



In this article, the author reviews principles presented in the book Consumptive Economics: The New Rules of Tech and applies the book's insights to address key issues in developing a pricing and revenue capture framework for enterprise XaaS providers. Author Tim J. Smith is the managing principal at Wiglaf Pricing, adjunct professor at DePaul University, a frequent PPS speaker, instructor and presenter, and the Academic Advisor for the Certified Pricing Professional designation. His most recent book is Pricing Strategy: Setting Price Levels, Managing Price Discounts, & Establishing Price Structures (South-Western Cengage Learning, 2012). He can be reached at tsmith@wiglafpricing.com.

Pricing for Consumption Economics

SaaS, DaaS, IaaS, and other “X-as-a-Service” business models are proven market disruptors in information technology.

Executives at enterprise IT solution providers are creating, adapting, or adjusting to competitors’ XaaS business models. But successfully implementing an XaaS business model requires a new approach to both pricing and revenue capture for IT services. What is that new approach?

J.B. Wood, Todd Hewlin, and Thomas Lah outline a large swath of the drivers and actions to take in their book Consumption Economics: The New Rules of Tech.

In this article, we will review and extend their thinking to address key issues in developing a pricing and revenue capture framework for enterprise XaaS providers.

The Revenue Driver for Enterprise XaaS Solves: Benefit and Price Segmentation

From the small business to the Fortune 500, every organization has become dependent upon enterprise solutions. They vary from the generic accounting and contact management solutions to the highly industry- and sometimes client-specific solution.

Even the Wiglaf Journal’s small business depends upon no fewer than nine different mission-critical IT solutions to function on a daily basis, and that isn’t even counting the numerous single-point peripherals, devices, software, and data purchased frequently with rarely a detailed cost/benefit evaluation.

As enterprise IT solution providers expanded their footprint across their client organizations, they also expanded their

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feature set.

Today, almost every enterprise solution offers a wide variety of features and functions, most of which no individual would reasonably attempt to learn much less use. Why? Because these features and functions were designed and developed to solve a specific problem for a specific set of customers, then embedded into the software solution and reproduced at no cost to the solution provider.

The result has been a proliferation of functions, most of which don't provide value to most enterprises. To be clear, each is likely to provide value to some enterprises but very, very few will provide value to every enterprise.



Without reviewing yet once again the meaning of cloud computing, let us simply acknowledge that it both enables enterprise solution providers to track usage at a finer level and creates value for enterprise solution customers by shifting the management of IT solutions to the companies that make them.

Figure 1: Example billing algorithm

$$\begin{aligned}
 \text{User Price} = & [(per\ user - month\ fee) \times (number\ of\ modules)] \\
 & + [premium\ feature\ level\ charges] \\
 & + [(number\ of\ monthly\ content\ subscriptions) \times (price\ per\ subscription)] \\
 & + [individual\ content\ download\ fees]
 \end{aligned}$$

XaaS pricing enables producing firms to shift from “all you can eat” solutions to “you need it, you buy it,” in the words of Wood et al.

For the solution provider, this leads to a finer level of price segmentation wherein:

1. Customers who benefit from services are charged for the benefits delivered.

2. Customers who don't benefit from certain services can enter the market at a lower price point. As discussed here and elsewhere, price segmentation can improve revenues and profits.

The Cost Driver for Enterprise XaaS: Cloud Computing

One cannot talk about XaaS without mentioning the cloud. But it is listed second rather than first because the cloud acts more as an enabler of Consumption Economics than a driver to Consumption Economics.

Without reviewing yet once again the meaning of cloud computing, let us simply acknowledge that it both enables enterprise solution providers to track usage at a finer level and creates value for enterprise solution customers by shifting the management of IT solutions to the companies that make them.

The Effect of Enterprise XaaS on Pricing

XaaS pricing results in what Wood et al. term “micro-transactions.” Micro-transactions are the small fees customers pay to utilize a solution.

In determining the price of micro-transactions, solution providers will rely upon bill factors in developing a billing algorithm.

Bill factors mentioned by Wood et al. include:

- Per app
- Per user-month
- Per feature level
- Per print or per document
- Per GB of data stored
- Per hour of resource used
- Per purchase
- Per data service subscribed
- Per content download

These bill factors can be expanded to include:

- Per employee impacted
- Per dollar impacted
- Per potential user
- Per customer's customer impacted
- Per part impacted (supply chain)
- Per design impacted (product engineer)

Others, depending on the nature of the value delivered and means of metering that value.

The billing algorithm then uses these bill factors to determine individual micro-transaction charges. An example billing algorithm for a single SaaS user is shown in Figure 1 above.

Consider what happens with the above approach to pricing. No longer is the enterprise solution provider pricing soft-

ware, installation, and maintenance. Now, the solution provider is pricing granular-level usage. That is, they are engaging in Consumption Economics.

Consumption Economics forces solution providers to price at a much more granular level. It “unbundles the bundle.” It shifts from buffet pricing to a-la-carte pricing. It requires pricing individual parts of the offering, and then only charging for the parts customers use. It changes transaction pricing from “this is the total price of the solution” to “this is the price to accomplish that specific goal with our solution.” It is a deconstruction of the price structure into the pricing of the individual elements thereof.

This shift to micro-transactions to profit from Consumption Economics is dependent upon the development of a price structure which matches individual points of benefit to a corresponding price to be paid to capture that benefit. Crafting that price structure isn't simple. More so, crafting a price structure that allows customers to understand what they are paying for what set of benefits requires engaging complexity to reveal simplicity.

XaaS Revenue Capture: Budgeted Spend

Even after the proper bill factors have been identified and the billing algorithm

is calculated, very few enterprise customers will want to pay for their consumption on the tap. Face it: no rational enterprise will give a solution to its employees that they can run up the tab on without some level of control. Enterprise customers desire, if not insist upon, predictability.

To manage this selling and customer engagement requirement, we depart from the text by Wood et al. and have noticed that leading enterprise solution providers bill against a “budgeted spend level.”

Budgeted spend levels are the amount of spending a customer will expect to pay

Despite the technical details and complex changes required to price and bill in the era of Consumption Economics, the principles haven't changed.

for a specific enterprise solution.

Leading enterprise solution providers negotiate for annual spend commitments from their customers, and then bill those customers against their spending commitments on a monthly, quarterly, semi-annual, or annual basis. Micro-transactions are then applied against budgeted

spend levels for individual enterprise customers.

Customers which are failing to reach their budgeted spend are encouraged to implement the solution further. Customers who exhaust their budgeted spend are encouraged to either purchase more or have their functionality reduced (if not turned off) until the next period's spending becomes available.

Pricing for Consumption Economics: New but Old

In some ways, Consumption Economics has radically changed the way software is priced and how customers are billed. But don't be fooled. Despite the technical details and complex changes required to price and bill in the era of Consumption Economics, the principles haven't changed.

Customers will pay for the benefits they derive. Consumption Economics simply forces both suppliers and customers to quantify those benefits. In that sense, the move toward value-based pricing which was somewhat ushered to the forefront due to the IT revolution of the '80s and '90s is now being applied with hyper-veracity in the 2010s under the guise of Consumption Economics.

Connecting the Dots: Leveraging a 360° Customer View

Sales leaders who seek to maintain the best levels of both profit and customer loyalty need to choose as a starting point the ability to create an enterprise-wide, 360° view of their customer through the benefits of data science and price optimization, as the author explains. Peter Ostrow is the Vice President and Research Group Director for the customer management research practice, and principal analyst, sales effectiveness, at the Aberdeen Group, a provider of fact-based research focused on the global technology-driven value chain. He can be reached via www.aberdeen.com.

With a strong case made for leveraging Big Data for sales leaders, the nuts-and-bolts activity needed to support successful price optimization deployments can often remain a challenge for the classic, non-technical sales executive. Indeed, there is a legitimate reason why business development and customer management organizations often lag behind other lines of business when it comes to embracing modern data management tools and techniques. Simply put, they haven't had to do so. Sales leadership, however, is no longer held accountable solely for top-line results – how many widgets, seats, or hours did we sell this quarter? – but is increasingly required to address contemporary bottom-line output, e.g., running their own part of the business ... like an actual business.

Perhaps the most obvious lesson B2B client management leaders can learn from today's consumer-driven environment is that the existing customer, or first-time buyer, is pretty much in charge of everything these days. In our private lives, we are all highly accustomed to the contemporary, hyper-driven, Internet-fueled, social media-equalizing opportunities we have to express our voice as a global

community – all in the interest of getting the best deal possible. Indeed, woe to the airline, retailer, or manufacturer who upsets the wrong consumer at the wrong time, and pays an all-too-public price for not putting the customer first.

This is where the benefits of data science and price optimization come directly to bear on the relationships that we build and maintain with our revenue-producing clients and accounts.

Sales leaders who seek to minimize the likelihood of losing customers or new deals, and to maintain the best levels of both profit and customer loyalty, need to choose as a starting point the ability to create an enterprise-wide, 360° view of their customer. Ideally, this means that all customer-facing personnel in your organization have an identical understanding of the specific facts associated with every account and buyer. It matters not whether their own individual workload relies on systems of record – from the CRM to the marketing automation platform (imagine knowing which 50% of your marketing budget is working) – and from the contact center deployment to the audit trail of all their historical transactions. In other words, the demographic, firmographic, and financial record of the companies and individuals to whom we sell should not represent multiple “versions of the truth” to different individuals or groups within our selling organization.

Research directly associates better performance with better customer data management, and showcases a number of easily accessible technologies – master data management, customer data integration, and of course price optimization – that can help enterprises unify their multiple views of the customer record into one reliable, and consistently updated, version of that elusive truth.

I personally experienced the downside of

resisting this approach a couple of years ago, when I converted my physical *Boston Globe* subscription into a Kindle version that was easier to read on a crowded commuter train. I called the venerable old newspaper to let them know that I was remaining a loyal customer, but would be consuming their content in a new channel format. The contact center that took my call clearly had no customer data integration between their broadsheet and digital publishing arms, because their only response was to try and keep me as a traditional customer ... by offering a lower monthly price generally reserved only for “new subscribers.”

This tactic was offensive since they were blatantly acknowledging that my 20+ years of customer loyalty held less value than net-new business. It was also illogical, because I continue to this day to buy their product, albeit via Amazon.com. Even more ridiculously, a few weeks later a different *Globe* call center representative reached out to me with another win-back attempt, which still represented a price point that was double my new Kindle expenditure, with another seller still not comprehending that I was still a customer.

The principal owner of the Boston Red Sox recently picked up the *Globe* for 30% less than the value of baseball player Dustin Pedroia's new contract. So it's not surprising when a dinosaur institution such as a traditional newspaper fails to grasp the value of the relatively small investment in developing a 360° customer view. But contemporary enterprises seeking to maintain or grow their business have little choice but to put the buyer first. If they hope to optimize the customer's experience through “the right offer at the right time” and the ability to predict which leads, accounts, buyers, geographies, and industry verticals are most likely to result in a win-win for both buyer and seller, they need to get on the modern bandwagon of data science.

Price Elasticity - Sensitivity: An Opportunity for Price Improvement

There is ongoing debate as to the effectiveness of price sensitivity and elasticity analysis in forecasting the change in unit quantity with respect to a pricing action. In this article, the author uses a case history analysis to analyze how price elasticity and sensitivity can be integrated into a price setting process, with the outcome providing significant price improvement opportunities at an SKU or customer level. Dick Sobel is Managing Director of the Pricing Analytic Group, a member of the Professional Pricing Society and Director of Analytics at PricePoint Partners. He can be reached at richard.sobel@pricing-analytic.com.

There is ongoing debate as to the effectiveness of price sensitivity and elasticity analysis in forecasting the change in unit quantity with respect to a pricing action.

Keeping in mind the influences of markets, segmentation, competitive environment and product specific special situations, price sensitivity and elasticity analysis can be an effective tool in price optimization, forecasting and price setting.

Price sensitivity analysis can help determine the amount of value created by a product or service by providing an indi-

cation of your customer's willingness to pay (WTP). It can also become a competitive advantage, when WTP is better understood.

Buyers are less price sensitive when the product they are buying is unique or of high quality, prestige or exclusiveness or when substitute products are hard to find or cannot easily be compared. The converse is true for customers with high price sensitivity.

Faithful customers tend to be less price sensitive, where price sensitive buyers are subject to customer churn. Sometimes the loss of unit volume due to a price increase is caused by the price sensitive customer looking for alternatives while the loyal customers remain.

There are times when methods for determining WTP such as Van Westendorp, conjoint analysis, qualitative & quantitative surveys, next best alternative and won/loss data are not readily obtainable. However if a company's comparative transactional data is available, price sensitivity and elasticity can be calculated and contribute to price improvement. Combined with any of the above WTP methods, it is a powerful addition to your pricing arsenal.

Through a case history we will look at how price elasticity and sensitivity can be integrated into a price setting process,

the outcome providing significant price improvement opportunities at an SKU or customer level.

Case History

This case study will evaluate price sensitivity- elasticity with a large distributor having over 10,000 SKU's and 1500 customers serving a large North American customer base.

The company uses a cost plus approach to pricing as multiple vendors implement price increases on a periodic basis throughout the product portfolio. Prices are raised to compensate for vendor cost increases, however there is minimal visibility as to the effect of these price increases on subsequent unit volume and margin.

The served markets are very competitive with different distributors selling the same products within the same territories and to the same customers. The company wishes to maximize their price increases without jeopardizing overall unit volume and or gross margin.

Figure 1 shows four (4) scenarios for price actions and the corresponding affect on gross margin dollars. Changes in unit volume that occur without a price action are not included in this discussion.

Forecasting price realization and profit-

Figure 1

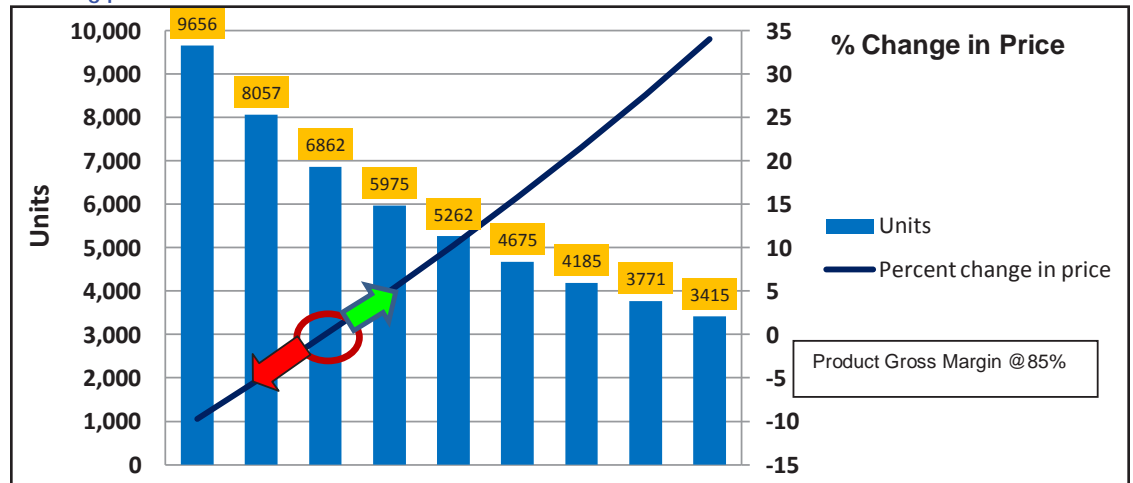
Price Change Scenarios	Impact on Gross Margin Dollars
Increased price with increased unit volume	Maximum Increase in Gross Margin Dollars
Increased price with decreased unit volume	Gross Margin dollars may increase or decrease depending on unit volume
Decreased price with increased unit volume	Gross Margin dollars may increase or decrease depending on unit volume
Decreased price with decreased unit volume	Maximum Decrease in Gross Margin Dollars

ability is dependent on understanding price sensitivity and whether your price actions meet your strategy and profit goals. The change in gross margin dollars is affected by the current %GM of the SKU. The higher the gross margin of a product the less sensitive is the unit volume change needed to maintain constant margin dollars.

In Figure 2 (above), a 5% reduction in price requires a 17% increase in unit volume to maintain constant gross margin dollars. However a 5% increase in price can maintain constant gross margin dollars with a 13% reduction of unit volume. These relationships are factored into the overall price sensitivity discussion and provide a user with pricing opportunities above and beyond covering cost increases, as we will see later.

Let's look at a case history contribution margin bridge in Figure 3 that illustrates gross margin dollar changes due to price realization, direct material cost,

Figure 2: Plots the required unit volume to maintain constant gross margin when either increasing or decreasing price.



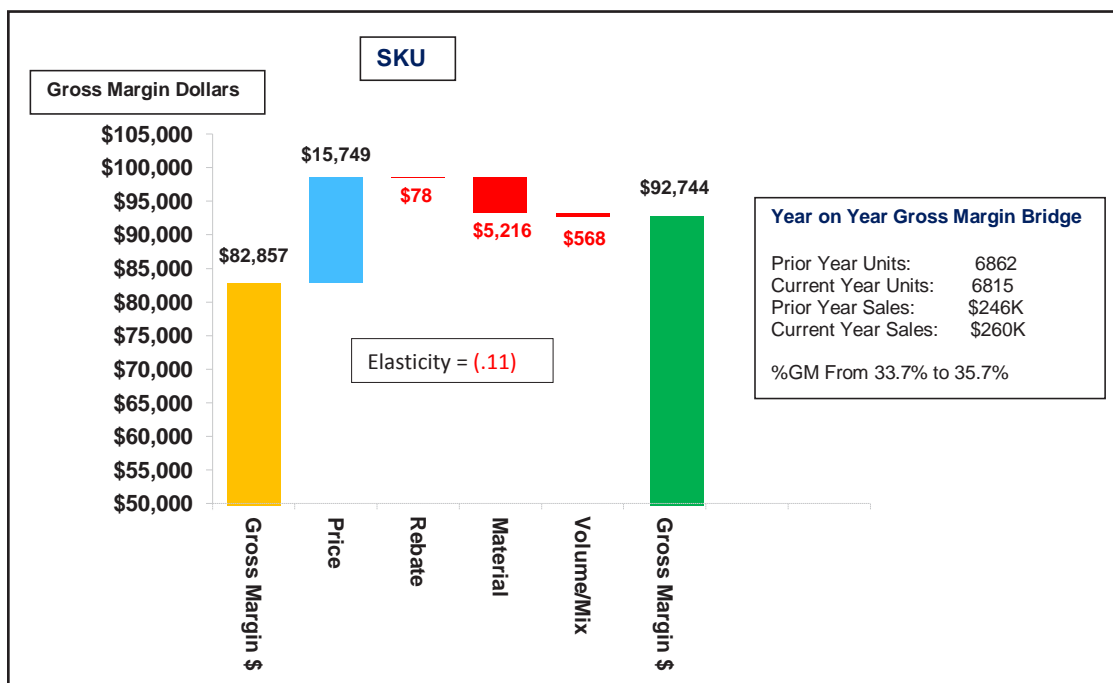
rebates and volume-mix when comparing year on year data. In this example, a 6.4% price increase was implemented on a product with a low price sensitivity-elasticity.

The impact of unit volume change relative to a price action is the basis for price sensitivity and elasticity optimization. In this case an aggressive price increase was warranted as the overall SKU price sensitivity-elasticity was very low. (Elasticity of -1 to +1 is viewed as inelastic)

Figure 3's contribution margin bridge showing the result of a 6.4% year on year price increase. In this example, price realization (\$15,748) exceeded the negative effect of a material cost increase of (\$5216) and the impact of a negative rebate of (\$78), and a unit volume-mix reduction of (\$568).

A similar chart or data analysis can be performed across the entire user product portfolio. Each SKU will fall into one of the categories shown in Figure 1. The only exception would be SKU's with no price change during the comparative time frame.

Figure 3

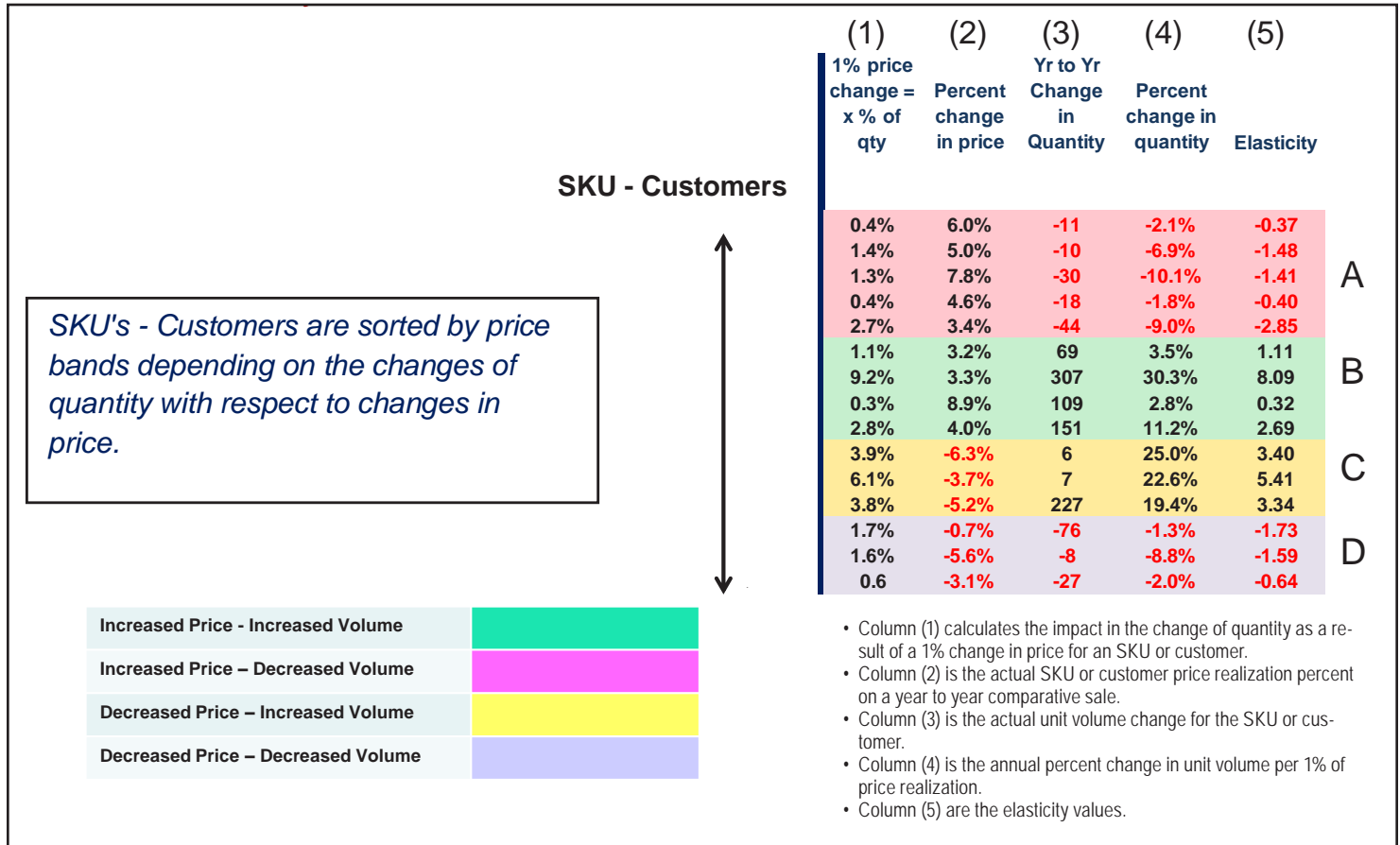


An opportunity for Price Improvement

Figure 4 on the next page is a cross section of price sensitivity data for a select number of SKUs. The same analysis is suitable to customers as well. It looks at both the percent change in quantity for a 1% change in price and the overall elasticity.

Elasticities between -1 to +1 are generally considered inelastic. Figure 4 combined with a contribution margin analysis as shown in Figure 3 provided the user with the required visibility to make effective pricing deci-

Figure 4: Price Sensitivity Bands - SKUs - Customers



sions on a product or customer basis.

Figure 4 examines the effect of a change in quantity for a given change in price and sorts the results into four (4) pricing bands:

- Increased price with increased unit volume
 - Best Outcome
 - Product Skimming Strategy
- Increased Price with decreased unit volume
 - Outcome works if overall gross margin dollars increase
 - Product Pruning Strategy
- Decreased Price with increased unit volume
 - Outcome works if overall gross margin dollars increase
 - Penetration Strategy
- Decreased Price with decreased

unit volume

- Worst Outcome

In Figure 4 we keep all of the changes in price as a positive number. The corresponding elasticity calculation can be negative or positive depending on the direction of quantity change.

The comparative time frame, that is whether the data comparison is monthly, quarterly or yearly plays an important role in evaluating what price actions to take and the magnitude of the actions. Monthly data may be too frequent and annual data too long.

However, a timeframe helps establish an SKU profile for price sensitivity. Quarterly works well as there is a time delay between when a price change is implemented and the time it takes to flow through your customer's purchases and be reflected in your transactional data.

So how can we use price sensitivity data to help improve price setting and price improvement?

Referring to Figure 4, products in row "A" (Increased price with decreasing unit volume) with elasticity factors less than one display low quantity change with increased prices. Gross margins actually increase as the price realization more than offsets for the loss of unit volume. This outcome works well if you are trying to prune a product or where loss of unit volume for a non strategic product is acceptable.

As elasticity factors increase the loss of unit volume may result in lower gross margin dollars and so more caution is required in how much if any future price increases are merited.

Row "B" is the best case scenario where unit quantity is increasing with increased price and supports a price skimming

strategy. Here high positive elasticity is good as it demonstrates that the willingness to pay for these products are high. Again, the marketing manager evaluates the significance of these changes within their market and competitive environments when setting future prices. These SKU's enjoy high margin improvement opportunities.

In row "C" (decreasing price with increasing volume) SKU quantity outcomes need to be positive with a net improvement in gross margin dollars. The higher the SKU initial gross margin, the better the outcome will be when lowering prices. All of the examples shown

exhibited robust increases in quantity and gross margin. When implementing a penetration pricing strategy that is a

The use of price sensitivity-elasticity analysis for forecasting and implementing a price change is an important tool in the price optimization tool box.

desire to increase market share, row "C" outcomes are desirable.

Row "D" SKU's perform the worst, where lowering the price resulted in low-

er unit quantity Product managers need to understand what external issues if any are affecting the pricing actions taken.

Summary

The use of price sensitivity-elasticity analysis for forecasting and implementing a price change is an important tool in the price optimization tool box. Combined with contribution margin analysis and an understanding of your customers, markets and competitors it can support proactive price setting and positive price realization.

The distributor in this case history is achieving 1-2% price realization where price sensitivity-elasticity is included in their price improvement process.