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Revenue Management and Dynamic Pricing for Start-Up Companies

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Over the last couple of years, fierce competition and technological innovations (particularly the proliferation of the Internet) have resulted in a fundamental shift in power from producers to consumers. Concurrently, these new levels of competition, combined with low inflation and an economic slowdown make it difficult to raise prices. In the case of those start-up companies remaining after the bursting of the dot.com bubble, this is an unfamiliar business environment. Focusing on pricing and revenue management offer far greater chances for corporate survival than cost cutting or volume generating initiatives. This paper outlines how to go about managing either a start-up or a business that previously hasn't been yield managed, as well as identifying some of the pitfalls and potential traps in doing so. Jon Manning is an economist, specialising in pricing and revenue management, he can be contacted at priceman@easy.com.

RECOGNIZE WHERE TO APPLY REVENUE MANAGEMENT

The terms 'Revenue Management', 'Yield Management' and 'Dynamic Pricing', (used interchangeably henceforth), are familiar to the masses, but understood by few, mainly practitioners and academics. In their simplest form, they all refer to the ability to charge the right price to the right consumer at the right time. What are the characteristics of products that lend themselves to Revenue Management? There are five of them:

Perishable Product: Revenue management is particularly suited to services, though this does not exclude tangible goods being yield-managed. This season's fashions can be just as perishable as any service. If, at a certain point in time, the opportunity to sell a product is lost, and it cannot be inventoried for sale sometime in the future, the chances are its revenue manageable;

Capacity is Limited: Most services can only be offered in limited quantities. Airlines offer a certain number of seats, car rental companies a limited number and type of vehicles, restaurants have a limited number of tables and cinemas have a limited number of seats and screenings;

Demand Varies: Do more people buy your product on one day of the week than on other days? Airlines carry more passengers over the Easter and Thanksgiving weekends than on other weekends;

Incremental Costs: The cost of accepting one additional customer is nil or negligible. The additional cost of screening a film to 50 customers or to 100 customers is insignificant;

Market Segmentation: It is difficult, if not impossible, to revenue management a homogeneous product. To maximize the benefits of yield management, the market must be segmented along one or more of the following lines: what is purchased, where it is purchased, when it is purchased, how it is purchased, why it is purchased and who purchases it.

Segmenting a market is an exercise not to be treated lightly. There are several "must haves" of market segmentation that should be pursued to ensure you yield manage effectively:

Advance Purchase: Make sure you product can be purchased in advance. Typically, the further in advance customers are prepared to part with their money, the more they are rewarded with a deeper discount;

Arbitrage is not possible: Is there a secondary or black market for your product? If so, it needs to be eliminated, or at least minimized, before you start revenue managing it;

Willingness to pay must be heterogeneous and fair: To charge different customers different prices, you need to segment your market. Some will naturally segment, while others can be segmented by the "fences" you place around your product. In both cases, the market segments must be willing to pay a different price from the next, and recognize that the basis for

such differentiation is equitable (i.e. other customers purchased a month or two in advance).

What sort of industries have products with such characteristics? Rather than being definitive, the following is a list of industry's which could surprise readers in that they are suitable to be yield managed: baby-sitting, hairdressing and other beauty services, eat-in (rather than take-out) restaurants, Internet Cafe's, Golf Courses, Squash Courts, Gymnasiums and other sports facilities services, even road or congestion pricing can be priced dynamically.

If you deploy YM/DP (Yield Management/Dynamic Pricing) without all the prerequisites mentioned above, then be prepared for short-term pain for long-term gain when you do achieve all these requirements. One company I know of commenced revenue management without proper market segmentation or advance purchase ticket sales: it offered a totally homogenous product which customers could (only) walk up and pay for on the day of purchase. It then chose to segment its market and offer two types of services, one of which could be purchased in advance. The immediate effect was to dilute revenue, as more (higher paying) customers switched to the (cheaper) advance purchase offering, at a faster rate than the growth in the total volume of customers.

KNOW THY MARKET, KNOW THY PRODUCT

Having recognized that your product is suitable for revenue managing, it is essential to understand both your product offering (particularly from the customer's perspective) as well as how the market(s) you are competing in operate(s). Most start-up companies prepare a business plan, either as a reality check for their own knowledge, research, experience or assumptions on how a market operates, or for presentation to venture capitalists. Business plans will by their very nature contain assumptions. In this section, I review some of market realities that may not have been taken into account in assessing the market and its customers.

The product offering must be understood from the customer's perspective. Do not assume that customer's buy your product just because of its price. Services are an experienced-based product, so customers may like your product because you have nice friendly staff, quick turnaround times or immediate availability. This season's fashions may be attractive because of the look and cut of article, or the fabric it is made from. At a conference recently attended, one speaker presented research showing price was the ninth most important thing to its customers. Eight other factors had greater value to their customers. It is imperative to understand the customer's concept of 'value' (a.k.a. 'value-based pricing').

Perhaps one of the golden rules of Revenue Management is that **you must stimulate demand before you can revenue manage**. Incumbent yield-managed industries will understand this: start-ups may not. Airlines, when they are making money, make most of it during the summer schedule. This is the time when, if you can squeeze one extra dollar out of each customer, the impact on the customer is minimal, but significant to the bottom line.

It can be quite a surprise to learn how a religious holiday, a public holiday or some other special event can impact on a business. My recommendation is that start-up companies should not take any special action or initiatives ahead of such an events, examine what actually happens on the day, and modify its tactics for the next occurrence of the event. I have seen customers respond in completely different ways to a public holiday and a religious holiday. One company the author knows of witnessed its utilization drop significantly during the middle of the afternoon, typically its busiest time of the day. Subsequent investigations revealed that a large number of its customers were Muslims, who were returning home at sunset to break the Ramadan fast. Until that time, this company was unaware of the size of its Muslim clientele.

Yield management is adaptable to the product life cycle. Understand how, and you will maximize the benefits of not only of your pricing regime itself, but any other marketing strategies you employ. When easyInternetCafe opened the world's largest Internet Café (as certified by the Guinness Book of Records) in New York's Times Square, its introductory offer of $1 for 5 hours featured in many press headlines. This is an example of how dynamic pricing is easily adaptable to a penetration pricing strategy to build location and product awareness. Likewise, yield management can be easily adapted to the mature phase of the product life cycle, where the objective is to optimize revenue, or to support a market exit

strategy, which may entail either raising prices, or holding a "fire sale".

Dynamic pricing can also provide a competitive advantage. **One way to fight a price war is by implementing a complex pricing structure that is difficult for competitors to compare. If you have dynamic pricing capabilities and your competitor does not, it is easy for you to match the competition, and difficult for the competition to match you**.

Start-ups operating across international frontiers may also be surprised to learn of cultural differences in these markets. Some countries and cultures respond differently to not only prices, but to pricing mechanisms. The Dutch for example, are notorious for preferring pricing certainty and stability: they do not take too warmly to real-time dynamic pricing. In other countries and cultures, customers may go to great lengths to work out how 'the system' works, ensuring they obtain the best value for money.

Finally, there may also be legal or regulatory difference from one country to the next. For examples, if you were advertising a truly dynamically priced offering in Italy or Germany, you would probably need to specify the minimum and maximum price customers can expect to pay. Germany also has strict laws on promotions and discounts which, while being common practice in more *laissez faire* countries, would breach the law in Germany.

ANALYSIS, ANALYSIS, ANALYSIS

You don't need $1m -plus Revenue Management systems to revenue manage. This author has revenue managed a start-up business using little more than Excel spreadsheets and an EPOS system that contained a simple but effective dynamic pricing mechanism. You must however strive for two things: system flexibility that matches the dynamism of the market you are competing in, and because so much of yield management uses the past as a predictor of the future, you must have (historical) data integrity.

Start-up companies need to be visionary in the design of their systems. **Remember: the name of the game is charging the right customer the right price at the right time, and to do this you need systems that flex in the same direction as your demand is variable**. One company the author is familiar with had assumed in its business plan that its capacity utilization would be identical seven days a week, week in week out, with perhaps minor variations for school holidays and the like. Accordingly it designed its pricing mechanism around this. It turned out that demand varied from one day to the next, with one Monday being similar to the previous Monday, Tuesday being similar to the previous Tuesday, and so on. Their system did not allow the charging of different prices for different days of the week, and accordingly the company probably left a lot of money on the table. Airlines have mastered this, and provide a shining example of the system flexibility a start-up should strive for: the ability to charge a different price for each seat, regardless of time of day, day of week, week of the year or operating aircraft.

Most pricing and revenue management decisions in start-up companies will (or should) be based on historical trends. For this reason it is important to extract and analyze as much data as possible. This is often a daunting task for a financially prudent start-up company, and the quest not to be *'data rich & information poor'* while avoiding *'paralysis by analysis'* does seem an oxymoron. The key to success in this regard is dedicated resources: start-up companies show little reluctance to recruit marketing managers, who did spend a lot during the dot.com boom, but are a bit more apprehensive when it comes to appointing pricing or revenue managers, who make money for the company.

It is essential to have integral KPI's on the business, and the revenue manager should be the custodian of these. The critical KPIs will vary on a case-by-case basis from company to company, but some points worth remembering are:

If your business is international, set prices and yield targets with due consideration for local market conditions. I have seen one example where a firm strived to achieve in its Spanish markets the yield it achieved in its UK market. It did not recognize that the equivalent of a pound in Spain purchased much more than it did in the UK. Accordingly, it significantly damaged its business by charging prices the Spanish market could not bear;

Yield should also be monitored after transaction costs. This is a topic that has been widely written about, but nevertheless I still see cases of Finance Departments talking in terms of gross yield, and Revenue Management talking net;

Likewise, if you employ a sales force, make sure that they are remunerated and/or incentivized not on the number of deals they sign, but on how profitable those deals are;

It can be very useful to find a "leading indicator" for your business. That indicator may be internal or external to your organization. Advance purchase sales, one of the prerequisites from a yield-managed business, have proven to be good internal leading indicators. Pre-paid, pay-as-you-go telephone cards are a prime examples: they have to be purchased before the network can be utilized;

Never underestimate the value of monitoring the under-utilized side of your business, namely wastage and spoilage. Such data will assist you in determining whether you have over-capitalised, and may provide an impetus for downsizing and by how much;

It is only with such historical data that you will be able to maximize revenue, utilization or both, capitalise on such things as cultural differences, and overcome any system limitations, the existence of which you must recognize (see below);

OTHER ISSUES

Start-up companies by their very nature are a risky business. No one knows how much people will pay for their products or services. There is no laboratory consumers can effectively be tested in. The real world is the revenue managers laboratory. It is not surprising then that start-up companies may resort to pricing research. Be cautious. Be very, very cautious with pricing research. What customers say they will buy and pay, and what they actually do buy and pay will rarely, if ever, be the same. Also bear in mind that the smaller the value of the purchase, the more elastic the customers.

Likewise, the history of pricing is littered with disasters and mistakes. Witness Amazon's failed attempt to charge different prices for DVD's, Kodak's £200 under pricing of a digital camera on its website or Coca-Cola's plan to charge higher prices in hot weather for vended cans of Coke. Sounds like another oxymoron: how do you experiment with prices when the real world in your laboratory? Some quick suggestions include: (a) offer incentives or compensation to participants in pricing experiments (b) don't just vary the price, vary the offering too, and (c) decrease prices rather than increase them (this was one of the main pitfalls of Amazon's DVD experiment).

It is important to know how elastic your customers are to make informed pricing decision. This may be difficult to ascertain if you have an extremely dynamic pricing mechanism, a large number of customers and/or insufficient resources. It is worth the effort however. If necessary aggregate the data using, say, an arc elasticity formula.

Dynamic pricing inevitably carries some risk, as the Kodak case recently illustrated. **It is important to recognize any system limitations you company or system may have.** Take the example of an Internet cafe that charges a price per hour according to the occupancy in the store. If the connection to the Internet is lost or the store empties for a fire drill, when it re-opens prices will start at the lowest possible rate per hour (i.e. based on 0% occupancy), a price not necessarily applicable should the outage or evacuation occur during a peak period.

Where possible, avoid price lists and price tags, unless they can be easily changed, like price boards outside petrol/gas stations. Stick to electronic or digital price displays wherever possible. Expect such systems as ESL (Electronic Shelf Labelling) to proliferate throughout supermarkets and other retail outlets in the coming years.

Be careful with what products or services you bundle and un-bundle, and their pricing. Monitor sales by product line, and determine and offer the bundle(s) of goods customers appreciate. The author knows of one company that did not monitor sales by product line, and after an across the board price increase, it saw its customer volumes dwindle significantly. This same issue is currently being grappled with by Telecom companies as they prepare to role out 3G services: pricing per item is the "Holy Grail", but customers may find the "all-you-can-eat" option more attractive. If you price per item, without bundling, you may damage the take up, not just one product, but across all product categories.

If you use external distribution channels, monitor and control them. They should be treated as a controllable costs (i.e. size of commissions paid). Also keep your eyes open for 'rogue' distribution channels. The author is aware of one travel

website that offers three core service to customers: one way fares, return fares or two return fares (cheaper than the cheapest return fare) which it recommends you use out of sequence. Back-to-Back ticket abuse are airline revenue managers' worst nightmare, and the practice will undoubtedly become more prevalent as the economic slowdown continues and corporate travel budgets are reigned in. Airlines are not alone in this problem either: it is even easier to purchase an use back-to-back tickets out of sequence on Eurostar services between London, Paris and Brussels.

Finally, as eluded to earlier, revenue management requires a dedicated resource, which without previous experience, should at least be appropriately qualified. I have seen a Certified Practicing Accountant (no disrespect intended) take on the role of Revenue Manager, and one of the first initiatives s/he undertook was to calculate a breakeven yield, which was miles away from the current yield being achieved. Their first recommendation was to increase prices dramatically to achieve breakeven, no doubt completely oblivious to the fact that customers buy you product or service because of the price you offer it at, and not on the basis of your costs.

NIRVANA?

Some people say price tags and fixed pricing are a mere anomaly in the history of pricing. Before their introduction, nearly all prices were negotiable. Are we seeing the end of the era of fixed prices, and the emergence of a new era where everything and everyone has a unique price: the often touted but elusive nirvana of "a market segment of one"? Dynamic pricing still has a long way to go, and a lot of industry's to penetrate. But already the cutting-edge revenue managed industries are getting so *micro* as to offer a unique price to a market segment of four or five.