis. Historical trends analysis. Formulation of marketing objectives.
2.4	Market 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.

Continues

	Metric	Construction	Considerations	Purpose
2.4	Penetration Share	Brand penetration as a percentage of market penetration.	A component of the market share formula.	Comparative acceptance of brand within category.
2.5	Share of Requirements	Brand purchases as a percentage of total category purchases by buyers of that brand.	Can use either unit or revenue shares. May rise even as sales decline, leaving only most loyal customers.	Level of commitment to a brand by its existing customers.
2.6	Heavy Usage Index	Category purchases by customers of a brand, compared with purchases in that category by average customers in the category.	Can use either unit or revenue sales.	Measures relative usage of a category by customers for a specific brand.
2.7	Hierarchy of Effects	Awareness; attitudes, beliefs; importance; intentions to try; buy; trial, repeat.	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.

	Metric	Construction	Considerations	Purpose
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	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.
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.

Continues

	Metric	Construction	Considerations	Purpose
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	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.

2.1 Market Share

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

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

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

Marketers need to be able to translate sales targets into market share because this will demonstrate whether forecasts are to be attained by growing with 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: *Revenue market share 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 7.1).*

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

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 are advised to 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. They might posit, for example, that "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 important 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.

Competitive dynamics in the automobile industry, and at General Motors in particular, illustrate the complexities involved in quantifying market share:

> *"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 (auto) 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 of time. Short-term data, however, generally carry a low signal-to-noise ratio. By contrast, data covering a longer time span 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:** *That portion of the total market for which the firm competes. This may exclude geographic regions or product types. In the airline industry, for example, as of mid 2005, Ryan Air did not fly to the United States. Consequently, the U.S. 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.

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

Market concentration, a related metric, measures the degree to which a comparatively small number of firms accounts 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

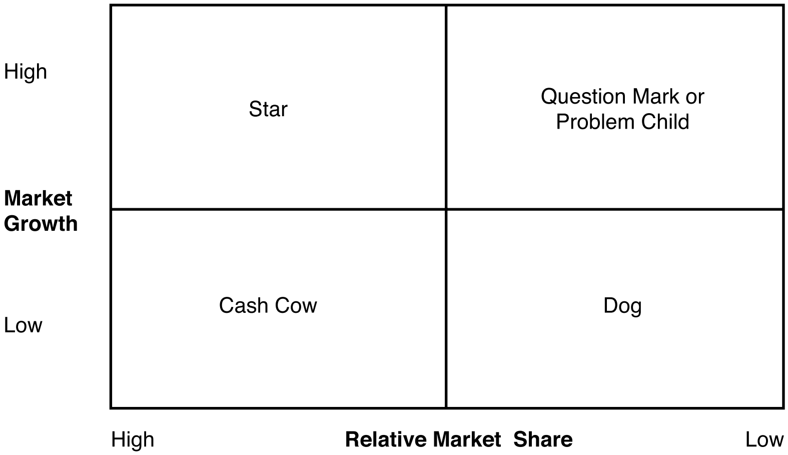


Figure 2.1 The BCG Matrix

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 in its famous matrix of relative share and market growth (see Figure 2.1).

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, placing them 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

$$\textbf{Relative Market Share (I)} = \frac{\textbf{Brand's Market Share (\$,\#)}}{\textbf{Largest Competitor's Market Share (\$,\#)}}$$

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	10.0	€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 usually calculated for the largest three or four firms in a market.*[3]

Three (Four) Firm Concentration Ratio: *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 comprised 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	50%	€375,000	40.0%
Twister	10.0	20%	€200,000	21.3%
A-One	7.5	15%	€187,500	20.0%
Bowlz	5	10%	€125,000	13.3%
Chien	2.5	5%	€50,000	5.3%
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**	**Herfindahl Index**	**Revenue (Thousands)**	**Revenue Share**	**Herfindahl Index**
Zipper	25	50%	0.25	€375,000	40%	0.16
Twister	10.0	20%	0.04	€200,000	21%	0.0455
A-One	7.5	15%	0.0225	€187,500	20%	0.04
Bowlz	5	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 to 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.

$$\textbf{Brand Development Index (I)} = \frac{\textbf{[Brand Sales to Group (\#)/Households (\#) in the Group]}}{\textbf{[Total Brand Sales (\#)/Total Household (\#)]}}$$

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.

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

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 CDI (category development index), marketers might determine that Midwesterners buy twice as many country-western music CDs per capita as Americans in general, while consumers living on the East Coast buy less than the national average. This would be useful information for targeting the launch campaign for a new country-western 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.

Construction

Brand Development Index—BDI (I): *An index of how well a brand performs within a given market group, relative to its performance in the market as a whole.*

$$\text{Brand Development Index—BDI (I)} = \frac{[\text{Brand Sales to Group (\#)/Households in Group (\#)}]}{[\text{Total Brand Sales (\#)/Total Household (\#)}]}$$

The BDI (brand development index) is a measure of brand sales per person or per household within a specified demographic group or geography, compared with its average sales per person or household in the market as a whole. To illustrate its use: One might hypothesize that sales per capita of Ben & Jerry's brand ice cream would be greater in the brand's home state, Vermont, than in the rest of the country. By calculating Ben & Jerry's BDI for Vermont, marketers could test this hypothesis quantitatively.

EXAMPLE: Oaties is a minor brand of breakfast cereal. Among households without children, its sales run one packet per week per 100 households. In the general population, Oaties' sales run one packet per week per 80 households. This translates to 1/100 of a packet per household in the childless segment, versus 1/80 of a packet in the general populace.

$$\text{BDI} = \frac{(\text{Brand Sales}/\text{Household})}{(\text{Total Brand Sales}/\text{Household})}$$

$$= \frac{1/100}{1/80} = 0.8$$

Oaties performs slightly less well in the childless segment than in the market as a whole.

Category Development Index—CDI: *An index of how well a category performs within a given market segment, relative to its performance in the market as a whole.*

$$\textbf{Category Development Index (I)} = \frac{\textbf{[Category Sales to Group (\#)/Households in Group (\#)]}}{\textbf{[Total Category Sales (\#)/Total Household (\#)]}}$$

Similar in concept to the BDI, the category development index demonstrates where a category shows strength or weakness relative to its overall performance. By way of example, Boston enjoys high per-capita consumption of ice cream. Bavaria and Ireland both show higher per-capita consumption of beer than Iran.

Data Sources and Complications

In calculating BDI or CDI, a precise definition of the segment under study is vital. Segments are often bounded geographically, but they can be defined in any way for which data can be obtained.

Related Metrics and Concepts

The term category development index has also been applied to retail organizations. In this application, it measures the extent to which a retailer emphasizes one category versus others.

$$\textbf{Category Development Index (I)} = \frac{\textbf{Retailer's Share of Category Sales (\%)}}{\textbf{Retailer's Total Share of Market (\%)}}$$

This use of the term is similar to the category performance ratio (see Section 6.6).

2.4 Penetration

Penetration is a measure of brand or category popularity. It is defined as the number of people who buy a specific brand or a category of goods at least once in a given period, divided by the size of the relevant market population.

$$\text{Market Penetration (\%)} = \frac{\text{Customers Who Have Purchased a Product in the Category (\#)}}{\text{Total Population (\#)}}$$

$$\text{Brand Penetration (\%)} = \frac{\text{Customers Who Have Purchased the Brand (\#)}}{\text{Total Population (\#)}}$$

$$\text{Penetration Share (\%)} = \frac{\text{Brand Penetration (\%)}}{\text{Market Penetration (\%)}}$$

$$\text{Penetration Share (\%)} = \frac{\text{Customers Who Have Purchased the Brand (\#)}}{\text{Customers Who Have Purchased a Product in the Category (\#)}}$$

Often, managers must decide whether to seek sales growth by acquiring existing category users from their competitors or by expanding the total population of category users, attracting new customers to the market. Penetration metrics help indicate which of these strategies would be most appropriate and help managers to monitor their success. These equations might also be calculated for usage instead of purchase.

Construction

Penetration: *The proportion of people in the target who bought (at least once in the period) a specific brand or a category of goods.*

$$\text{Market Penetration (\%)} = \frac{\text{Customers Who Have Purchased a Product in the Category (\#)}}{\text{Total Population (\#)}}$$

$$\text{Brand Penetration (\%)} = \frac{\text{Customers Who Have Purchased the Brand (\#)}}{\text{Total Population (\#)}}$$

Two key measures of a product's "popularity" are penetration rate and penetration share. The penetration rate (also called penetration, brand penetration, or market penetration as appropriate), is the percentage of the relevant population that has purchased a given brand or category at least once in the time period under study.

EXAMPLE: Over a period of a month, in a market of 10,000 households, 500 households purchased Big Bomb brand flea foggers.

$$\text{Brand Penetration, Big Bomb} = \frac{\text{Big Bomb Customers}}{\text{Total Population}}$$

$$= \frac{500}{10{,}000} = 5\%$$

A brand's penetration share, in contrast to penetration rate, is determined by comparing that brand's customer population to the number of customers *for its category* in the relevant market as a whole. Here again, to be considered a customer, one must have purchased the brand or category at least once during the period.

$$\textbf{Penetration Share (\%)} = \frac{\textbf{Brand Penetration (\%)}}{\textbf{Market Penetration (\%)}}$$

EXAMPLE: Returning to the flea fogger market, during the month in which 500 households purchased Big Bomb, 2,000 households bought at least one product of any brand in this category. This enables us to calculate Big Bomb's penetration share.

$$\text{Penetration Share, Big Bomb} = \frac{\text{Big Bomb Customers}}{\text{Category Customers}}$$

$$= \frac{500}{20{,}000} = 25\%$$

DECOMPOSING MARKET SHARE

Relationship of Penetration Share to Market Share: *Market share can be calculated as the product of three components: penetration share, share of requirements, and heavy usage index.*

$$\textbf{Market Share (\%)} = \textbf{Penetration Share (\%)} * \textbf{Share of Requirements (\%)} * \textbf{Heavy Usage Index (I)}$$

Share of Requirements: *The percentage of customers' needs in a category that are served by a given brand or product (see Section 2.5).*

Heavy Usage Index: *A measure of how heavily the people who use a specific product use the entire category of such products (see Section 2.6).*

In light of these relationships, managers can use this decomposition of market share to reveal penetration share, given the other inputs.

$$\textbf{Penetration Share (\%)} = \frac{\textbf{Market Share (\%)}}{\textbf{[Heavy Usage Index (I)} * \textbf{Share of Requirements (\%)]}}$$

EXAMPLE: Eat Wheats brand cereal has a market share in Urbanopolis of 6%. The heavy usage index for Eat Wheats cereal is 0.75 in Urbanopolis. Its share of requirements is 40%. From these data, we can calculate the penetration share for Eat Wheats brand cereal in Urbanopolis:

$$\text{Penetration Share} = \frac{\text{Market Share}}{\text{(Heavy Usage Index} * \text{Share of Requirements)}}$$

$$= \frac{6\%}{(0.75 * 40\%)} = \frac{6\%}{.30} = 20\%$$

Data Sources, Complications, and Cautions

The time period over which a firm measures penetration can have a significant impact on the penetration rate. For example, even among the most popular detergent brands, many are not purchased weekly. As the time period used to define penetration becomes shorter, managers can expect penetration rates to decline. By contrast, penetration share may be less subject to this dynamic because it represents a comparison between brands, among which the effects of shorter periods may fall approximately evenly.

RELATED METRICS AND CONCEPTS

Total Number of Active Customers: *The customers (accounts) who purchased at least once in a given time period. When assessed at a brand level, this is equivalent to brand penetration. This term is often used in shorthand form—total number of customers—though this would not be appropriate when a distinction must be made for ex-customers. This is discussed in more detail in Section 5.1 (customers of a specified recency).*

Acceptors: *Customers who are disposed to accept a given product and its benefits: the opposite of rejecters.*

Ever-tried: *The percentage of a population that has tried a given brand at any time. (See Section 4.1 for more on trial.)*

2.5 Share of Requirements

Share of requirements, also known as share of wallet, is calculated solely among buyers of a specific brand. Within this group, it represents the percentage of purchases within the relevant category, accounted for by the brand in question.

$$\textbf{Unit Share of Requirements (\%)} = \frac{\textbf{Brand Purchases (\#)}}{\textbf{Total Category Purchases by Brand Buyers (\#)}}$$

$$\textbf{Revenue Share of Requirements (\%)} = \frac{\textbf{Brand Purchases (\$)}}{\textbf{Total Category Purchases by Brand Buyers (\$)}}$$

Many marketers view share of requirements as a key measure of loyalty. This metric can guide a firm's decisions on whether to allocate resources toward efforts to expand a category, to take customers from competitors, or to increase share of requirements among its established customers. Share of requirements is, in essence, the market share for a brand within a market narrowly defined as the people who have already purchased that brand.

Purpose: To understand the source of market share in terms of breadth and depth of consumer franchise, as well as the extent of relative category usage (heavy users/larger customers versus light users/smaller customers).

Construction

Share of Requirements: *A given brand's share of purchases in its category, measured solely among customers who have already purchased that brand. Also known as share of wallet.*

When calculating share of requirements, marketers may consider either dollars or units. They must ensure, however, that their heavy usage index is consistent with this choice.

$$\text{Unit Share of Requirements (\%)} = \frac{\text{Brand Purchases (\#)}}{\text{Total Category Purchases by Brand Buyers (\#)}}$$

$$\text{Revenue Share of Requirements (\%)} = \frac{\text{Brand Purchases (\$)}}{\text{Total Category Purchases by Brand Buyers (\$)}}$$

The best way to think about share of requirements is as the average market share enjoyed by a product among the customers who buy it.

EXAMPLE: In a given month, the unit purchases of AloeHa brand sunscreen ran 1,000,000 bottles. Among the households that bought AloeHa, total purchases of sunscreen came to 2,000,000 bottles.

$$\text{Share of Requirements} = \frac{\text{AloeHa Purchases}}{\text{Category Purchases by AloeHa Customers}}$$

$$= \frac{1{,}000{,}000}{2{,}000{,}000} = 50\%$$

Share of requirements is also useful in analyzing overall market share. As previously noted, it is part of an important formulation of market share.

$$\textbf{Market Share} = \textbf{Penetration Share} * \textbf{Share of Requirements} * \textbf{Heavy Usage Index}$$

Share of requirements can thus be calculated indirectly by decomposing market share.

$$\textbf{Share of Requirements (\%)} = \frac{\textbf{Market Share (\%)}}{[\textbf{Penetration Share (\%)} * \textbf{Heavy Usage Index (I)}]}$$

EXAMPLE: Eat Wheats brand cereal has a market share in Urbanopolis of 8%. The heavy usage index for Eat Wheats in Urbanopolis is 1. The brand's penetration share in Urbanopolis is 20%. On this basis, we can calculate Eat Wheats' share of requirements in Urbanopolis:

$$\text{Share of Requirements} = \frac{\text{Market Share}}{(\text{Heavy Usage Index} * \text{Penetration Share})}$$

$$= \frac{8\%}{(1 * 20\%)} = \frac{8\%}{20\%} = 40\%$$

Note that in this example, market share and heavy usage index must both be defined in the same terms (units or revenue). Depending on the definition of these two metrics, the calculated share of requirements will be either unit share of requirements (%) or revenue share of requirements (%).

Data Sources, Complications, and Cautions

Double Jeopardy: Some marketers strive for a "niche" positioning that yields high market share through a combination of low penetration and high share of requirements. That is, they seek relatively few customers but very loyal ones. Before embarking on this strategy, however, a phenomenon known as "double jeopardy" should be considered. Generally, the evidence suggests that it's difficult to achieve a high share of requirements without also attaining a high penetration share. One reason is that products with high market share generally have high availability, whereas those with low market share may not. Therefore, it can be difficult for customers to maintain loyalty to brands with low market share.

Related Metrics and Concepts

Sole Usage: *The fraction of a brand's customers who use only the brand in question.*

Sole Usage Percentage: *The proportion of a brand's customers who use only that brand's products and do not buy from competitors. Sole users may be die-hard, loyal customers. Alternatively, they may not have access to other options, perhaps because they live in remote areas. Where sole use is 100%, the share of wallet is 100%.*

$$\text{Sole Usage (\%)} = \frac{\text{Customers Who Buy Only the Brand in Question (\#)}}{\text{Total Brand Customers (\#)}}$$

Number of Brands Purchased: During a given period, some customers may buy only a single brand within a category, whereas others buy two or more. In evaluating loyalty to a given brand, marketers can consider the average number of brands purchased by consumers of that brand versus the average number purchased by all customers in that category.

EXAMPLE: Among 10 customers for cat food, 7 bought the Arda brand, 5 bought Bella, and 3 bought Constanza. Thus, the 10 customers made a total of 15 brand purchases (7 + 5 + 3), yielding an average of 1.5 brands per customer.

Seeking to evaluate customer loyalty, a Bella brand manager notes that of his firm's five customers, 3 bought only Bella, whereas two bought both Arda and Bella. None of Bella's customers bought Constanza. Thus, the five Bella customers made seven brand purchases (1 + 1 + 1 + 2 + 2), yielding an average of 1.4 (that is, 7/5) brands per Bella customer. Compared to the average category purchaser, who buys 1.5 brands, Bella buyers are slightly more loyal.

Repeat Rate: *The percentage of brand customers in a given period who are also brand customers in the subsequent period.*

Repurchase Rate: *The percentage of customers for a brand who repurchase that brand on their next purchase occasion.*

Confusion abounds in this area. In these definitions, we have tried to distinguish a metric based on calendar time (repeat rate) from one based on "customer time" (repurchase rate). In Chapter 5, "Customer Profitability," we will describe a related metric, retention, which is used in contractual situations in which the first non-renewal (non-purchase) signals the end of a customer relationship. Although we suggest that the term retention be applied only in contractual situations, you will often see repeat rates and repurchase rates referred to as "retention rates." Due to a lack consensus on the use of these terms, marketers are advised not to rely on the names of these metrics as perfect indicators of how they are calculated.

The importance of repeat rate depends on the time period covered. Looking at one week's worth of purchases is unlikely to be very illuminating. In a given category, most consumers only buy one brand in a week. By contrast, over a period of years, consumers may buy several brands that they do not prefer, on occasions when they can't find the brand to which they seek to be loyal. Consequently, the right period to consider depends on the product under study and the frequency with which it is bought. Marketers are advised to take care to choose a meaningful period.

2.6 Heavy Usage Index

The heavy usage index is a measure of the relative intensity of consumption. It indicates how heavily the customers for a given brand use the product category to which that brand belongs, compared with the average customer for that category.

$$\text{Heavy Usage Index (I)} = \frac{\text{Average Total Purchases in Category by Brand Customers (\#,\$)}}{\text{Average Total Purchases in Category by All Customers for That Category (\#,\$)}}$$

or

$$\text{Heavy Usage Index (I)} = \frac{\text{Market Share (\%)}}{[\text{Penetration Share (\%)} * \text{Share of Requirements (\%)}]}$$

The heavy usage index, also called the weight index, yields insight into the source of volume and the nature of a brand's customer base.

Purpose: To define and measure whether a firm's consumers are "heavy users."

The heavy usage index answers the question, "How heavily do our customers use the category of our product?" When a brand's heavy usage index is greater than 1.0, this signifies that its customers use the category to which it belongs more heavily than the average customer for that category.

Construction

> **Heavy Usage Index:** *The ratio that compares the average consumption of products in a category by customers of a given brand with the average consumption of products in that category by all customers for the category.*

The heavy usage index can be calculated on the basis of unit or dollar inputs. For a given brand, if the heavy usage index is greater than 1.0, that brand's customers consume an above-average quantity or value of products in the category.

$$\text{Heavy Usage Index (I)} = \frac{\text{Average Total Purchases in Category by Brand Customers (\#,\$)}}{\text{Average Total Purchases in Category by All Customers for That Category (\#,\$)}}$$

EXAMPLE: Over a period of one year, the average shampoo purchases by households using Shower Fun brand shampoo totaled six 15-oz bottles. During the same period, average shampoo consumption by households using any brand of shampoo was four 15-oz bottles.

The heavy usage index for households buying Shower Fun is therefore 6/4, or 1.5. Customers of Shower Fun brand shampoo are disproportionately heavy users. They buy 50% more shampoo than the average shampoo consumer. Of course, because Shower Fun buyers are part of the overall market average, when compared with non-users of Shower Fun, their relative usage is even higher.

As previously noted, market share can be calculated as the product of three components: penetration share, share of requirements, and heavy usage index (see Section 2.4). Consequently, we can calculate a brand's heavy usage index if we know its market share, penetration share, and share of requirements, as follows:

$$\text{Heavy Usage Index (I)} = \frac{\text{Market Share (\%)}}{[\text{Penetration Share (\%)} * \text{Share of Requirements (\%)}]}$$

This equation works for market shares defined in either unit or dollar terms. As noted earlier, the heavy usage index can measure either unit or dollar usage. Comparing a brand's unit heavy usage index to its dollar heavy usage index, marketers can determine whether category purchases by that brand's customers run above or below the average category price.

Data Sources, Complications, and Cautions

The heavy usage index does not indicate how heavily customers use a specific brand, only how heavily they use the category. A brand can have a high heavy usage index, for example, meaning that its customers are heavy category users, even if those customers use the brand in question to meet only a small share of their needs.

Related Metrics and Concepts

See also the discussion of brand development index (BDI) and category development index (CDI) in Section 2.3.

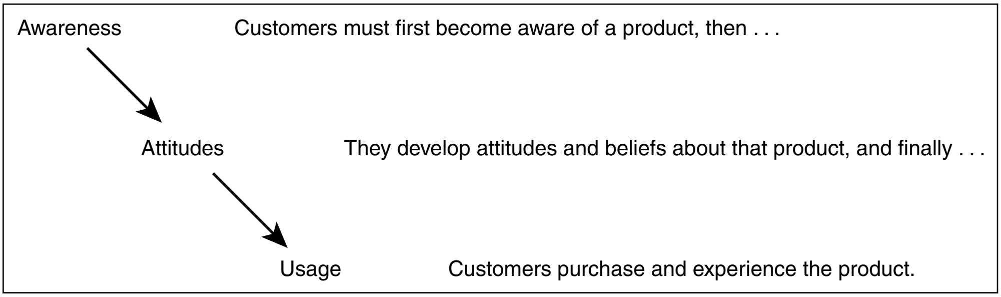
2.7 Awareness, Attitudes, and Usage (AAU): Metrics of the Hierarchy of Effects

Studies of awareness, attitudes, and usage (AAU) enable marketers to quantify levels and trends in customer knowledge, perceptions, beliefs, intentions, and behaviors. In some companies, the results of these studies are called "tracking" data because they are used to track long-term changes in customer awareness, attitudes, and behaviors.

AAU studies are most useful when their results are set against a clear comparator. This benchmark may comprise the data from prior periods, different markets, or competitors.

Purpose: To track trends in customer attitudes and behaviors.

Awareness, attitudes, and usage (AAU) metrics relate closely to what has been called the Hierarchy of Effects, an assumption that customers progress through sequential stages from lack of awareness, through initial purchase of a product, to brand loyalty (see Figure 2.2). AAU metrics are generally designed to track these stages of knowledge, beliefs, and behaviors. AAU studies also may track "who" uses a brand or product—in which customers are defined by category usage (heavy/light), geography, demographics, psychographics, media usage, and whether they purchase other products.



Customers must first become aware of a product, then . . .

They develop attitudes and beliefs about that product, and finally . . .

Customers purchase and experience the product.

Figure 2.2 Awareness, Attitudes, and Usage: Hierarchy of Effects

Information about attitudes and beliefs offers insight into the question of why specific users do, or do not, favor certain brands. Typically, marketers conduct surveys of large samples of households or business customers to gather these data.

Construction

Awareness, attitudes, and usage studies feature a range of questions that aim to shed light on customers' relationships with a product or brand (see Table 2.4). For example, who are the acceptors and rejecters of the product? How do customers respond to a replay of advertising content?

Marketers use answers to these questions to construct a number of metrics. Among these, certain "summary metrics" are considered important indicators of performance. In many studies, for example, customers' "willingness to recommend" and "intention to purchase" a brand are assigned high priority. Underlying these data, various diagnostic metrics help marketers understand *why* consumers may be willing—or unwilling—to recommend or purchase that brand. Consumers may not have been aware of the brand, for example. Alternatively, they may have been aware of it but did not subscribe to one of its key benefit claims.

AWARENESS AND KNOWLEDGE

Marketers evaluate various levels of awareness, depending on whether the consumer in a given study is prompted by a product's category, brand, advertising, or usage situation.

> **Awareness:** *The percentage of potential customers or consumers who recognize—or name—a given brand. Marketers may research brand recognition on an "aided" or "prompted" level, posing such questions as, "Have you heard of Mercedes?" Alternatively, they may measure "unaided" or "unprompted" awareness, posing such questions as, "Which makes of automobiles come to mind?"*

Table 2.4 Awareness, Attitudes, and Usage: Typical Questions

Type	Measures	Typical Questions
Awareness	Awareness and Knowledge	Have you heard of Brand X? What brand comes to mind when you think "luxury car?"
Attitudes	Beliefs and Intentions	Is Brand X for me? On a scale of 1 to 5, is Brand X for young people? What are the strengths and weaknesses of each brand?
Usage	Purchase Habits and Loyalty	Did you use Brand X this week? What brand did you last buy?

Top of Mind: *The first brand that comes to mind when a customer is asked an unprompted question about a category. The percentage of customers for whom a given brand is top of mind can be measured.*

Ad Awareness: *The percentage of target consumers or accounts who demonstrate awareness (aided or unaided) of a brand's advertising. This metric can be campaign- or media-specific, or it can cover all advertising.*

Brand/Product Knowledge: *The percentage of surveyed customers who demonstrate specific knowledge or beliefs about a brand or product.*

ATTITUDES

Measures of attitude concern consumer response to a brand or product. Attitude is a combination of what consumers believe and how strongly they feel about it. Although a detailed exploration of attitudinal research is beyond the scope of this book, the following summarizes certain key metrics in this field.

Attitudes/Liking/Image: *A rating assigned by consumers—often on a scale of 1–5 or 1–7—when survey respondents are asked their level of agreement with such propositions as, "This is a brand for people like me," or "This is a brand for young people." A metric based on such survey data can also be called relevance to customer.*

Perceived Value for Money: *A rating assigned by consumers—often on a scale of 1–5 or 1–7—when survey respondents are asked their level of agreement with such propositions as, "This brand usually represents a good value for the money."*

Perceived Quality/Esteem: *A consumer rating—often on a scale of 1–5 or 1–7—of a given brand's product when compared with others in its category or market.*

Relative Perceived Quality: *A consumer rating (often from 1–5 or 1–7) of brand product compared to others in the category/market.*

Intentions: *A measure of customers' stated willingness to behave in a certain way. Information on this subject is gathered through such survey questions as, "Would you be willing to switch brands if your favorite was not available?"*

Intention to Purchase: *A specific measure or rating of consumers' stated purchase intentions. Information on this subject is gathered through survey respondents' reactions to such propositions as, "It is very likely that I will purchase this product."*

USAGE

Measures of usage concern such market dynamics as purchase frequency and units per purchase. They highlight not only what was purchased, but also when and where it was purchased. In studying usage, marketers also seek to determine how many people have tried a brand. Of those, they further seek to determine how many have "rejected" the brand, and how many have "adopted" it into their regular portfolio of brands.

Usage: *A measure of customers' self-reported behavior.*

In measuring usage, marketers pose such questions as the following: What brand of toothpaste did you last purchase? How many times in the past year have you purchased toothpaste? How many tubes of toothpaste do you currently have in your home? Do you have any Crest toothpaste in your home at the current time?

In the aggregate, AAU metrics concern a vast range of information that can be tailored to specific companies and markets. They provide managers with insight into customers' overall relationships with a given brand or product.

Data Sources, Complications, and Cautions

Sources of AAU data include

- Warranty cards and registrations, often using prizes and random drawings to encourage participation.
- Regularly administered surveys, conducted by organizations that interview consumers via telephone, mail, Web, or other technologies, such as hand-held scanners.

Even with the best methodologies, however, variations observed in tracking data from one period to the next are not always reliable. Managers must rely on their experience to distinguish seasonality effects and "noise" (random movement) from "signal" (actual trends and patterns). Certain techniques in data collection and review can also help managers make this distinction.

1. **Adjust for periodic changes** in how questions are framed or administered. Surveys can be conducted via mail or telephone, for example, among paid or unpaid respondents. Different data-gathering techniques may require adjustment in the norms used to evaluate a "good" or "bad" response. If sudden changes appear in the data from one period to the next, marketers are advised to determine whether methodological shifts might play a role in this result.
2. Try to **separate customer from non-customer responses;** they may be very different. Causal links among awareness, attitudes, and usage are rarely clear-cut. Though the hierarchy of effects is often viewed as a one-way street, on which awareness leads to attitudes, which in turn determine usage, the true causal flow might also be reversed. When people own a brand, for example, they may be predisposed to like it.
3. **Triangulate customer survey data** with sales revenue, shipments, or other data related to business performance. Consumer attitudes, distributor and retail sales, and company shipments may move in different directions. Analyzing these patterns can be a challenge but can reveal much about category dynamics. For example, toy shipments to retailers often occur well in advance of the advertising that drives consumer awareness and purchase intentions. These, in turn, must be established before retail sales. Adding further complexity, in the toy industry, the purchaser of a product might not be its ultimate consumer. In evaluating AAU data, marketers must understand not only the drivers of demand but also the logistics of purchase.
4. **Separate leading from lagging indicators** whenever possible. In the auto industry, for example, individuals who have just purchased a new car show a heightened sensitivity to advertisements for its make and model. Conventional wisdom suggests that they're looking for confirmation that they made a good choice in a risky decision. By helping consumers justify their purchase at this time, auto manufacturers can strengthen long-term satisfaction and willingness to recommend.

Related Metrics and Concepts

Likeability: *Because AAU considerations are so important to marketers, and because there is no single "right" way to approach them, specialized and*

> *proprietary systems have been developed. Of these, one of the best known is the Q scores rating of "likeability." A Q Score is derived from a general survey of selected households, in which a large panel of consumers share their feelings about brands, celebrities, and television shows.*[4]

Q Scores rely upon responses reported by consumers. Consequently, although the system used is sophisticated, it is dependent on consumers understanding and being willing to reveal their preferences.

> **Segmentation by Geography, or Geo-clustering:** *Marketers can achieve insight into consumer attitudes by separating their data into smaller, more homogeneous groups of customers. One well-known example of this is Prizm. Prizm assigns U.S. households to clusters based on ZIP Code,*[5] *with the goal of creating small groups of similar households. The typical characteristics of each Prizm cluster are known, and these are used to assign a name to each group. "Golden Ponds" consumers, for example, comprise elderly singles and couples leading modest lifestyles in small towns. Rather than monitoring AAU statistics for the population as a whole, firms often find it useful to track these data by cluster.*

2.8 Customer Satisfaction and Willingness to Recommend

Customer satisfaction is generally based on survey data and expressed as a rating. For example, see Figure 2.3.

Very Dissatisfied	*Somewhat Dissatisfied*	*Neither Satisfied nor Dissatisfied*	*Somewhat Satisfied*	*Very Satisfied*
1	2	3	4	5

Figure 2.3 Ratings

Within organizations, customer satisfaction ratings can have powerful effects. They focus employees on the importance of fulfilling customers' expectations. Furthermore, when these ratings dip, they warn of problems that can affect sales and profitability.

A second important metric related to satisfaction is willingness to recommend. When a customer is satisfied with a product, he or she might recommend it to friends, relatives, and colleagues. This can be a powerful marketing advantage.

Purpose: Customer satisfaction provides a leading indicator of consumer purchase intentions and loyalty.

Customer satisfaction data are among the most frequently collected indicators of market perceptions. Their principal use is twofold.

1. Within organizations, the collection, analysis, and dissemination of these data send a message about the importance of tending to customers and ensuring that they have a positive experience with the company's goods and services.
2. Although sales or market share can indicate how well a firm is performing *currently*, satisfaction is perhaps the best indicator of how likely it is that the firm's customers will make further purchases *in the future*. Much research has focused on the relationship between customer satisfaction and retention. Studies indicate that the ramifications of satisfaction are most strongly realized at the extremes. On the scale in Figure 2.3, individuals who rate their satisfaction level as "5" are likely to become return customers and might even evangelize for the firm. Individuals who rate their satisfaction level as "1," by contrast, are unlikely to return. Further, they can hurt the firm by making negative comments about it to prospective customers. Willingness to recommend is a key metric relating to customer satisfaction.

Construction

> **Customer Satisfaction:** *The number of customers, or percentage of total customers, whose reported experience with a firm, its products, or its services (ratings) exceeds specified satisfaction goals.*
>
> **Willingness to Recommend:** *The percentage of surveyed customers who indicate that they would recommend a brand to friends.*

These metrics quantify an important dynamic. When a brand has loyal customers, it gains positive word-of-mouth marketing, which is both free and highly effective.

Customer satisfaction is measured at the individual level, but it is almost always reported at an aggregate level. It can be, and often is, measured along various dimensions. A hotel, for example, might ask customers to rate their experience with its front desk and check-in service, with the room, with the amenities in the room, with the restaurants, and so on. Additionally, in a holistic sense, the hotel might ask about overall satisfaction "with your stay."

Customer satisfaction is generally measured on a five-point scale (see Figure 2.4).

Satisfaction levels are usually reported as either "top box" or, more likely, "top two boxes." Marketers convert these expressions into single numbers that show the

Very Dissatisfied	Somewhat Dissatisfied	Neither Satisfied nor Dissatisfied	Somewhat Satisfied	Very Satisfied
1	2	3	4	5

Figure 2.4 A Typical Five-Point Scale

percentage of respondents who checked either a “4” or a “5.” (This term is the same as that commonly used in projections of trial volumes; see Section 4.1.)

EXAMPLE: The general manager of a hotel in Quebec institutes a new system of customer satisfaction monitoring (see Figure 2.5). She leaves satisfaction surveys at checkout. As an incentive to respond, all respondents are entered into a drawing for a pair of free airline tickets.

	Very Dissatisfied	Somewhat Dissatisfied	Neither Satisfied nor Dissatisfied	Somewhat Satisfied	Very Satisfied
Score	1	2	3	4	5
Responses (200 useable)	3	7	40	100	50
%	2%	4%	20%	50%	25%

Figure 2.5 Hotel Customer Survey Response

The manager collects 220 responses, of which 20 are unclear or otherwise unusable. Among the remaining 200, 3 people rate their overall experience at the hotel as very unsatisfactory, 7 deem it somewhat unsatisfactory, and 40 respond that they are neither satisfied nor dissatisfied. Of the remainder, 50 customers say they are very satisfied, while the rest are somewhat satisfied.

The top box, comprising customers who rate their experience a “5,” includes 50 people or, as a percentage, $50/200 = 25\%$. The top two boxes comprise customers who are “somewhat” or “very” satisfied, rating their experience a “4” or “5.” In this example, the “somewhat satisfied” population must be calculated as the total usable response pool, less customers accounted for elsewhere, that is, $200 - 3 - 7 - 40 - 50 = 100$. The sum of the top two boxes is thus $50 + 100 = 150$ customers, or 75% of the total.

Customer satisfaction data can also be collected on a 10-point scale. Regardless of the scale used, the objective is to measure customers’ perceived satisfaction with their experience of a firm’s offerings. Marketers then aggregate these data into a percentage of top-box responses.

In researching satisfaction, firms generally ask customers whether their product or service has met or exceeded expectations. Thus, expectations are a key factor behind satisfaction. When customers have high expectations and the reality falls short, they will be disappointed and will likely rate their experience as less than satisfying. For this reason, a luxury resort, for example, might receive a lower satisfaction rating than a budget motel—even though its facilities and service would be deemed superior in "absolute" terms.

Data Sources, Complications, and Cautions

Surveys constitute the most frequently used means of collecting satisfaction data. As a result, a key risk of distortion in measures of satisfaction can be summarized in a single question: Who responds to surveys?

"Response bias" is endemic in satisfaction data. Disappointed or angry customers often welcome a means to vent their opinions. Contented customers often do not. Consequently, although many customers might be happy with a product and feel no need to complete a survey, the few who had a bad experience might be disproportionately represented among respondents. Most hotels, for example, place response cards in their rooms, asking guests, "How was your stay?' Only a small percentage of guests ever bother to complete those cards. Not surprisingly, those who do respond probably had a bad experience. For this reason, marketers can find it difficult to judge the true level of customer satisfaction. By reviewing survey data over time, however, they may discover important trends or changes. If complaints suddenly rise, for example, that may constitute early warning of a decline in quality or service. (See number of complaints in the following section.)

Sample selection may distort satisfaction ratings in other ways as well. Because only *customers* are surveyed for customer satisfaction, a firm's ratings may rise artificially as deeply dissatisfied customers take their business elsewhere. Also, some populations may be more frank than others, or more prone to complain. These normative differences can affect perceived satisfaction levels. In analyzing satisfaction data, a firm might interpret rating differences as a sign that one market is receiving better service than another, when the true difference lies only in the standards that customers apply. To correct for this issue, marketers are advised to review satisfaction measures over time *within the same market.*

A final caution: Because many firms define customer satisfaction as "meeting or exceeding expectations," this metric may fall simply because expectations have risen. Thus, in interpreting ratings data, managers may come to believe that the quality of their offering has declined when that is not the case. Of course, the reverse is also true. A firm might boost satisfaction by lowering expectations. In so doing, however, it might suffer a decline in sales as its product or service comes to appear unattractive.

Related Metrics and Concepts

Trade Satisfaction: *Founded upon the same principles as consumer satisfaction, trade satisfaction measures the attitudes of trade customers.*

Number of Complaints: *The number of complaints lodged by customers in a given time period.*

2.9 Willingness to Search

Although many metrics explore brand loyalty, one has been called the "acid test." That is,

Willingness to Search (%) = Percentage of Customers Willing to Delay Purchases, Change Stores, or Reduce Purchase Quantities to Avoid Switching Brands

This metric can tell a company much about the attitudes of its customers and whether its position in the market is likely to be defensible against sustained pressure from a competitor.

Purpose: To assess the commitment of a firm's or a brand's customer base.

Brand or company loyalty is a key marketing asset. Marketers evaluate aspects of it through a number of metrics, including repurchase rate, share of requirements, willingness to pay a price premium, and other AAU measures. Perhaps the most fundamental test of loyalty, however, can be captured in a simple question: When faced with a situation in which a brand is not available, will its customers search further or substitute the best available option?

When a brand enjoys loyalty at this level, its provider can generate powerful leverage in trade negotiations. Often, such loyalty will also give providers time to respond to a competitive threat. Customers will stay with them while they address the threat.

Loyalty is grounded in a number of factors, including

- Satisfied and influential customers who are willing to recommend the brand.
- Hidden values or emotional benefits, which are effectively communicated.
- A strong image for the product, the user, or the usage experience.

Purchase-based loyalty metrics are also affected by whether a product is broadly and conveniently available for purchase, and whether customers enjoy other options in its category.

Construction

> **Willingness to Search:** *The likelihood that customers will settle for a second-choice product if their first choice is not available. Also called "accept no substitutes."*

Willingness to search represents the percentage of customers who are willing to leave a store without a product if their favorite brand is unavailable. Those willing to substitute constitute the balance of the population.

Data Sources, Complications, and Cautions

Loyalty has multiple dimensions. Consumers who are loyal to a brand in the sense of rarely switching may or may not be willing to pay a price premium for that brand or recommend it to their friends. Behavioral loyalty may also be difficult to distinguish from inertia or habit. When asked about loyalty, consumers often don't know what they will do in new circumstances. They may not have accurate recall about past behavior, especially in regard to items with which they feel relatively low involvement.

Furthermore, different products generate different levels of loyalty. Few customers will be as loyal to a brand of matches, for example, as to a brand of baby formula. Consequently, marketers should exercise caution in comparing loyalty rates across products. Rather, they should look for category-specific norms.

Degrees of loyalty also differ between demographic groups. Older consumers have been shown to demonstrate the highest loyalty rates.

Even with these complexities, however, customer loyalty remains one of the most important metrics to monitor. Marketers should understand the worth of their brands in the eyes of the customer—and of the retailer.

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