Outcome Pricing

Outcome pricing has accelerated strongly in recent years, across industries, both as a response to rapid commoditization and as a strategy for increasing value capture and margins. Outcome based pricing mechanisms can not only help to combat commoditization, but to create customer value. In this article, the author explains how value based pricing is a best practice as a means of driving improved price realization within the constraints of existing revenue models, and gives real world examples of its application. Author Colin Carroll is the head of the Pricing Business Consulting group at Vendavo. He can be reached at ccarroll@vendavo.com.

Your product service bundle creates value for your customers. As the seller, you employ price to capture a portion of that value as profit. How much of that value does a supplier capture? Revenue models, pricing strategies and execution determine how effective the supplier is in capturing price and value.

In many companies, pricing strategies can vary by product line, region or segment. Revenue models, however, are more static. The pricing mechanism is considered fixed, as opposed to another variable in the price optimization process. This article will review several examples of the revenue model commonly referred to as ‘Outcome Pricing’, the mechanism of tying a sellers’ price and revenue realization to customer outcomes.

This article will also discuss some of the challenges associated with operationalizing Outcome Pricing Revenue Models and contracts.

The Difference between Pricing Strategies and Revenue Models

Penetration pricing, skim pricing, price increases or decreases are all pricing strategies for increasing margin, market share or share of customer wallet in a product category, region or segment. No matter what pricing strategy or strategies are selected, however, the resulting price quote is delivered in this form:

- Price per unit volume E.g. $1600/ton, 74c/pound
- Price per unit $200.each, $45/case
- Price per activity unit $240/hr, $150/visit

Even services pricing is primarily sku based……so a visit to pick up wet garbage becomes a sku, and is priced per each or per 'lift'. Travel brochures might discuss pricing per experience, but it is the rare seller, in B2B, that reconsiders the revenue model.

Bundling is another common pricing strategy.

Price bundling of complementary products can transfer competitive strength from a leading product to weaker products, increasing revenue and customer share.

Similarly, bundling services with your products adds value for the customer using the product, and can justify a premium and create barriers to customer switching.

In both of these primary bundling scenarios, the result of the bundle is priced with a product pricing mechanism. Outcome pricing differs in that an outcome is a sophisticated type of price bundling, combining products and services, but priced contingent upon the customers’ outcome.

Power by Hour: The Standard Bearer for Outcome Pricing

Many of you know the story of GE’s Aircraft division, which moved from selling engines to selling hours of uptime. While this is often cited as an example of value based pricing, the real innovation here not an increase in customer value creation, but a change in the revenue model reflecting where the customer value was created. Let’s examine this change in revenue model, with billing changing from $/engine to $ per hour.

Selling into the volatile economics of the airline industry is never easy. We can assume that GE Aviation sought to improve margin realization without sacrificing revenue or share in an environment of economic uncertainty. This is the problem facing many a seller: noting that prospects and customers struggled to afford and maintain their engines,
how best to:
1. Grow their available market.
2. Encourage existing customers to upgrade.
3. Lower the total cost of acquisition and use for customers (over the product and customer lifecycle).
4. Add more value to their customers, and get paid for that value.
5. Improve their service cost recovery.

GE may have also have sat back and said, well, it might be nice if we could offer price stability to our airline customers; help them forecast their engine acquisition and maintenance costs the same way that they are able to forecast fuel prices given their hedging.

GE Aviation likely wanted to practice value based pricing based on competitive differentiation, perhaps better engine uptime, a typical example of value based pricing of the ‘cost of use’ variety. By understanding the customer’s economics, the supplier can lower or offset cost drivers, the total cost of acquiring and maintaining airline engines. And if you can add value to your customer in this way, you can justify a (value based) premium.

How best to capture that premium? Even the best value based pricing model becomes difficult to execute when your customers are in the middle of a steep downturn, when a customer’s price value tradeoff shifts strongly in favor of price, and when the value appreciation horizon becomes very, very short. Hard to appreciate long term benefits when we are on the verge of bankruptcy, is the thinking.

Here the innovation was not value based pricing, but shifting the revenue model to outcome based pricing. Instead of billing for engine (per each) and maintenance services (per hour, per visit), GE Aviation said, well, engines really support our customers’ revenue model, the business of flying, of maximizing the revenue per seat mile yield from their expensive assets, planes. Linking the price of the enabling engine with the outcome, plan uptime, introduced a new revenue model. In short, moving to price per outcome, where the outcome is an hour that the engine is operating: The advent of Power by Hour.

Rolls Royce also now employs the power by hour pricing model. A few providers of lift trucks are moving to this model, and soon all capital equipment suppliers will be forced to offer some version of this revenue model. Software suppliers, whether of enterprise application or packaged software, are feeling similar pressure to offer subscription based products.

The real innovation here is the revenue model, using the pricing mechanism itself, as opposed to the product, to create customer value. The seller transitions from selling a product supported by services to selling a service, supported by products. But the deliverable, and the denominator in the price per unit equation, is a customer outcome.

Explosives
Acme is a supplier of explosives and explosive services. Acme sells explosives ($/#), blasting caps and ignition systems for triggering those explosives ($/each). In addition, Acme provides other investments, in infrastructure and technical services as part of long term supply agreements. Investment and services are traditionally costs, rather than revenue lines, recouped through product sales over the customer lifecycle.

Over the years Acme and other explosives companies saw more and more of their volume being indexed to Nitrogen, the primary raw material, both in response to customer demand and as a defensive strategy enabling raw material escalation recovery. Indexed contracts limit not only pricing downside but also upside. Indexed contracts lock the seller into a conversion margin, a margin cap which may or may not satisfy shareholders.

In response to downward margin pressures, Acme innovated by introducing outcome based contracts for some customers. Instead of the traditional model invoicing for each of the distinct offerings/skus, Acme has moved to invoicing based on a new unit of measure: ton of customer/mine output. Charging for customer output/produced tons vs. seller sold/delivered tons is the innovation. Acme is moving from pricing inputs to pricing outputs.

First Acme sits down with a customer and they agree on a daily mine output. Let’s say 100 tons per day of Copper is agreed as a baseline output. Acme says, ok, we will supply explosives, blasting caps and services to you, and charge you $20/ton of output.
• Acme will manage inventory for the customer: you will never run out of explosive.
• Acme will help the customer to figure out blast patterns to work efficiently and limit waste, consulting to help improve the yield on the customer’s operation.
• The mine’s actual explosive consumption is Acme’s problem. Acme’s price of $20/ton of copper output must carry a margin, based on the forecasted vs. actual explosives consumption.
• Acme and the mine agree on an audit mechanism to measure output.

The mine outsources blasting to the experts, those who know how to maximize the yield of their products, while lowering costs and gaining predictable costing. This arrangement is a form of outsourcing, with the output pricing mechanism creating value for both seller and buyer.

Note that the outcome based revenue model here creates something beyond product and service value: a predictable cost stream. Explosive costs are now predictable and constant, not on a per month basis, but on a per ton of output basis. The seller can offer cost predictability without locking into a fixed seller margin.
Water Treatment Chemicals

FunctionalWater Inc. is another process industry manufacturer that has employed outcome pricing.

- FunctionalWater Inc. provides water treatment chemicals to paper mills, usually priced per pound.
- FunctionalWater Inc. also provides services: boiler cleaning for example, usually priced per hour or per visit.
  - Boiler cleaning is a real service, with a real variable cost, for which FunctionalWater Inc. charges per visit. The paper mill would have to hire/train/pay an employee to clean the boiler periodically. Why not pay an expert to do it?
- FunctionalWater Inc. combines up the chemicals and the cleaning visits into a product service bundle and charges per hour of boiler uptime.
  - This outcome based pricing mechanism provides cost consistency and visibility for the paper mill, and a barrier to customer switching behavior which FunctionalWater Inc. monetizes, ostensibly, with higher margins.
- FunctionalWater Inc., a supplier of commodity-like products, uses an outcome based pricing model to resist downward pricing pressure, to monetize their service proposition, to create value for the customer and get paid for that value creation.

Medical Devices

Medical Devices is an interesting business: lots of R&D leading to lots of innovation. Yes, healthcare spending growth exceeds inflation and GDP growth, but we all appreciate the innovation if we need it. No one is ever less price sensitive than a guy looking at a pacemaker insertion or a hip replacement. We want it done right.

But it is the distinction between customer and payer in healthcare that leads to outcome based pricing in medical devices. I need a hip replacement, or a pacemaker, but my insurer, my HMO or Medicare is paying. And it is the doctor, rather than the patient, who specifies the pacemaker selection. The government, and now most HMOs, reimburses hospitals on a ‘per procedure’ metric. This type of pricing is called capitated or ‘per procedure’ pricing (p3 pricing).

- Medicare has a schedule: $5,000 for a pacemaker implant procedure, for example.
- Imagine how complicated it would be if the rate card were different for every type of pacemaker. There are some variations, of course, but reimbursement rates are set at a high level of the product hierarchy.

So the hospital says to the supplier, ok, I get $5k from Medicare for implanting each pacemaker.

- I need a predictable pacemaker cost from you, pacemaker supplier, so I can figure out how to make a profit at that federally defined reimbursement level.
- And, of course, not all pacemakers are created equal.
- We expect to do 3,000 pacemaker operations this year, but I can’t tell you which pacemakers I will need in advance. The doctor makes that decision in real time based on patient requirements, of course, evaluating size, new or replacement procedure.
- So the hospital needs your full product line on site, probably consigned, from which the doctor will choose. The hospital provides a forecast at the procedure if not the model level, and would like the supplier to manage the inventory.

This is a bit of an oversimplification, but in short, the supplier needs to forecast demand and come up with one procedure price, or for each device/procedure type (e.g. bronze, silver, gold knees) as opposed to a different price for each sku.

- For purposes of this example, let’s say the capitated, per procedure price is $2,300 for each pacemaker.
- To further complicate matters, the pacemaker is itself a bundle
  - Pacemaker, and multiple leads to connect the device to the heart.
  - Disposables used to implant the pacemaker.
- Sometimes the doctor will drop a lead on the floor, or damage a pacemaker during the process. That becomes scrap.
- The supplier needs to account for scrap and shrinkage in this ‘per procedure’ price.

In this case, the per outcome price is a response to payer models, the billing outcome, as opposed to the customer or patient outcome, but increasingly Med Device suppliers must all support ‘per procedure’ pricing. In Med Devices, capitated or per procedure pricing is forcing Med Device companies to develop

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Figure 2

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<thead>
<tr>
<th>From Inputs</th>
<th>To Outputs</th>
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<tbody>
<tr>
<td>Explosives ($ / pound)</td>
<td>$ per unit of production</td>
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<tr>
<td>Blasting caps ($ / each)</td>
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<td>Ignition systems ($ / each)</td>
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<td>Technical service (cost to serve)</td>
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Figure 3

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<th>From Inputs</th>
<th>To Outputs</th>
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<tr>
<td>Product ($ / pound)</td>
<td>$ per # of output</td>
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<tr>
<td>Services ($ / hour, $ / per visit)</td>
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<tr>
<td>Technical service (cost to serve)</td>
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Figure 4

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<th>From Inputs</th>
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<tr>
<td>Product bundle ($ / each)</td>
<td>$ per procedure</td>
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<tr>
<td>Technical expertise (cost to serve)</td>
<td>Per bed, per month, per patient day</td>
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<tr>
<td></td>
<td>Predictable procedure costs</td>
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new analytic tools and systems, new bundling strategies and new invoicing processes.

**Lift Trucks**

Most industrial facilities own and operate lift trucks, in varying states of repair. When lead (Pb) prices go up with Chinese demand, the price of batteries goes up. The lift truck price goes up to reflect the new price of the battery, and the lift truck buyers groan. A paper mill doesn’t want to be in the business of watching the LME for lead prices….shouldn’t buying lift trucks be easier?

Lift truck utilization varies, at most facilities, throughout the day and with facility output. But the facility has to buy the trucks, and keep the operators, paying their healthcare and pensions, effectively a fixed cost.

Several years ago one lift truck industry leader introduced outcome based pricing for several large customers.

- Old model for customer: Buy the truck (cap ex) + buy the parts (op ex) + employ or contract the repair technician (fixed or variable cost) + employ the operator (fixed cost).
- New Model for customer: Pay for truck by hour/week/month. Add capacity on short notice, reduce capacity with planned notice.

Instead of just selling lift trucks and lift truck fleets (billed $/each), the lift truck supplier is now:

- Providing a bundled billed on a per truck-hour/month basis
  - Providing lift trucks, in good repair, replaced after x hours or y miles.
  - Maintenance of the truck embedded in the per month price.
    - Parts can be included, as a variable option, depending on operating environment and operator experience.
  - Providing lift truck operators.
    - Rate varies with operator experience.
- Former capital expenses are now converted to operating expenses

So the lift truck operator expands its bundle, lowers the customers’ fixed/variable costs, and uses outcome based pricing to add value. The paper mill no longer has to hire the operators, or manage the procurement of lift trucks.

Referred to Performance Based Logistics (PBL), this model is a clear adaptation of the Power by the Hour model.

Experience and interviews suggest that virtually every capital equipment segment and supplier will eventually be forced to respond to this revenue model, offering price per hour or month offerings.

Offering this revenue model is easier said than done. For example, a major factor in setting and realizing PBL pricing is the operating environment of the equipment and the skill of its operator.

1. Low skill operators, for example, require higher than normal maintenance.
2. If parts & service are rolled into this PBL model, then there must be a mechanism to account for different parts demand streams.
3. It is essential, clearly, to understanding the operating environment well enough to get the forecast right.
   - Mines require more service and parts than do the warehouses of clothing chains.

**Operational Challenges and Implications**

The decision to offer outcome based pricing requires significant change on the side of the supplier. A new revenue model requires process and tool changes, perhaps even an organizational redesign.

The first requirement is that the seller must be prepared to do a good job of forecasting and managing customer volume. Once a price is determined, there are more operating challenges. How do you invoice for this new service product bundle? How do you take a per bundle or per month charge and allocate across business units, product lines and regions?

Let’s revisit the Acme example. For Acme to profitably price and administer their outcome based contract, they must:

1. Understand the daily/monthly mine output
   - Forecast the required volumes of explosive, blasting caps and service required to enable that monthly output:
     - i. Attach either a margin or a value to that service, and develop a pricing mechanism.
     - ii. $ per month, or $ per ton produced.
     - iii. In this situation, month and ton of production are factors of each other, as monthly mine output is considered fixed, or fixed within a band.
   - b. Even more important than the original forecast is the ability to identify deviations from the expected forecast and profitability as they occur.

2. At the end of the month, Acme must measure actual consumptions vs. their estimate. Was the rock on ground contract as profitable as expected? And if not, why not?
   - a. Was the forecast wrong? Why was consumption higher/lower than expected?
     - i. If lower, higher than expected margin for Acme. This incentive drives Acme innovation.
     - ii. If higher, lower than expected margins. This negative incentive drives Acme innovation.
   - b. Fix the root cause.
   - c. Refine.
   - d. Audit mechanisms are required, of course, but the result is that Acme avoids commoditization and downward pricing pressure, creates a barrier to switching behaviour, creates value with services, and has a margin upside. All created with a new pricing mechanism and unit of measure.
3. Be able to price on a per month or per ton output.
   a. Invoicing, bundling systems in place?
   b. Master data, product and customer hierarchy issues.
   c. Revenue, discount and margin allocation by Business unit, product line and region.
   d. Analytical systems in place.

Commercial Challenges and Implications

Early adopters of outcome based pricing models have found that they can be difficult to sustain over extended periods, or over a business cycle. At their best, outcome based pricing models give align supplier and customer incentives, focusing both parties on increases in efficiency and production. When production, or consumption, varies from expected, arguments about root causes can undermine this spirit of collaboration.

Returning to the Acme example, consider what happens if mine output falls dramatically for several months, perhaps due to freight or labor issues beyond Acme’s control. Does Acme receive less revenue for that month? Even more challenging is what happens when mine output soars. The buyer, initially very keen on outcome based pricing and the fixed cost per ton of copper, now understands that they are now paying significantly more, on an absolute and monthly basis, than before the outcome pricing model was introduced. Renegotiations can occur.

Summary

Outcome pricing has accelerated strongly in recent years, across industries, both as a response to rapid commoditization and as a strategy for increasing value capture and margins. Outcome based pricing mechanisms can not only help to combat commoditization, but to create customer value. Industries with extended contract durations and barriers to customer switching are best suited to outcome based revenue models, but in some cases it is this pricing mechanism itself which adds value, improving margins and creating barriers to customer switching behavior.

Analogous to changes in the software industry, material suppliers are offering products as a service, with the revenue model evolving from input to output units to time periods. In some industries the trend has been that once one supplier offers an outcome based revenue model, other competitors are forced to follow suit. There are some risks to outcome based pricing, and the analysis burden is high, but there are also rewards and opportunities, including share and margin gains.

Value based pricing is a best practice as a means of driving improved price realization within the constraints of your existing revenue model. But in the future, more and more product service bundles will be delivered, and priced, as services, contingent on outcomes. The enabler? Moving the revenue model from per unit to per unit outcome or per month: outcome based pricing.