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Research Article

Implementing strategic B2B pricing: Constructing value benchmarks

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ABSTRACT Pricing specialists agree that businesses should price products based on *value*. Yet most companies set prices based on the *cost of their product*. Alternatively, they set prices based on the *prices of competing products*, without fully accounting for the worth of performance differences between their product and the reference products. They do not have the techniques or tools to appraise their product's value versus other products on the competitive landscape. We illustrate how to appraise a product's value based on the going rate prices of competing products *and on its performance versus these comparable products* on key purchase criteria that customers assess. We discuss how this benefits business teams by making them more market driven, customer focused and competitor savvy.
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INTRODUCTION

Pricing specialists agree that businesses should price products based on *value*. Yet, many companies set prices based on the *cost* of their product (Ulaga, 2001; Hinterhuber, 2008). Alternatively, they set prices based on the *prices* of competing products, without fully accounting for the worth of *performance differences* between their product and the reference products. Why?

In a research study aimed at identifying specific obstacles that prevent companies from implementing value-based pricing strategies Hinterhuber found that the number one obstacle was the ability to conduct an accurate *value assessment*. One respondent commented that his business team just did not have the tools to attach a financial value to their differentiated product. As Hinterhuber noted, 'If the company itself does not know the value of its products or services to customers, how does it know what to charge the customers for value?'

In this article, we provide a practical, proven and easy-to-implement solution to the problem of finding a benchmark for value: *customer value mapping*. We show how to estimate the worth of one's product based on both (a) the *going-rate prices* of the various products currently on the market *and* on (b) the *composite overall performance scores* for

these products. The overall performance scores depend on how the product and comparable products perform on the key purchase criteria that buying teams use to assess alternative products and vendors. The key tool for constructing value benchmarks and visualizing the competitive landscape is a *customer value map* (Gale, 1994),[1] a scatter plot relating going-rate prices to composite overall performance scores.

Note that this approach is different from other value-based-pricing techniques where the approach is to estimate the economic consequences for the customer in using your product. Such techniques, while useful, require many assumptions about the users' processes and the costs and revenues associated with them. Further, with those techniques, the valuation is not linked to the actual array of price and performance choices available to the customer in the market. In customer value mapping, the link between going-rate prices and overall performance scores provides a solid, market-based grounding for the pricing benchmarks.

In the next section below, we describe how buying teams simultaneously choose a product and a supplier. In the subsequent section, we illustrate how to calibrate the monetary value of each product competing in a category. In the section after that, we discuss strategic pricing based on value. In the section after that, we note that when selling to business customers, supplier attributes can play a bigger role than product attributes in the customer's purchase decisions. In the penultimate section, we discuss installing a customer value appraisal and management system that follows a product through its lifecycle. We conclude by highlighting some advances in the customer value-mapping toolkit and the benefits the new techniques deliver to business team leaders.

HOW DO BUYING TEAMS CHOOSE A PRODUCT/ SUPPLIER?

How do business customers decide which products to buy and which supplier to choose? In some cases they focus almost exclusively on price and buy from the vendor offering the lowest price. In most markets, however, business customers consider a variety of other factors. These non-price factors reflect their business' needs, their reasons for purchasing the product, and their organization's anticipated outcomes and experiences from selecting a supplier. Buying teams refer to these factors as *key purchase criteria*. Marketers refer to them as *key buying factors*. Price is always a factor. Yet, in many cases, sellers who differentiate their offers by outperforming the competition on the non-price attributes can justify sizeable price premiums versus basic offers.

How much is a product worth versus alternative offers? In this article we describe a customer value-mapping technique that relates going-rate prices for the products competing in a market category to the overall performance scores of the products. In order to calculate an overall measure of performance, a team needs performance scores on each of the buyer's key purchase criteria and a sense of how influential each benefit attribute is in the supplier selection process.

First, a team must identify the non-price purchase criteria that buyers will look at. In B2B markets the performance attributes relate to the overall offer the supplier provides, not just the product attributes. The B2B performance dimensions include the *product itself* (for example, quality, features, ease of use), *vendor service* capabilities (for example, lead time, on time delivery, tech support), the *customer–supplier relationship* (for example, knows our business' downstream customer needs, understands our business model, provides insights on how we can stay ahead of the market), and *the supplier's reputation* (for example, viability, an organization we can trust, industry leader).

The *product* that a purchasing team is assessing may be a physical good, a core service or a more comprehensive solution. The product-specific attributes differ by product-market category. Mining, construction and forestry companies

assess industrial machines based on their power, capacity, durability, reliability, features and ease of use. Farming businesses and medical practitioners assess agricultural chemicals and prescription drugs based on measures of their efficacy and side effects. Companies looking for a supplier of information technology outsourcing services assess competing vendors based on attributes with names like *delivers on promises*, *understands business needs*, *helps you achieve your business goals* and *works with you as a partner*. In addition, buyers of capital goods often assess other costs incurred in owning and using the product, as well as purchase price. In summary, cross-functional buying teams typically assess the performance of competing offers on attributes in the product dimension and the various supplier-performance dimensions of performance – balanced against the cost dimension (price or total cost of ownership). Factors like durability and reliability, which are often treated as performance attributes in consumer markets, are sometimes assessed as part of total cost of ownership in B2B markets. For a case example (room air cleaners) that uses three cost attributes (equipment price, energy costs and consumables costs) and four benefit attributes (removes smoke, removes dust, quite and easy to use), see Gale and Swire (2006).

Business *buying teams* attempt to account for value differences among alternative offers by studying all of the important performance differences. To keep pace with their customers, *selling teams* also attempt to account for value differences. To do this they are increasingly adopting *customer value mapping* to appraise the worth, or market value, of their products. They assemble data on the performance of their product offers and the product lines of several competing vendors in a *comparative performance scorecard*. They use *customer value maps* to display and review how the going-rate prices relate to the overall performance scores of alternative products. The *fair-value line* on the value map is used to estimate the value of their products. This technique provides them with a fair price estimate for their offer that is consistent with their product's overall performance versus comparable products.

In the next section, we illustrate this technique using a consumer electronics case: laptop computers. Later, we describe how product line teams selling to *business* customers adapt this methodology. We show how to develop competitive value benchmarks for a product offer and to set target prices that capture added value justified by the product's competitive advantages.

CALIBRATING THE MONETARY VALUE OF PRODUCTS

Through research and consulting with global B2B clients during the last 20 years, we have developed and evolved a rigorous, repeatable, data-based process for (a) measuring the performance and (b) analyzing and assessing the value of competing products. Our goal here is to make managers aware of this methodology for overcoming the number one obstacle to implementing value-based pricing; the lack of a rigorous assessment of value. We use publicly available data from a product evaluation of laptop computers published by Consumer Reports Magazine (2008a, b). Later, we will describe a B2B client case and note some differences to bear in mind when adapting the approach to B2B markets. This methodology will be of use to anyone who manages product development, pricing or product-line marketing, as well as general managers of businesses.

Assembling the data for value assessment – the comparative performance scorecard

The first step in carrying out a customer value analysis (CVA) for value-based pricing is to define the relevant product-market category. The key questions when gathering data for a CVA are:

- What is our product? What are comparable products offered by competing vendors?
- What are the potential buyer's key purchase criteria?

- How do buying teams measure performance on the purchase criteria? Typically they use a mix of objective measures (battery life, hours) and subjective judgments (ergonomics, 1–10 score).
- What are the performance levels for our products and the alternative products?
- Which purchase criteria are most influential when buying teams assess competing offers?
- How can we calculate a measure of overall performance to balance against price?
- What is the going-rate price for each product?
- What are the market share levels and trends?

The data for a CVA are assembled and integrated into a *comparative performance scorecard*. The data for five 15-inch laptop computers, from Apple, HP, Sony, Dell and Toshiba, are shown in Table 1. Our analysis also includes five 17-inch models, which are not shown here.

The performance analysis covered 12 purchase criteria, which are named in the *attribute* column. In the *dimension* column, these attributes have been classified as being related to the product itself, to supplier services or to the company brand name. The *unit of measure* column describes how each attribute is measured. The key sources of performance measures are:

Source	*Attributes*
• Objective measures	1–5
• Customer perceptions	6, 7 (percentage of respondents satisfied with tech support)
• Expert judgment	8–12

The *better direction* column tells us whether the measure has a positive or negative relationship to overall performance. Performance data are

Table 1: Comparative performance scorecard for workhorse laptop computers (2008)

Dimension	*Attribute*	*Unit of measure*	*'Better' direction*	*Alternative suppliers*				
				Apple 15	*HP 15*	*Sony 15*	*Dell 15*	*Toshiba 15*
Product	HD memory	Gigabytes	+	250	250	250	160	160
Product	Battery life	Hours	+	4.5	3.0	2.3	3.0	1.8
Product	Weight	Pounds	−	5.3	6.1	5.7	5.9	6.5
Product	Free USB ports	#	+	2.0	3.0	3.0	3.0	4.0
Product	Screen size	Inches	+	15.0	15.0	15.0	15.0	15.0
Service	Tech support	% score	+	83	48	51	60	55
Brand	Reliability	% repaired	−	23.0	22.0	21.0	22.0	21.0
Product	Ergonomics	1–10	+	7.5	7.5	7.5	7.5	9.0
Product	Speed	1–10	+	9.0	9.0	7.5	9.0	7.5
Product	Features	1–10	+	7.5	7.5	7.5	7.5	7.5
Product	Display	1–10	+	7.5	6.0	6.0	6.0	6.0
Product	Speakers	1–10	+	6.0	6.0	4.5	3.0	4.5
Overall-performance score				7.5	6.8	6.3	6.7	6.0

Price elements	*When paid (optional)*	*Weights*	*Comparative prices*				
			Apple 15	*HP 15*	*Sony 15*	*Dell 15*	*Toshiba 15*
Price	At purchase	100	2050	1200	1470	1200	1165

listed for each product. Prices are shown in the bottom row of the scorecard. The comparative performance scorecard contains the basic data for beginning a CVA to appraise the worth of each product.

Populating a scorecard with data for value analysis and assessment

To develop a scorecard for a product line, first construct a scorecard template with a list of the key purchase criteria for assessing the products and a list of comparable products from competitors. Then assemble the performance measures. Possible data sources include objective measures of performance or customer perception ratings from a customer survey. Where such measures are not available for an attribute, the subject matter experts on a product assessment team typically reach a cross-functional consensus and assign 1–10 scores for each offer. Data on prices typically come from competitive intelligence. Data on market share levels and trends come from industry analysts. Once the key performance measures and prices are assembled into a scorecard, the information for appraising a product's value and developing product strategy has been captured – on a single page.

Once validated, the comparative performance scorecard will become a key living document for product development, product management/marketing, value-based pricing, sales and key account teams. It becomes as important to these functions as the income statement is to the finance function.

Note that the data do not have to be perfect. In a sense, the procedure used here mimics the way actual buyers evaluate the various competing products available to them. As buyers know, some data will be hard to find. It may be necessary to do some informed estimation. However, if the team is familiar with the market, it should be able to come up with a fairly accurate scorecard for the different products – one that will give a reasonably accurate and robust picture of what customers see when comparing their alternatives.

CVA provides the tools for assembling and integrating data from different sources into a comparative performance scorecard; using customer value tools to analyze the data and simulate alternative product positioning moves; and incorporating the market, customer and competitive insights gained to make better decisions about various aspects of developing successful product strategies. Figure 1 illustrates how the scorecard data and CVA tools relate to key product strategy decisions. For a write up on CVA tools and how they relate to business strategy applications (see Swire, 2010).

The key point is that once a business introduces a customer value measurement and analysis process for value-based pricing, the same data and value analysis tools can be used to better resolve a much wider range of business strategy issues. Business unit general managers can use CVA to become more market driven, customer focused and better prepared for potential competitive challenges.

Identifying performance standards and determining the importance of purchase criteria

The comparative performance scorecard is the key tool for assembling, structuring, evolving and storing successive snapshots of data for analyzing competitive shifts among offers in a category. These comprehensive data need to be processed to make it easy for business teams to grasp the monetary value of each product and the goodness of the deal it offers. To make sense of our data, we introduce additional value analysis tools (Swire, 2010).

The necessary data for further analysis is shown on the *Standards and Weights* table. This table shows, for each attribute on the scorecard, a pair of *standards*, called *basic* and *premium*. The *basic* standard represents the minimal level of performance that would be acceptable to most customers. The *premium* standard represents the level of performance that customers typically expect if they buy a premium product. These standards relate back to the continuum of

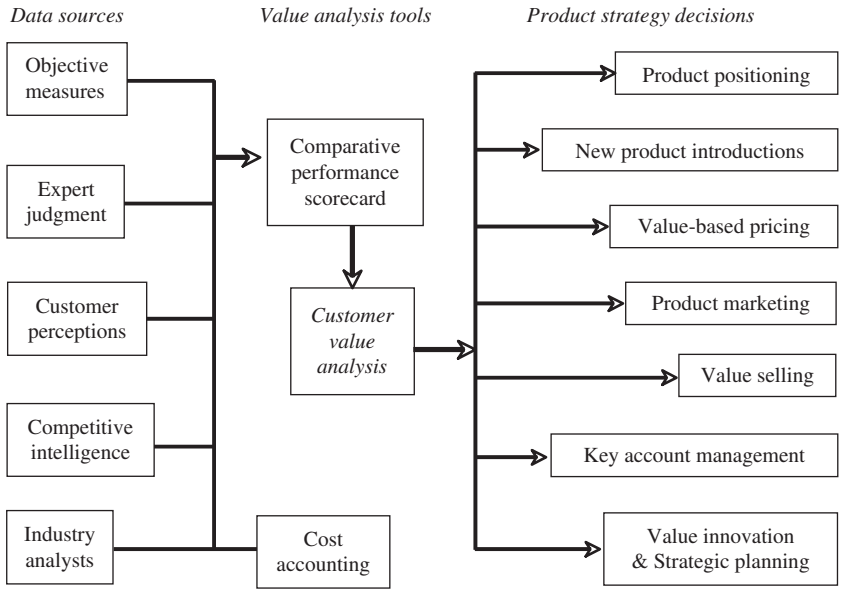


Figure 1: Flow chart for using CVA data and tools to manage customer value.

performance scores in the scorecard. As we will see, these standards will help us:

- Interpret the significance of measured performance differences from product to product.
- Assign relative-importance weights to the various attributes.

A product that performs worse than the basic standard on an attribute would be viewed as being sub-standard on that attribute. If this were a purchase criterion where a product must perform at the basic level to be considered, such a product would not make it into the consideration set of viable options for buying teams. At the other end of the spectrum, a product that performs above the premium standard would be viewed as being super premium on that attribute. If this were a criterion where buyers consider anything over the premium standard to have no added value, the team could make an adjustment in their model to reflect that the benefit to the buyers flattened out at the premium standard.

For some attributes a particular objective measure of performance may experience diminishing returns with respect to customer value. If this is the case, the analysis team can either transform the measure to be approximately linear to value in the relevant performance range. Alternatively, the team can find another measure of performance that is linear with value. For example, miles-per-gallon (MPG) is an objective measure of fuel economy that is subject to diminishing returns. Moving from 20 to 30 MPG does not save the customer as much as moving from 10 to 20 MPG. By contrast, gallons per 12 000 miles is a measure that is linear with value.

Ranking attributes based on their influence in the purchase decision

The final column in the Table 2 contains what we refer to as 'importance weights'. These weights show the relative importance of the various attributes. A project team typically assigns these weights subjectively, allocating 100 points across the various attributes. This process starts by ranking the attributes, a step

Table 2: Performance evaluation standards and weights

Attribute (measure)	*Evaluation standards*		*Relative impact of basic to premium moves*	
	Basic	*Premium*	*Rank (1 is best)*	*Weights (sum=100)*
HD memory (gigabytes)	160	250	9	5.1
Battery life (hours)	2.0	5.0	2	14.1
Weight (pounds)	8.0	5.0	3	12.8
Free USB ports (#)	2.0	5.0	12	1.3
Screen size (inches)	15	17	6	9.0
Tech support (% score)	50	80	10	3.8
Reliability (% repaired)	30	10	7	7.7
Ergonomics (1–10)	4.0	8.0	8	6.4
Speed (1–10)	4.0	8.0	1	15.4
Features (1–10)	4.0	8.0	5	10.3
Display (1–10)	4.0	8.0	4	11.5
Speakers (1–10)	4.0	8.0	11	2.6
Overall performance	4.0	8.0	—	100.0

that can be undertaken after the team has defined standards for basic and premium performance, as described above.

To rank the attributes, teams typically use the following exercise: They start by picturing a customer with a basic product, a product for which performance is at a basic level for each attribute. Then they give this imaginary customer a choice of upgrades: The customer can elect to improve performance on a single attribute from the current basic level to the premium level. Which attribute would the customer pick for the upgrade? The answer to this question reveals the highest ranked attribute. The exercise continues by having the team pick the second attribute for an upgrade, then the third and so forth. In the laptop example, the team picked speed first. Then they reviewed the data for two key purchase criteria for laptops: battery life and laptop weight. Which upgrade would they pick next? Moving battery life up from 2 to 5 hours or moving laptop weight down from 8 to 4 pounds? The team ranked battery life second and laptop weight was ranked third. The rankings of attribute importance are shown in Table 2.

Once the attributes are in rank order, the team assigns a set of weights that places more weight on the attributes ranked as being more influential. The team then proceeds to validate the relative weights with potential buyers and refines the initial set of weights to reflect customer comments.

For feedback sessions with key accounts, we suggest that teams bring along a list of the hypothesized key purchase criteria and a pie chart (not shown) of the initial set of weights. These two exhibits have proven to be good catalysts to generate additional market insights and account-specific needs. Indeed, one can take the key account buy-side team through the same process for ranking attributes by influence that one takes sell-side product marketing teams through. The discussion yields many insights for both teams and strengthens the partner relationship between the selling team and the buying team. When market research studies are

available, a team can use a set of weights based on a statistical analysis of the data.

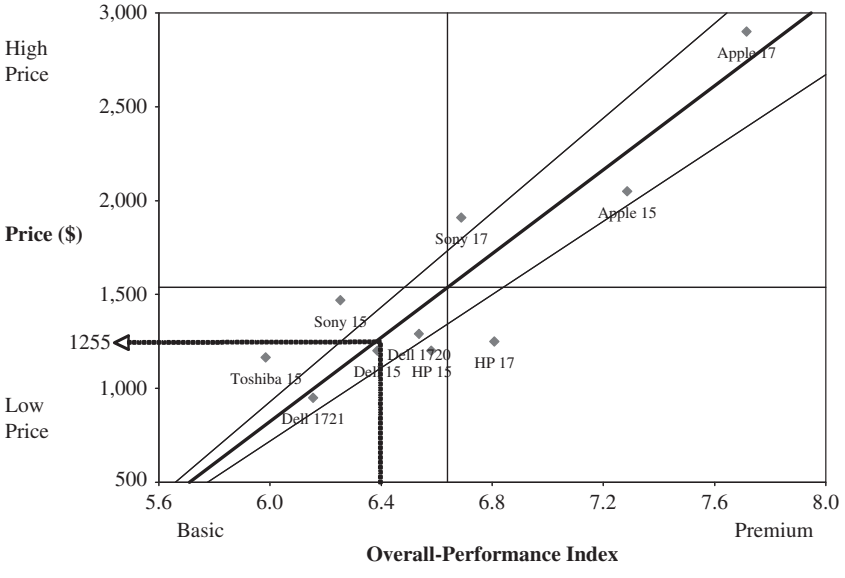
Calculating a measure of overall performance for each product

In order to assess each product's overall performance for price, which is what buying teams attempt to do, we need to construct a measure of overall performance. The first step is to calculate 1–10 performance scores for the attributes that are measured objectively (in different units like gigabytes, hours and pounds) and for the attributes that are measured as percentage scores based on customer perceptions. For example, using 4 and 8 as standards for basic and premium performance on a 10-point scale, 2 hours of battery life would score a 4, 5 hours would score 8 and 3.5 hours would score 6 on the 10-point scale. This conversion to 10-point scores also requires sign reversals for measures that are negatively related to overall performance (laptop weight and per cent repaired). Once we have a 1–10 measure where 10 means better performance, on each attribute, we can calculate a weighted average, an overall performance score for each product.

Assessing overall performance for price – the customer value map

At this point, with a measure of overall performance and a going-rate price for each of the major representative products competing in a category, we can plot the performance scores versus price on a *customer value map* (see Figure 2). The simple scatter plot of overall performance versus price is an interesting and powerful visual display. A value map enhanced with reference lines depicting the fair-value line and fair-deal zone yields still deeper insights for product positioning and value-based pricing.

The vertical line near the middle of the map represents the average overall performance level in the category. Products to the right outperform the category average. They are closer to the premium standards for key purchase criteria. Products to the left under-perform the category average. Their attribute performance scores cluster toward the basic end of the performance spectrum. The horizontal line near the middle of the value map represents the average price of products in the category. Products above this line are more expensive. Products below this line are less expensive. If a



Fair-value line passes through point (avg. price, avg. performance). Slope= $1118 per perf. point

Figure 2: Customer value map for 'Workhorse' Laptop Computers, 2008.

team has sales or market share data for the products, they can enrich the value-mapping analysis by plotting bubbles that reflect the relative sizes of the competing products.

What represents a fair deal? – The fair-value line

The fair-value line is a key reference line on the customer value map. As its name implies, it is the line that represents the locus of fair-deal points on the value map. We draw the fair-value line through the intersection of average performance and average price. From a subjective standpoint, it seems fair to charge an average price for an average level of overall performance. The fair-value line slopes upward to the right, reflecting how much more customers were paying for better overall laptop performance. To position the line we need a second point in addition to the cross hairs of average price and average performance. The differences in performance drive the price differences. For the archetype buyer in the category, it seems fair for a product that is one standard deviation better in performance to command a price that is one standard deviation higher in price. This provides the second point for drawing the fair-value line.

Which offers represent the best or worst deals? – The fair-deal corridor

The fair price for a product is a point estimate. To visualize a range around this point estimate we introduced the concept of a fair-deal zone, flanking the fair-value line. The fair-deal zone is set statistically, based on the distribution of a relative competitive value metric, which we describe in the next section. Roughly, one-quarter of the offers in a value analysis plot above/left of the corridor and one-quarter plot below/right. Half tend to fall within the fair-deal zone. With the fair-deal zone as a reference, a team can quickly see which of the products are in the worst or best quartiles of the offers in terms of delivering relative competitive value to customers. Products above the fair-value zone would appear to customers as overpriced. They often end up losing market share. Products below the fair-value zone are bargains. They often gain market share.

A business unit general manager and the product line leaders can check to see whether the market share levels and trends are consistent with the product positions on the value map. This may yield further insights for refining the expert judgment scores and/or relative importance weights. The evolving scorecard data are often validated and updated with input from potential buyers. Techniques for doing this include customer interviews, customer listening sessions with cross-functional buying teams, quantitative focus groups with customer buying teams, and market research surveys.

What is the monetary value of each product? – Customer value metrics

The slope of the fair-value line for this snapshot of workhorse laptops is a little more than US$1100 per point of overall performance. This means that if a product, like the Toshiba 15 with an overall performance score of 6.0 could improve its performance by one point (on the 10-point scale) on every attribute, it would be worth $1100 more.

How much is each product worth – relative to competing offers? To gauge how much a product is worth, we can position its overall performance score on the horizontal axis of the value map, go up to the fair-value line, and then over to the price axis. For the Dell 15 model, the fair price, or competitive benchmark of its value to customers versus other workhorse laptops is $1255. Based on the fair-value line and overall performance scores we can calculate a monetary value of how much each product is worth, see Table 3.

Table 3 shows five customer value metrics for each of the laptop models in this snapshot. The overall performance scores are calculated as a weighted average of the scores on the key purchase criteria. The prices are going-rates, or street prices, which were assembled in the comparative performance scorecard. The fair price for each model depends on its overall

Table 3: Customer value metrics: Workhorse Laptop Computers (2008)

Customer value concept	*Unit of measure*	*Apple 15*	*HP 15*	*Sony 15*	*Dell 15*	*Toshiba 15*	*Apple 17*	*Sony 17*	*Dell 1720*	*HP 17*	*Dell 1721*	*Average*
Overall performance score	1–10	7.3	6.6	6.3	6.4	6.0	7.7	6.7	6.5	6.8	6.2	6.6
Price	$	2050	1200	1470	1200	1165	2900	1910	1290	1250	950	1539
Fair price (monetary value)	$	2261	1473	1106	1255	807	2741	1594	1423	1726	998	1539
Customer surplus	$	211	273	−364	55	−358	−159	−316	−133	476	48	0
Relative competitive value	%	9	19	−33	4	−44	−6	−20	9	28	5	0

performance score and the fair-value line, which captures the relationship between overall performance scores and warranted prices of products in the category. Customer surplus is calculated as fair price minus price. It is a monetary measure of the goodness of the deal that each offer delivers to customers. Relative competitive value is another measure of customer surplus, expressed as a percentage of the fair price. Models with high relative value are positioned to gain market share. Models with low relative value are likely to lose market share.

STRATEGIC PRICING – BASED ON VALUE BENCHMARKS

The fair-value line and zone on a value map are based on (a) *going rate prices* and (b) *overall performance scores*. The fair price for a product is a competitive benchmark for the *value* of the product. Targeting a price close to the product's fair price, like the Dell 1721 model in this snapshot, is a neutral pricing strategy. Products priced below the fair-value line are positioned to buy market share. Products priced above the fair-value line are positioned to boost short-term margins, possibly at the cost of market share loss.

In this time period, it looks like HP was pricing to gain market share, thereby putting pressure on other laptop makers. The HP models had the highest relative competitive value scores: The price of an HP17 was 28 per cent below the estimated fair price for that product; the HP15 was priced 19 per cent below its benchmark. When reviewing this laptop case, product strategists and pricing specialists like to discuss whether HP was unknowingly leaving money on the table or consciously pricing below fair value to gain share in the laptop category in 2008.

The value map and value metrics suggest that Sony was pricing for margin. But, the *Consumer Reports* product evaluation does not take intangible, image-related factors into account. Perhaps the inclusion of brand-image factors, which do affect buying decisions, would reposition the Sony models to be more competitive. Discussing products positioned outside the fair-value corridor and their market share movements can help a team to refine its initial value scorecard to be more consistent with observed trends in each product's sales.

ASSESSING THE VALUE OF PRODUCTS SOLD TO BUSINESS CUSTOMERS

In the *Consumer Reports* evaluation of laptops, most of the non-price purchase criteria are related to the performance of the product itself. There are 10 product attributes, one service attribute and one attribute that relates to repairs for the *brand*, rather than to an individual model. In business markets, buying teams assess not only attributes related to the product, but also attributes related to supplier services, the customer–supplier relationship and supplier reputation. The buyer simultaneously chooses a *product* and a *supplier*, as we will illustrate in the next section.

Value assessment of a commercial equipment product – case synopsis

Commercial equipment vendors typically identify three customer types that influence purchasing decisions – specifying engineers, building owners and the contractors who install the equipment. The importance weights on the purchase criteria differ across benefit segments. In the segment where specifying engineers are highly influential, product attributes carry more weight. By contrast, building owners tend to place more emphasis on attributes impacting the total cost of ownership. Contractors place more weight on supplier services. They do not want the product delivered too early because it might be damaged or stolen while waiting to be installed. They do not want it delivered late because that would reduce the productivity of their installation teams and could subject their business to late-completion penalties.

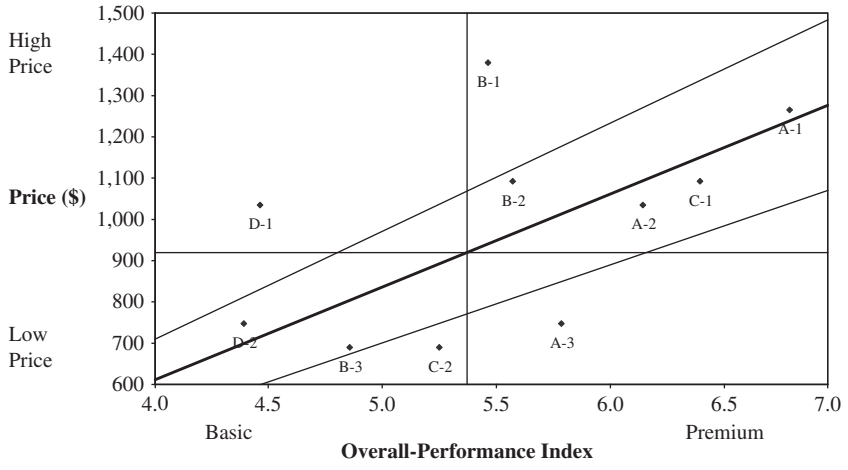
This example focuses on the market segment where contractors have the heaviest influence on which product/supplier is selected. The segments dominated by *specifying engineers* and *building owners* were analyzed separately and are not shown here. In the *contractor segment*, five of the attributes relate to suppliers and only two focus on the product itself (Table 4).

This team decided to assess three of their models, designated *A1*, *A2* and *A3*, against the product lines of three competitors. A1 was their top-of-the-line product, A2 was their mainstream product and A3 was a\their basic, no-frills product. The team's panel of industry experts supplied the initial subjective performance scores on a 1–10 scale. The team refined these scores based on feedback from customers. The value map in Figure 3 displays 10 products offered by the four leading suppliers (Figure 3).

When the team reviewed the value map they found that their best and better products (A1 and A2) were priced within the fair-value

Table 4: Performance dimensions and benefit attributes for a commercial equipment product

Dimension	*Attribute*
Product	Performance
Product	Footprint
Supplier service	Lead-time
Supplier service	Ease of doing business
Supplier service	Ease of installing
Supplier service	Warranty
Supplier–customer relationship	Delivery timing



Fair-value line passes through point (avg. price, avg. performance). Slope= $226 per perf. point

Figure 3: Customer value map for business equipment – Contractor segment.

corridor, and quite close to the fair-value line. Their basic product, however, A3, seemed to be under priced. The team identified C2 as their product's closest competitor and proceeded to review attribute-level scores head-to-head. The scores for product performance and footprint were the same. There were service advantages on lead-time, ease-of-installation and delivery timing. These service advantages had not been considered by the product development and pricing team at launch. They came into play, however, once the product was on the market. On the basis of their value analysis, the team took several actions to achieve higher pocket prices and overall business results. The case can be summarized as follows:

Business situation: New product development (NPD) and pricing teams had missed key service advantages when targeting a price for the A3 product

Insights gained from competitive value assessment:

- Value map: suggested we are leaving money on the table for product A3.
- Comparative performance scorecard – we have vendor service advantages versus the closest competing product.

Actions taken by product management team:

- Emphasized superior logistics services and ease of installation in marketing campaigns and sales collateral targeted at the contractor-influenced segment.
- Raised list price a small amount.
- Tightened up on discounts, especially in deals where the contractor plays a key role in selecting the vendor. Began to enforce a policy that was already in place but had not been enforced: Do not give additional discretionary discounts when contractors specify delivery windows that are tighter than normal.

Results achieved:

- Higher pocket prices in the service sensitive segment.
- Higher margins and profits.
- Held market share.

Key to project success: Having the value assessment team look beyond technical product criteria to include a full range of supplier service attributes.

For more information on applying CVA in business markets see Gale (2011). This video presentation contains: (a) case vignettes highlighting the business issue, analysis steps, insights gained, actions taken and results achieved, (b) responses to frequently asked questions, (c) examples of how segmentation and differentiation link to value analysis, and (d) steps for getting started.

INSTALLING A CUSTOMER VALUE MANAGEMENT SYSTEM

When targeting a particular price-for-performance position against competing products, NPD teams tend to focus on benefit attributes that relate to the product itself. They compare how well their new product will perform at launch versus established products. Sometimes forgotten is the fact that comparative performance on the supplier services, customer–supplier relationship, and reputation dimensions of value will also affect the realized price and sales volume of a new product. There can be a disconnect as a product passes from product development into the product management phase of the life cycle. An NPD process focused on just *product* attributes and targeted prices but not on how *customers assess suppliers* is incomplete. This disconnect, between the product development and marketing views, is a key problem for business unit general mangers.

A second issue for business heads, as we have discussed in this article, is that their teams do not have the tools to calibrate the monetary

value of their products. Competitive analyses by NPD or line-of-business teams usually do contain some insights from voice-of-the-customer research. These analyses stop short, however, of constructing competitive, performance-based benchmarks of how much a product is really worth. In fact, our observation is that most companies do not have a rigorous process for measuring the overall performance and value of their products – either in the product development phase or in the product management phase.

Most companies would benefit greatly by installing a customer value measurement, analysis and *product appraisal process*. Such systems track comparative supplier and product performance through the development, launch and product management phases of the product life cycle. Introducing a customer value management system would help business unit general managers better align their NPD and line of business teams. It would make their organizations more market driven, customer focused, competitor savvy, effective and profitable.

CONCLUSIONS

The value-mapping approach described here is similar to the approach that real estate appraisers take when they estimate the market value of a house (see Brueggeman and Fisher, 2005, pp 188–193). They begin with the selling prices of comparable properties that have sold recently as an initial set of value benchmarks. They then adjust these benchmarks up or down systematically, depending on how the lot size, house size, quality and so on differ from the subject property. Professionals responsible for setting the appraisals that towns use for tax bills develop algorithms that receive the characteristics of a property as input and put out an appraised value. In our value-mapping framework, the fair-value line and corridor are based on both *going-rate prices* and *composite overall performance scores* of the key competing products as inputs. Prices are set strategically *based on a value benchmark* associated with a product's performance level – in the context of a visual display of the competitive landscape in a market category.

In recent years, new techniques and tools have been developed to enrich the value-mapping process. Scale transformations enable engineers to measure and simulate changes in attribute level performance using objective measures on different scales for some purchase criteria and subjective 1–10 scores on others. The flexibility of being able to use the same objective measures that they use in designing products is an attractive feature for NPD teams. Product managers appreciate the option of graphing a line depicting the cost per unit for their product on the value map. This enables them to see their product's worth-to-cost ratio and profit margin, in addition to their relative value to the customer. Product planners and sales teams appreciate the *product appraisal table* (Gale and Swire, 2006; Swire, 2010), which displays the worth differences between a subject product and a competing product head-to-head at the attribute level. Strategic pricing teams like the capability to superimpose the performance level and target price for a new product onto a value map based on the incumbent products that it would face at launch. This helps them to gauge the potential competitiveness of their new product and whether its price is targeted as too high, or too low, based on its overall performance versus incumbent products. Finally, business unit general managers that are attempting to make their business a preferred supplier in the customer's eyes appreciate the ability to include supplier attributes as well as product attributes when readying a new product for launch.

Once a business team completes a value-mapping analysis, they will know a lot more about the competitive product strategies and the key strengths and weaknesses of all the products competing in the targeted market. Moreover, they will be on the way to shifting toward pricing based on going-rate prices and a *comprehensive appraisal based on competitors' performance scores on key purchase criteria*. They will be on the way to developing successful

value-based product development, management and marketing strategies. They will begin building an appraisal process for measuring value and targeting the right price levels for their offers.

NOTE

1 The idea of scatter plots as an analytical tool goes way back. The *price–performance* curve, which plots prices versus a specific aspect of product performance (for example, expected miles per tire), has been a staple of technology analysis for a long time. The use of a value map (price versus a *composite* index of performance) for assessing the competitive landscape, product positioning and strategic pricing – was introduced in book format in *Managing Customer Value*. The value map concept has been further developed by Marn *et al* (2004) and discussed by other authors of pricing books, see Dolan and Simon (1996), Nagel *et al* (2006).

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