BUSINESS MARKETING - TECHNOLOGY FOCUS

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Lecture 16: Pricing Continued

Hello, I am Jayanta Chatterjee from IIT Kanpur and we are discussing various aspects of pricing in the B2B market, particularly with a technology focus. In this session, we are going to discuss about critical underpinning concepts of pricing decisions.

Illustration: *National Rubber*

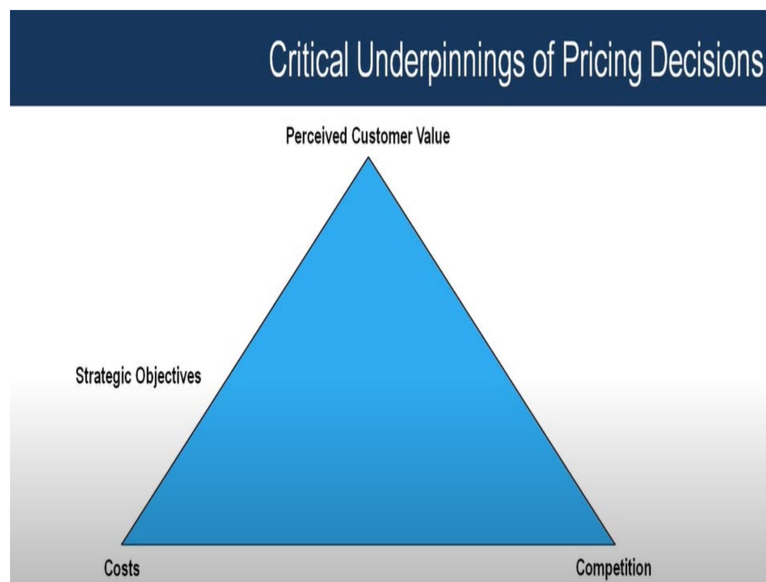
	Year*	1% price increase	1% price decrease
Net Sales (Rs millions)	25,179	25,431	24,927
Net Earnings (Rs millions)	644	896 262 increase	392 252 decrease

Like for example, this is an interesting chart in front of you. If you look at the net sales of an imaginary company, so it is 25,179. It could be anything. It could be dollars, rupees. It could be 25.179 million. It could be anything. But if we increase the price by 1% per unit, then it becomes 25,179 to 25,431. Now that reflects in the net earnings.

If we add the differential now between the 25179 and 25431, if that differential we add to the net earning, then we have a net earning. So, the percentage increase in price is 1%, but the percentage increase in net earning will be a lot more and you can easily calculate this 39-40% increase that will happen in the net earning in this particular case. Similarly, if the price goes down by 1% and therefore, we deduct that differential of 24,927 and 25,179 that 1% in decrease we add it to the we deduct it from the net earning and the net

earning goes then from 644 to 392 a significant 40% decrease so 1% increase in price and 1% decrease in price will reflect in a very magnified form on the net earning. So that's why when we were discussing in the just end of the last session, we were discussing about adaptive pricing.

We were discussing about price negotiation. So, remember that one has to be very careful in the price negotiation that the 1% which appears to be so innocuous in the price increase or reduction can make a very significant change in the net result or the net earning.



This triangle represents what we have been discussing in the previous session also that ultimately pricing is a balance of three corners. On one side we have cost that is the kind of usually starting point but the cost and we have written on top, not price, we have written their perceived customer value.

Because ultimately, what we are trying to strategize for is not exactly price, but as we discussed, that price, explicit price, implicit price, all put together, it is a position in the customer's mind that you are trying to aim for and therefore we are not calling it price but we are saying the perceived customer value is in interaction with cost and competition which so cost at one end, competition at the other end and the perceived customer value at the apex.

Perceived Customer Value

Creating Value

- Product
- Service
- Promotion
- Distribution

This is the interaction field where price setting happens. So, perceived customer value, that perceived customer value can be created through the product, through the service, through promotion, through distribution and all of that, all those elements put together create the customer value perception.

Perceived Customer Value

Measuring Value

- Direct value assessment – ask customers what they would pay
- Dollarmetric method – derived from preferences within paired options
- Perceived value analysis – rate value items by importance – 5-step process
- Customer value map – visual representation of perceived value analysis
- Economic value – transform value items into dollars and cents
- Price experiment – offer product at different prices

Now customer value can be measured. What is the value that the customer gives, is prepared to give for this particular pair of glasses? Now one is you can ask the customer directly.

But that is something that cannot be done in each and every case. And it cannot be it is not practically possible for many complex products because this is a much more simpler product and which can be directly experienced but a leisure cutting machine cannot be directly experienced it will need lot of use for the customer to form an opinion and because there are no benchmarks available for many innovative products often so even the Customer's perception is not available or not feasible.

So, we have some methods. Like one method is called the dollar metric method or the perceived value analysis, multi-criteria analysis. And we will look at some of the prominent ones to understand that how we do it. So, for example, this dollar metric one. I mean the name sounds a little bit academic but actually it is a very simple arithmetic thing that like there are two options. Here everything we are going to do is in pair wise comparison.

Measuring Value

Dollarmetric Method: *Illustration – A, B, C, D*

Options Compared	Preferred Option	Extra Price for Preferred Option
A and B	B	$10
A and C	C	$13
A and D	A	$ 5
B and C	C	$ 3
B and D	B	$ 8
C and D	C	$12

This pair wise comparison in pricing strategy or in many kinds of B2B strategy plays a very important part that is because as a human being we usually have very difficult, lot of difficulty in evaluating that what can be the price of this or what is the value of this. But if we are able to give another similar product and we are able to compare, then the customer can form an impression or a decision much more easily that I prefer this as opposed to this and I can give this this much and I can give this this much value. And that

this pairwise comparison therefore leads to much more easier and better decision in the customer's mind.

Measuring Value

Dollarmetric Method: *Illustration – A, B, C, D*

Preferred Option – Price
A and B $10
A and C $13
A and D $ 5
B and C $ 3
B and D $ 8
C and D $12

Options: *Relative Values*

A = –10 – 13 + 5 = 18/3 = –6

B = +10 – 3 + 8 = _15/3 = +5

C = +13 + 3 + 12 = +28/3 = +9.3

D = –5 – 8 – 12 = –25/3 = –8.3

Now, in the next slide, as you see what we have got is A and B $10, A and C $13, A and D $5 we have tabulated that, C and D is $12 we have tabulated all of that. Now, we can derive from this as relative value between A and D we can derive as a relative value and that is the calculation which is shown on the right hand side column.

That means we can get give A a value of minus 6, B as a value of plus 5, C a value of 9.3. These are all calculated from that particular that out of the 3 compared A compared to B, C and D what is its composite value and so it shows us that if we have A, B, C, D all put together and our preferred valuation then it shows that we can give C 9.3, D will be minus 8.3 and B will be plus 5 and A will be minus 6.

So, this is kind of a one way of approaching multiple price options of comparable products, competitive products and where you can position the price of your product. This is one way of doing this. This is the dollar metric method. So, look at the simple step. This is the first step where you just pairwise comparison, you tabulate the chart and then you put it all together and you give, arrive at distinctive value for each one of the elements, each one of the options of A, B, C and D. And so that gives us that in case of A, we are willing to pay versus the least value option, we are willing to pay 2.3 dollars

more. So A is minus 6, D is minus 8.3. So which means that we are able, we are prepared to pay $2.3 more for A.

Measuring Value

Dollarmetric Method: *Illustration – A, B, C, D*

Options: *Relative Values*

A = –6

B = +5

C = +9.3

D = –8.3

Willingness to Pay
Versus
Least Value Option

A = –6 – (–8.3) = $2.3

B = +5 – (–8.3) = $13.3

C = +9.3 – (–8.3) = $17.6

We are prepared to pay $13.3 more for B and we are prepared to pay $17.6 for C, all this in comparison to D. So, if you are actually a price setter for D, then you will see where you will be able to put your pricing.

Measuring Value

Perceived Value Analysis: *Illustration – Chair*

Benefits Required	Relative Importance Weighting	Supplier A Price = 500		Supplier B Price = 450		Supplier C Price = 300	
		Rating (1–10)	Total	Rating (1–10)	Total	Rating (1–10)	Total
Chair design	20	5	100	7	140	6	120
Comfort	30	6	180	8	240	4	120
Fabric quality	15	10	150	9	135	8	120
Fabric design	15	5	75	7	105	4	60
Ease of purchase	20	8	160	10	200	8	160
Grand Total	100	Total	664	Total	820	Total	580

So, once you have the other elements, other competitive prices, then you can decide where we will set your price.

But a more scientific approach to do this is what you have in front of you now. And this is actually we have here this is a multi-criteria way of making the that same decision that we discussed just in the previous slides. Here we are taking a chair this could be a you know factory industrial chairs this could be office chairs.

So, we are discussing here in the context of a B2B buying situation. So when a person decides to buy a chair, then these are the buying criteria usually which you have on the extreme left-hand column, which is chair design, comfort, fabric quality, fabric design and ease of purchase.

This is a little of intangible point where the other ones are kind of tangible, chair design which is kind of tangible and intangible blending, comfort again an intangible point, fabric quality again somewhat intangible, somewhat tangible and fabric design again a tangible, intangible blend. So, all of these are both quantitative and qualitative elements put together. That's why actually the relative judgment becomes very important here.

Now, first thing that you do is you ask the customers and say okay customer in their buying decision relative importance or weightage given to each attribute is 20 for design, 30 for comfort because it's a chair which we will utilize for long time during the office hours. So, if you are looking for a chair at the drawing room, which will be utilized maybe now and then, you know, you may go for more for show.

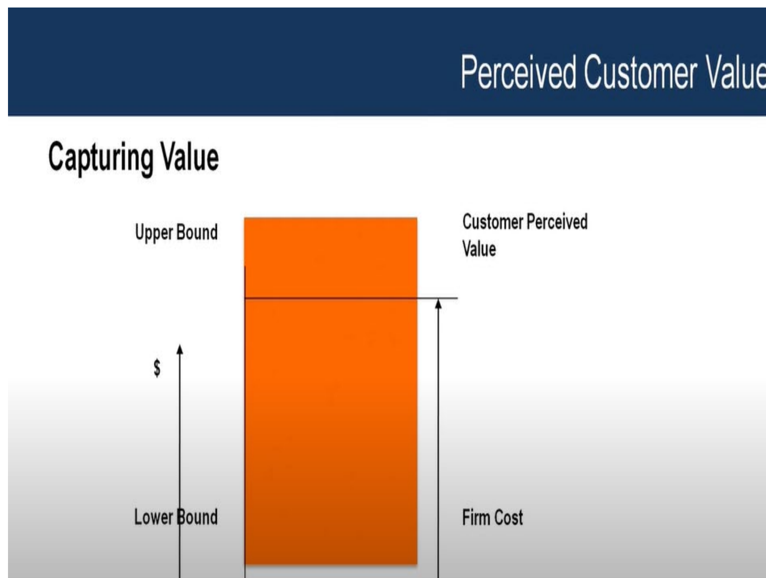
So, they are actually the design element, the wow element may actually score above everything else. So, you may give 42 tier chair design, but here we are looking at a industrial chair or an office chair. So, comfort has the maximum weightage. So, comfort is 30, design is 20, fabric quality is 15, fabric design is 15 and ease of purchase, again a very important point when it is B2B situation, suppose has a weightage of 20. All put together must always add up to 100.

So, this is how we divide the relative weightage of the various attributes. Next comes that supplier A on chair design, suppose on a scale of 1 to 10, they score 5. As opposed to that, the chair design is superior in case of B, so they score 7 and C is something in between, they score 6. But when it comes to comfort, A scores 6, B also scores but much

higher level, B scores 8 and C scores on comfort a lot lower and they score 4. Similarly, you can see all the other elements that are tabulated that on fabric quality A is 10, B is 9, C is 8 and so on for design and so on for ease of purchase.

Now if we multiply the relative importance of the attribute with the score obtained by that particular choice, then you have A totaling up to 664 that means 20 into 5 is 100, 30 into 6 is in case of A I am talking about 30 into 6 is 180, 15 into 10 is 150 and if you add up all these elements you come to 664. So in the same way do it for B and it totals up to 820 and C totals up to 580.

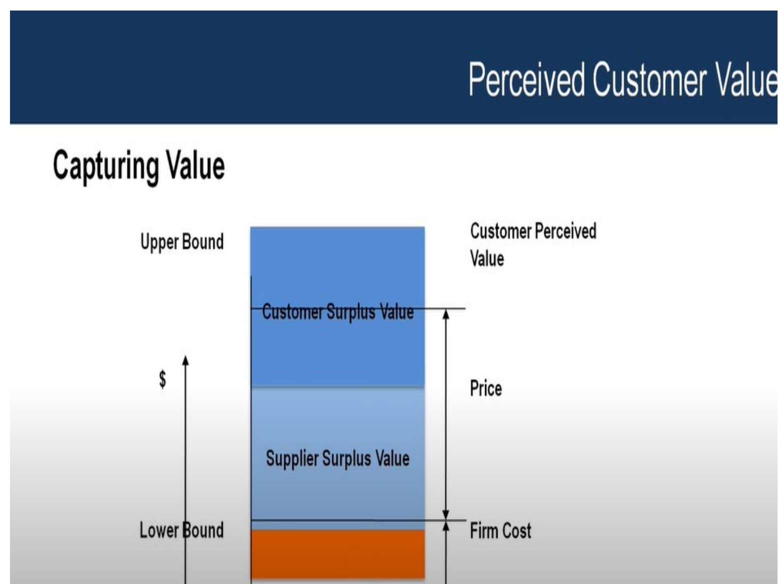
So, by multiple criteria and pairwise comparison, we see that between A, B and C, the preference points are 8, 26, 64 and 580 and we can use these imputed, we can use this to impute the price, we can project the price that will be therefore considered as acceptable value in the customer's mind because 820 of B divided by 664, the percentage you get, you can use almost the same percentage to dissect the price of B compared to the price of A and in the same way 820 to 580 it can be the comparative positioning of the price of B with respect to C. So this is a very useful, simple, straightforward, logical and very useful way of measuring value and guiding our pricing strategy in the B2B context.



Ending this particular aspect of pricing, therefore what we are saying is that the price, the lower bound of the price, so price is actually something that is in between the lower

bound which is the cost and the upper bound which is the customer perceived value. So between these is what the pricing range is all about because the maximum you can go is what is a customer's perceived value. And the minimum you can go is that what is your cost.

Sometimes people go below cost, but that is a rare situation. And maybe due to some strategic reason, you may decide to take some loss in a particular transaction for the sake of continuing relationship or building relationship with a new customer or a strategic customer. But that is not the usual situation. Usual situation is upper bound the perceived value in the customer mind determined by the method that we just now discussed the dollar metric and the multi-criteria method that we just now discussed and the lower bound is cost in between is your pricing arena.



So, between suppose the price is something the line in between as you see here. So, between the price and the cost is the supplier surplus value and the domain, the range between or the space between customer perceived value and the price is the customer surplus value.

So, obviously, the customer will try to maximize this particular gap between the the price and the perceived value and the supplier will try to maximize this gap also between the

price and the cost, the cost of the organization. So this is the tussle that goes on and this is the arena of where negotiations happen.

Now we have been discussing about break even, etc. Another important concept that we need to introduce here as one of the underpinning principles of B2B pricing is price elasticity. So there are certain products where in the industrial B2B segment, some of the consumables or certain items which people will be ready to stock if there are significant price advantages where we have this elastic price. That means lower the price, higher the quantity. So you see here on the left-hand side the graph that for a $5 drop in price from $25 to $20, the quantity demand will be almost double from 50 to 100.

This obviously, this will change because of the slope of the graph. But in case of on the right hand side, you see inelastic price. Here, the price dropped from 25 dollars to 20 dollars, the same 5 dollars which is on the left hand side. Because of the nature of the inelastic nature of this, there will be a only 5 unit growth in the quantity demanded. This is the elastic price versus inelastic price.

So, elastic price means quantity demanded will change significantly, will change in price. For the same change in price in inelastic market, the quantity demand will be slightly

Price Sensitivity

Price Elasticity of Demand (PED) : *Definition*

PED = Percent change in volume/percent change in price

increased or decreased. So, price elasticity of demand PED is defined as percent change in volume divided by percent change in price.

Price Sensitivity

Price Elasticity of Demand (PED) : *Illustration*

Price = 100 Sales volume = 1000 units

So, suppose price is 100, sales volume is 1000 units.

Price Sensitivity

Price Elasticity of Demand (PED) : *PED Calculation*

Price = $100   Sales volume = 1000 units

New Price ($)	Absolute Price Change ($)	Percent Price Change (%)	Sales Volume (units)	Absolute Volume Change (units)	Percent Volume Change (%)	Price Elasticity Calculation	Price Elasticity (PED)
Product A $99	–$1	–1%	1030	+30	+3%	+3%/–1%	–3.0
Product B $98	–$2	–2%	1010	+10	+1%	+1%/–2%	–0.5
Product C $105	+$5	+5%	990	–10	–1%	–1%/+5%	–0.2

Now, if you look at here that product A change is minus for minus 1 percent. The sales volume becomes 1030 instead of 1000 and therefore so 1% change in price leading to 30 units increase in volume and therefore we can say 3% volume change divided by 1% volume price increase price decrease leads us to a price elasticity of demand of price elasticity of demand is minus 3.0. In the same way you see the chart you can apply to in case of B the PED is minus 0.5, in case of product C the price elasticity of demand is minus 0.2

Price Sensitivity

Price Elasticity of Demand (PED) : *Definition*

PED = Percent change in volume/percent change in price

so we can easily calculate therefore by this formula which is change in price divided by demand, percentage change in volume divided by percent change in price is and this is

Price Sensitivity

Price Elasticity of Demand (PED) : *PED Calculation*

Price = $100 Sales volume = 1000 units

New Price ($)	Absolute Price Change ($)	Percent Price Change (%)	Sales Volume (units)	Absolute Volume Change (units)	Percent Volume Change (%)	Price Elasticity Calculation	Price Elasticity (PED)
Product A $99	–$1	–1%	1030	+30	+3%	+3%/–1%	–3.0
Product B $98	–$2	–2%	1010	+10	+1%	+1%/–2%	–0.5
Product C $105	+$5	+5%	990	–10	–1%	–1%/+5%	–0.2

the tabulation that explains it and this is something that you have to remember very well, when you are setting your prices in the B2B context that if it is an inelastic case, then a change in the drill bit, a certain kind of specialized high speed drill tool, a kind of say little unique product or product which are not easily available. 5% change in price will not at all affect perhaps the demand.

Competition

The firm always has to consider competitor prices, but

- Focusing too heavily on competitor pricing may devalue/commoditize the firms' product and lead to losses for all players
- Generally, the firm should focus on providing greater value per unit price than competitors
- Offering value superiority is crucial, not offering price superiority
- Generally, the firm should *focus on beating the competitor's value*, not on *beating the competitor's price*

And also as we discussed in the previous session, the company has to always also look at competition prices. So, focusing too heavily on competition prices of course it may devalue or commoditize because you are not always marking yourself to the market. You may actually become a leader and you may set a price instead of following the price of the competitor.

So, that is something that you have to determine that what is your market position and accordingly you have to decide that with respect to competition how you are going to guide your pricing strategy.

Competition

Questions to Ask of Competitors

- Has the competitor been raising or lowering prices?
- How comparable are the various competitive offers in terms of perceived customer value?
- How many firms are competing? What are their market shares?
- What are the competitor's costs and profits?
- How is the competitor's product positioned relative to the firm's?

Likely Competitor Response to Firm Actions

Firm Options to Competitor Price Reductions

So, questions that you need to ask, therefore, has the competition been raising or lowering prices? How comparable are the various competitive offers in terms of perceived customer value? How many firms are competing? What are their market shares?

So, these questions are all related to your position with respect to your competitors. And as we said right in the beginning of this session, that segmentation targeting and positioning these are all related to the pricing strategy to each other.

Competition

Likely Competitor Response to Firm Actions

Current Situation	Firm Action	Likely Competitor Response
Few competitors and marginal profits Firm is market share leader Market demand inelastic	Raise prices	Accept the firm's price leadership and also raise prices
All competitors make similar offers Market demand moderately elastic No competitor dominant	Lower prices	Follow suit
Competitors profitable Market demand moderately elastic Marketing offers highly differentiated	Raise prices	Hold prices constant

So, sometimes you can raise your price and therefore that will be your competition may actually accept you as the price leader and they will also raise prices, fine, you lower prices customers the competitors also lower prices, fine. But if you raise prices and your competition actually just holds their prices, then you are suddenly introducing an uncompetitiveness for your product line. So these are some things that you need to take care of.

But remember, in B2B market, because there are fewer number of players and fewer number of buyers, so we are looking at not a few to many type of market in B2C that there are few manufacturers of soaps and there are millions of buyers possible buyers of soap because we are not dealing with that kind of market we are looking at market where there are maybe 4 players as suppliers and there may be 10 players as buyers. So, here these sort of changes usually not happen too many times because the competitors more or less know who is leading as a, who is the market price leader and who are the followers and that sort of sets in.

So, this is the nature of what we call the oligopolistic market and most of the, many of the B2B markets are that characteristic, display that characteristic and therefore, we do not see this kind of drastic situation where somebody raises the price and everybody else holds. That usually do not happen. Okay.

Competition

Firm Options to Competitor Price Reductions

- Price actions
- **Non-price actions**
  - Change the basis of competition
  - Clarify and reinforce the price/value relationship
  - Invest in fixed-cost marketing expenditures
  - Make pricing opaque
  - Signal the firm's position
- Withdraw

So, I will conclude by this particular slide, which is in front of you, which is that sometimes as a competitive posture or as a competitive strategy in your pricing, you can change, play with some non-price actions. Like, for example, change your terms of payment, change the basis of competition, change the invest in fixed cost.

Marketing expenditure for example you may decide to locate a spare parts depot and you can persuade the customer that they can now therefore save the cost of stocking emergency spares because you will always be available 24 by 7 to supply whenever it is needed. So, certain large plants like metal plants, like steel plants, aluminium plants, they give value to this kind of proposal from their suppliers in the B2B context. And so these are certain non-price strategies that you can follow if your competitor prices are aggressive.

Competition

Firm Options to Competitor Price Reductions

- Price actions
- Non-price actions
- **Withdraw**
  - **Partial**
  - **Total**

And of course, sometimes you may decide not to play so, that's another. So that ends our, this particular set of sessions on B2B pricing. And depending on your response in the forum, we will see if there are other additional clarifications that are necessary. Then we will provide that. Thank you.