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**Lecture - 37**

**Dynamic Pricing and Revenue Optimization Techniques**

Hello everyone. In this session, let's understand what is dynamic pricing and some revenue optimization techniques for services. But before that, or before discussing dynamic pricing, let's recap how product and services are priced to recollect the different pricing techniques firms can use to influence customers' purchase decisions. So have a look at this particular video that talks about how products or even services are priced and the psychology of pricing. Product pricing is a masterful psychological manipulation technique that we're exposed to on a daily basis. From simply picking up a gallon of milk for \$1.99 to pre-ordering an iPhone for \$9.99. We try to make buying decisions based on value, use, and longevity. But despite our best efforts, these pricing games subconsciously affect all of our buying decisions.

Considering this, how exactly are products priced? Starting off, we have the most blatant pricing technique, charm pricing. Charm pricing is when the price ends in 99 or 95. Charm pricing is less about the ending number and more about reducing the leading number by 1. This is especially effective for prices that are just under a new place value like 10, 100, or 1000 dollars. Our brains use the first number as an anchor and use this to perceive the cost of the certain product.

When we see the price 1.99, the anchor value is 1 rather than 2 despite the actual cost being nearly 2 dollars. By reducing the perceived cost, companies are able to make their products seem like a greater value, thus increasing the likelihood of a conversion. Next up, we have exclusive pricing. Logically, we want the best value for the cheapest price.

But in practice, we often prefer getting an exclusive product for a higher price. The best example of this is Apple. They don't offer the best specs or the latest technology. In fact, they often lag behind the market whether it's OLED implementation or DDR4 RAM. But this doesn't stop Apple from selling millions of iPhones and MacBooks.

The thing is, Apple isn't selling phones or laptops. They're selling a lifestyle and a social image. People are well aware of how expensive Apple products are and owning an Apple product will display that you are financially stable and even wealthy. And this perceived image is what sells Apple products as well as all luxury brands. Are Rolls Royces really 4 times as luxurious as Mercedes S-Classes? Are organic foods really twice as healthy as normal food? As for designer brands, this really needs no explanation.

Overall, with premium pricing, companies try to get consumers to buy their products based on exclusivity rather than value. Moving on, let's take a look at a few visual tactics. Writing prices in a small font is a popular technique used by many companies. Our brains perceive cost of a product not just by its numerical value but also its physical size. Conversely, discounted products often have large physical price tags as this is perceived as a larger discount.

Speaking of larger prices, you may have noticed that large prices generally don't have commas. This is designed to influence the way we group the numbers and the price. If there was a comma, we are more likely to read this number as \$2,399. But without a comma, we are expected to read it as \$2,399. By associating smaller numbers with larger prices, companies make their products appear cheaper than they really are.

Similar to this, companies also associate words that mean small with high-priced products. For instance, if you were trying to sell a \$1,500 phone, instead of advertising it as high performance and high capacity, which are characteristics consumers would already expect, it is much more effective to say thin, versatile, and low power consumption. Another pricing technique used is breaking up the total price of a product into smaller quantities. This is especially popular with monthly plans, whether subscriptions or installment payments. For example, a gym that charges \$90 a month may advertise your subscription cost as just \$3 a day.

This doesn't sound nearly as bad and makes it seem like the per visit cost is only \$3. But the thing is, it is unlikely that you go every single day. The average person would be lucky if they went just 10 times a month, so the per visit cost is actually 3 times more at \$9. Similarly, most gyms don't even offer an yearly subscription because you are less likely to renew given a higher upfront cost. Following up, for large prices, it is very effective to offer specific pricing rather than round numbers.

For example, it's better to price a car at \$29,654.37 rather than just simply \$28,999.99. Though you are offering a higher MSRP, the higher price is more likely to lead to a sale. This is because people associate specific numbers with honesty.

They think since you went through the trouble to come up with such a specific price, you're not trying to rip them off, and so they're less likely to negotiate. The round

\$28,999.99 is perceived as having a much larger markup, despite actually being cheaper. However, in cases where a purchase is emotional, it can actually be helpful to choose round numbers. This is often the case in jewelry.

In such cases, the buyer has already decided to buy their product whether a wedding ring or a wedding dress. Here, people's budgets are much more flexible and they choose to buy a product based on how much they like the product rather than the price. As a result, you want the price to seem higher as this is one of the few cases that people are actually proud to pay more as people are proud of these purchases. As you can see, the psychology of pricing is a very complex subject as rules and strategies vastly differ based on the price, emotions, and the product itself. Sometimes you want round numbers, sometimes you want specific numbers, and other times you want charming numbers.

Similarly, sometimes you're selling value while other times you're selling exclusivity or emotions. But these are some of the most commonly used pricing strategies across all price ranges and all companies use a combination of them. So next time you're shopping, take a closer look at the price because I assure you there's more going on than what meets the eye. So dynamic pricing is one of the pricing strategies service provider can adopt to price their services. Dynamic pricing, also known as demand-based pricing or surge pricing, involves setting prices for services based on various factors such as time of the day, day of the week, seasonality, consumer demand, or even competitor pricing.

Dynamic pricing is a strategy where businesses adjust the prices of their offerings or services to account for changing demand. This approach allows businesses to capitalize on fluctuations in demand and supply to maximize revenue. As shown in this particular diagram, dynamic pricing is a pricing where product and services are influenced by two market forces, demand and supply. And these two market forces together determine the pricing for those services. Here the pricing is flexible.

It changes as per these two market forces. These are, that is, demand and supply. So the two crucial things that are affecting or influencing dynamic pricing are demand fluctuations and supply constraints. Demand fluctuations. Changes in consumer demand for a service can occur due to various factors such as time of the day, day of the week, seasonality, special events, or economic conditions.

Dynamic pricing strategies aim to capitalize on fluctuations in demand by adjusting prices accordingly. So what kind of fluctuations can happen in terms of demand? There can be high demand or then can be low demand. During high demand or peak periods of demand, such as holidays or weekends, businesses can implement surge pricing to increase prices and maximize revenue from customers willing to pay more for the

service. Whereas during off-peak times or season of low demand or periods, businesses may offer discounts or promotions to attract customers and fill capacity, thereby maximizing revenue and avoiding underutilization of resources. Now the second force or market force is supply constraints.

Services often have limited capacity or resources leading to supply constraints that can affect pricing decisions. Dynamic pricing allows businesses to manage capacity utilization efficiently and optimize revenue based on supply availability. So again there are two conditions. There can be a limited capacity or supply or there can be excess capacity or excess supply. When demand exceeds available capacity, businesses can use dynamic pricing to adjust pricing upward, encouraging customers to book in advance or choose alternative times or dates with lower demand to balance supply and demand.

During periods of low demand or underutilized resources, businesses may offer discounted prices or promotions to stimulate demand and fill capacity, thereby maximizing revenue and minimizing revenue loss from idle resources. Let's discuss some examples of dynamic pricing across three different sectors, airlines, electricity and hotels. In airlines, the price of the flight ticket in the airline industry depends on the remaining number of seats, type of seat, total time left for the flight to take off, etc. So there is nothing as fixed pricing in this industry as different fare charges can be charged for tickets on a single flight as well. Coming to electricity, in this type of industry, utilities might be charged at higher prices during high usage periods.

And when it comes to hotels, in this type of industry, the prices are generally altered on factors like the size of the rooms, peak seasons, festive seasons, weekend's, type of view they offer from the room, number of rooms available and the total number of hours stay as well. Let's understand dynamic pricing with some informative video. Have a look at this particular video from Wall Street Journal that talks about why prices are changing across all the time and more often. Have a look at this video.

On a Monday at 3 p.m., outside of rush hour traffic, a car from Times Square to Central Park in New York might cost you around \$17. Now fast forward three hours. As more people are looking for cars, that same ride might cost closer to \$24. If you've taken a trip like this or bought a plane ticket, you know to expect big price swings based on demand, time or location. But did you know that those price swings are happening all over the economy and often in places where you might not expect, like on your laundry detergent or even a blouse? These changes are part of a high tech and fast spreading strategy called dynamic pricing.

And as prices around us are rising faster than they have in four decades, to understand why things cost what they do, you have to understand how it works. Dynamic pricing is a strategy businesses use to change their prices automatically and ensure that they are

offering the optimal price at any given moment in time. And that basically means that they are varying their pricing essentially based upon market conditions. So things like costs, what their competitors are doing and even demand. Because those factors can change quickly, some businesses are updating prices more often.

In February, 75 percent of retailers on Quick Lizard, a pricing software platform, said they increased how often they update their prices in the last year. So where can you spot dynamic pricing other than rideshare companies and airlines? You probably recognize it with gas prices, where the price of a gallon can change daily. Or on Amazon, which has been using dynamic pricing for years. Their changes are usually less noticeable, but they allow Amazon to determine the most competitive price for everything from electronics to household items. For example, here's the price of these Tide Pods over a day at the beginning of April.

In the morning, it hit \$21.49. By noon, it dropped to \$21.24. And by evening, it had dropped even lower to \$19.99. A spokesperson from Amazon said the company's prices fluctuate so they can meet or beat the lowest competitive price from other retailers.

But this is what dynamic pricing looks like in action. And you may start seeing similar strategies in brick and mortar stores, too. Chsins like Kohl's and Best Buy have rolled out electronic price tags, some of which almost look like paper price tags, making it easier and quicker to change the price on, say, a display of televisions. All right, so I'm at Best Buy and they got Lego and that's cool and all, but check it out.

They're moving to all digital price tags. And the supermarket chain Kroger has tested digital labels that can change prices on items in seconds. But seeing these frequent price changes in stores can be surprising for customers. If you chat with someone who's in the grocery store on a week-to-week basis. They know how much they're paying for a dozen eggs. They know how much they're paying for a gallon of milk.

They know how much they're paying for, you know, their fruits, their vegetables. And when those types of prices change, people can be very resistant and it can be a big turn off. But under certain conditions, companies are willing to take the risk. Companies will go to dynamic pricing when more traditional ways of pricing are no longer working for them. So maybe they have previously changed their prices once a quarter, maybe once a month, and they're starting to notice that their costs are shifting so much throughout the month or the quarter that their margins are getting squeezed more than they would like.

When most businesses decide to start using dynamic pricing, they use software to track various factors. There will be a range, a huge number of algorithms whose role is, again, to mimic the choices that humans make. But because it's being done in an automated way, we're able to set prices much more frequently or much more granularly than if you're doing it without the automation. A dynamic pricing algorithm for a gas station

might look at the cost of fuel, competitor prices and alternatives that customers might have. What dynamic pricing would allow me to do is instead of having a single point of view that is driven by the price of crude, I actually could have a very granular point of view on individual competitors and what my delivered cost is of the fuel and then execute those price changes on a very frequent basis.

But that algorithm might look different for a grocery store. They might look at competitor prices, but they also might consider cost of goods and what they know customers are willing to pay more on. But even if a business uses dynamic pricing, those rules might not affect everything you buy there. There are a few exceptions where prices are largely fixed and they're actually being set by the manufacturer.

Examples of that would be jeans. There are certain types of sneakers or athletic apparel where the manufacturer also sets the prices. And then prestige cosmetics is a third where you see a lot of manufacturers set pricing. But beyond that, where the retailer is actually able to set their price, dynamic pricing can be applicable across the store. As more companies use dynamic pricing, you might start noticing it more often, especially during periods of inflation like the one we're in now. You could be, you know, visiting a store that has been using dynamic pricing for a long time.

But now you're noticing the prices of things are changing a lot. And that's not because they're doing something different. That's because the inputs are changing more frequently. The adoption of dynamic pricing is expected to continue and mom and pop shops and local retailers are starting to experiment with it, as well as big box stores.

There are different types of dynamic pricing as well. Dynamic pricing can take various forms in service industries, each tailored to specific market conditions and business objectives. So let's discuss the four types of dynamic pricing with examples of service firms implementing them. First type here is time based pricing. Time based pricing involves adjusting prices based on the time of the day, day of the week or even seasonality.

For example, hotels. Hotels often implement time based pricing by offering different rates for weekdays versus weekends or even peak seasons versus off peak periods. For instance, a hotel might charge higher room rates during holidays or weekends when demand is high and lower rates during weekdays when occupancy tends to be lower. Second type of dynamic pricing is demand based pricing. Demand based pricing, also known as surge pricing or demand pricing, involves adjusting prices based on fluctuations in demand.

For example, ride sharing platforms like Uber and Lyft. These platforms employ demand based pricing algorithms to increase fares during periods of high demand, such

as rush hours, special events or even adverse weather conditions. By raising prices during peak demand, these companies can incentivize more drivers to come online and meet the increased demand, ensuring availability while maximizing revenue. Third type of dynamic pricing is segment based pricing. Segment based pricing involves offering different prices to different customer segments based on factors such as their purchasing behavior, preferences or even willingness to pay.

For example, airlines. Airlines use segment based pricing by offering different ticket prices based on factors such as seat class like economy versus business, flexibility and booking timing. Business travelers who often book flights closer to the departure date and require flexible tickets are typically charged higher fares compared to the leisure travelers who book in advance and are willing to accept more restrictions. The fourth type of dynamic pricing is location based pricing. Location based pricing involves adjusting prices based on the geographic location or even market conditions.

For example, event ticketing companies like Ticketmaster. Ticketmaster implement location based pricing by varying ticket prices for the same event based on the venue's location and demand in different markets. Tickets for popular events in major cities may be priced higher than the similar events in smaller towns, reflecting differences in demand and market size. These examples illustrate how service firms can implement dynamic pricing strategies to optimize revenue, respond to changes in demand and tailor pricing to different market segments and conditions. Dynamic pricing enables businesses to capture value efficiently, maximize profitability and remain competitive in a dynamic and rapidly evolving markets.

What are the advantages of dynamic pricing? Let's discuss. So there are typically five advantages. The first here is flexibility. Dynamic pricing helps firms in strengthening and protecting their brand value. They are able to set basic prices for their brand and then by making alterations in them, they're able to grow their sales and make profit out of it.

The second advantage is with respect to controllability. By the help of dynamic pricing, the service providers get a better curve over their pricing strategies. They can access real time trends in the pricing of several products that are launched in the industry. Thus, service providers are able to set the right price and hence maximize their revenues and profits. Third advantage is with respect to easy management. Dynamic pricing is quite practical when it comes to its proper management.

With the right kind of software built on the basis of properly programmed algorithm, any service firm can do the dynamic pricing by setting at one place as well. The next advantage comes in terms of saving a lot of money. Dynamic pricing is based on the real time product supply mechanism. It becomes easy to monitor the price fluctuations in the

market and the activities of their competitors. Finally, dynamic pricing also helps or offers an advantage in terms of maximizing profit that can be obtained.

One of the most essential aspects for a successful service provider is the maximization of profit and with dynamic pricing, it becomes quite practical and easy to do that. At the same time, there are some disadvantages of going for dynamic pricing strategy. To name a few, the first disadvantage here is that there is more time required to be invested in the marketing activity. Dynamic pricing takes place quite frequently. The buyers have to dedicate a lot of time so that they can remain updated with the marketing scenario from time to time and make changes in the prices accordingly.

Second disadvantage is in the form of monitoring of the competitor. To monitor the competitor is quite an essential aspect of dynamic pricing. This in turn increases the additional expenditure or additional expenditure because the seller or the service provider has to invest in the separate competitive price monitoring system. And the third disadvantage is with respect to confusion among customers. Due to the constantly changing of prices, the customers get confused about which product or services to buy at what price. This indirectly leads them to not being able to use the dynamic pricing or instead go for the fixed prices in terms of services.

Now, let's see how to implement dynamic pricing strategy at service organization. So it's a four stage process as shown in this particular chart. The first step here is determining your commercial objective. This is the first step in implementing a successful dynamic pricing strategy. Think of your objective as a compass that directs the decision making process of your company.

One has to consider many factors, for example, why do we exist as a company? What are our customers' expectations? Do we want an increased volume of sales versus overall profit? Or what is our current pricing model? To answer this question is to answer the first step that is determining your commercial objective. Then comes the second step where a firm chooses a particular pricing strategy. Once you identify your commercial objective, you can find a pricing strategy that complements your goals. Static pricing may be the best fit. For instance, if you're creating a ride sharing service to help parents pick up their kids, dynamic pricing may work best.

Prices can go up after the school day is over, while there may be the occasional extracurricular activity that requires pickup, prices can go back down later in the evening. Third step is establishing your pricing rules. While the prices of your product or services may change, the rules you use to set prices should stay consistent. For instance, if an e-commerce store is going out of stock, it can set a rule to follow the lowest price range of some competitors. When the stock reaches a certain number, you'll also have to decide which of your offerings will be affected by the switch to the dynamic



pricing and will every service fluctuate or will only a few offerings adopt this new pricing model.

So these decisions need to be taken. And finally, the final step is finding the right tools to implement your strategy. There are a lot of dynamic pricing tools that can help you to enact this particular strategy. Some tools are specific to certain industries as well. These tools allow you to select which product or services are affected by dynamic pricing.

Once the tool has been implemented, be sure to test and monitor your strategy. The data you gather can shape your future pricing decisions as well. Now moving on to the next concept that is revenue optimization. Revenue optimization is the process of optimizing every aspect of your business from pricing, inventory and distribution to marketing activities to boost revenue and drive growth. There are three critical characteristics of revenue optimization.

These are acquisition, pricing and retention. Acquisition. When you do customer acquisition successfully, you can attract the right prospect who are interested in your product or services and are more likely to purchase those services. You should also test different methods to acquire customers and find out what method is the most effective and affordable for your business or services. Second characteristic is deciding about pricing. Optimizing pricing can be good for maximizing revenue. When building a pricing strategy, one should take into account business goals, customer profiles, pricing strategies of your competitors and current market situations and other things.

And the third criteria is retention. Customer retention is another key driver for revenue growth. When you offer an excellent customer experience and delight customers throughout their relationship, the high chance is that they'll want to stick with you for more number of services or repeat businesses or longer period. This eventually can help you increase ROI, return on investment, boost your brand loyalty and acquire more new customers. So, how to implement, how to implement this revenue optimization, how to optimize the revenue for that matter for a particular service firm.

So, there are four stages, right? Acquisition, retention, expansion and then pricing. With respect to acquisition, firm need to attract the best fit prospect who will provide the most revenue for your company while also keeping your customers acquisition cost as low as possible. Buyer personas and ideal customer profiles help to ensure that you are investing your marketing and sales resources into attracting and nurturing prospects. Once you are ensured, the next step of optimizing your acquisition strategy is to determine which customer acquisition channels generate the most revenue and have the highest return on investment. Second step is retention. It's much cheaper to retain existing customers than it is to acquire new ones and increasing customer retention rates by as little as 5% can increase profit by 25 to 95%.

A successful retention strategy revolves around good customer service. Third step is expansion. Existing customers are 50% more likely to try new product and spend 31% more than new customers. So, in the long run, expansion revenue is more sustainable than acquisition revenue. Expansion revenue is gained through upselling and cross selling to existing customers.

And finally, pricing. You just need to set a price that makes you a profit while also enabling you to sell a sufficient number of units to the customers. Unfortunately, the price that enables you to close the most sales doesn't always result in the highest profits and neither does setting the highest price. Your pricing strategy doesn't just influence your profits, but also how your company is perceived. An excellent example of revenue optimization from a service firm is Marriott International, one of the world's leading hotel chains. Marriott employs sophisticated revenue management strategies to maximize revenue across its vast portfolio of hotel properties.

So, let's discuss the case study of Marriott International. So, Marriott implements different tools or techniques for that matter to optimize its revenue. The first tool or technique is dynamic pricing. Marriott utilizes dynamic pricing algorithms that considers factors such as demand patterns, market conditions, competitive pricing and historical booking data to adjust room rates in real time. By dynamically setting prices, Marriott can capture maximum revenue during periods of high demand and adjust rates to stimulate demand during off-peak periods.

Another thing is yield management. Yield management is a revenue optimization technique that involves adjusting prices to maximize revenues from perishable inventory or time-constrained services. It typically applies to services where capacity is fixed and demand fluctuates over time. Yield management focuses on selling the right inventory to the right customer at the right price and time. For example, hotels offering discounted rates for early bookings or last-minute deals to fill back-end rooms. Another example, theaters and entertainment venues adjusting ticket prices based on demand for different showtimes or performances or car rental industry.

Car rental companies offering lower rates for off-peak hours or longer rental durations. So, Marriott is also implementing yield management. Marriott practices yield management to optimize revenue from its hotel inventory, especially during peak seasons or events. Through yield management techniques, Marriott adjusts room rate based on factors like booking lead time, length of stay, room type preferences and cancellation policies. This ensures that Marriott maximizes revenue by selling the right room to the right customer at the right price.

Then comes implementation of segmentation and personalization. Marriott segments its customer base and tailors pricing and promotional offers to different customer

segments. For example, Marriott Bonvoy, its loyalty program offers personalized promotions, discounts and even exclusive benefits to members based on their membership tier, booking history and preferences. By personalizing offers, Marriott enhances customer loyalty and maximizes revenue from its most valuable customers. And finally, Marriott also has some package deals and upselling offers.

So, Marriott offers various package deals and upselling opportunities to increase revenue per guest. This includes room upgrades, dining packages, spa treatments and even other add-on services. By bundling services and offering value-added packages, Marriott increases the average spend per guest and maximizes revenue from each customer. And finally, Marriott also implements sophisticated inventory management techniques. Marriott strategically manages its room inventory to optimize revenue and occupancy rates. It employs techniques such as overbooking where it accepts more reservations than available rooms to minimize revenue loss from cancellations or sometimes no-shows from the customers.

Additionally, Marriott uses strategic pricing and availability controls to allocate inventory effectively across different distribution channels and market segments. So, with the case of Marriott, we can see that a lot of service providers are adopting this particular technique called as dynamic pricing to go for revenue optimization. So, in this session, we try to understand the concept of dynamic pricing and revenue optimization with examples. Thank you.