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CONVERGENCE LETTER

Towards the 7th heaven of Revenue Management

Tariff strategies in services



N°25

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In the mid-1980s American Airlines and Delta Airlines designed a technique known as Revenue Management, which objective was to maximise revenues by striking the right balance between filling aircraft capacity and revenue per seat. This technique allowed them to overcome their production model constraints: rigidity in adapting capacities in terms of volume and quality, impossibility of storage leading to loss of unsold products, etc. Those companies were able to identify main customer segments so that they could win greater market share in value terms. Revenue Management (RM) guiding principle is that profits largely depend on revenue level in a business where fixed costs are prevalent. RM is based on 3 main elements: a sophisticated tariff strategy, capacity management that can influence revenue, and lastly customers' acceptance of the associated constraints. This brilliant system, which has been leveraged for 30 years in order to define air ticket prices, has been extended to other industries such as railway transport, car rental and advertising space rental; It could now be applied in the telecoms industry in order to make the most of a precious asset: the telecommunications network.

■ A company that operates in a capacity-based industry, which is defined by rare and perishable resources and substantial investment in production tools, is usually faced with a critical issue: which customers segments should be targeted in order to maximise value?

Revenue Management attempts to provide an answer for each market segment need. RM can be used to calculate tariff levels and allocate capacity in relation to those tariffs. The objective is to optimise profit stemming by a product or service sold, via modelling and forecasting demand behaviour for each market segment. In order to understand the ins and outs of RM, let's focus on the law of supply and demand which defines how the interests of suppliers and consumers are reconciled, this law models these two variables on a given market. Supply is defined as the quantity of an economic good that producers wish to sell at a given price; demand is the quantity of a good, that consumers wish to buy at a given price. These two factors can be more or less elastic, meaning that a change in demand or supply will result in a price change and vice and versa. This law has specific applications due to the nature of a capacity industry that has:

- A production system with low supply elasticity: difficulty of adding aircraft, increasing landing/take-off rights in the air transportation industry, etc.;
- Impossibility of storing products: unsold products, such as aircraft seats or call minutes, are lost;
- Predomination of fixed costs: networks, information systems, etc.;
- Possibility to partially forecast demand or activity, thanks to past sales statistics;

- Changes in demand, with weekly or even daily variations based on seasonal factors;
- Low marginal cost when accepting additional customers.

Accordingly, a company operating in a sector subject to such constraints will have too much capacity during certain periods, and this capacity will be lost as it cannot be stored. As a result sales will not cover fixed costs and earnings will eventually fall. Conversely, it might not have enough capacity in booming periods. Unable to serve demands, the company will lose potential customers and hence the associated revenue. RM can address these problems by offering the "right quantity" of a specific service at the "right time" and at the "right price".

In order to do so RM relies on three main parameters.

■ **Tiered pricing.** RM is based on the premise that price sensitivity varies widely depending on the customer. Therefore RM intends to identify market segments by assessing their value potential and by setting associated price levels. Historically, airlines have adopted this approach in order to better differentiate their offering for the two main airline customer segments: business and leisure customers. The business segment, is made of passengers travelling for business reasons, and is relatively inelastic to prices, giving priority to product quality (On the ground, in flight, travel perks overall). The leisure segment although price-sensitive is more

flexible regarding travel conditions. Airlines offer lower fares to this segment, with some strings attached, such as staying a couple of days at destination site, booking in advance or paying additional fees for changing flights. This type of fares assumes several requirements in order to meet their goal, being easily understandable and having a competitive price point for each segment. Various segments and micro-segments have to be clearly identified; they must also be clearly separated and water-tight, in order to avoid having customers in a given segment moving to a lower fare class.

■ **The second parameter of RM is Yield Management.** Since demand in each segment is not stable over time, RM allows capacity to be allocated differently to each customer/fare class segment pair, in order to maximise available capacity profitability. RM relies on detail modelling demand, in order to generate demand forecasts and a minimum price for each period. Capacity is then allocated to fare classes higher than this minimum price in line with forecasts, focusing on highest fare classes. During certain periods, some fare classes will therefore not be offered. RM also encourages price-sensitive customers to shift their demand from over-capacity periods to under-capacity periods.

■ This method introduced by the air transport industry can be applied in other industries, such as telecoms or energy. That is the very reason one should analyse acceptance by customers, which is the third element of RM. One of the criteria for RM implementation is the customer behaviour regarding fares and capacity fluctuations, as well as customer's ability to "absorb" such constraints. On the one hand, in industries such as air transportation and tourism in the broad sense, consumers have fully accepted tariff rules, folding those into their buying habits. It is now regarded as normal that low prices can be obtained via advance ticket booking without the possibility to change flights. On the other hand, the utility sector (Electricity or water supply) is having quite some difficulties imposing such rules in general, especially in Latin countries like France. Indeed, these sectors are viewed as public or as almost-public services, which limits RM opportunities. Difficulty of getting rail transport customers to accept RM is a telling example.

The telecoms carriers business is centered on operating a network, as such they have been taking a supply-side stance, experiencing similar problems to ones the airlines companies encountered: a low variable cost per voice or data unit; network construction involving high fixed costs; perishable capacity, where unused bandwidth is lost; inelastic network capacity on the short and medium term. Mobile operators thus have a large amount of unused network capacity, with on average 35-40% of their voice capacity

actually used. That's the reason why several African telecoms operators (MTN joining forces in 2007 with equipment supplier Ericsson for the Dynamic Discount offering, followed by Vodacom and Safaricom) implemented Revenue Management techniques under the Dynamic Pricing (DP) name.

DP allows mobile customers to have access to special rates on their communications tariffs (Voice for now), based on real-time telecoms networks usage. The guiding principle is based on tiered pricing that takes network load into account at a particular geographical location, at a given time. The aim is to optimise network capacity utilization and to reduce excess capacity, as well as level usage by reducing network saturation at peak calling times.

■ **Special rates may be discounted by as much as 99% in particular cases, by using several levers:**

- Price elasticity: Dynamic Pricing can be used to target price-sensitive customers who respond to special offers which can help avoid negatives effects associated with "entry-level" tariffs and image;
- Consumption habits: the most price-sensitive customers are encouraged to change their consumption behaviour and make their calls when the network is least congested;
- Average revenue per user (ARPU) and network profitability: Dynamic Pricing allows network capacity to be used where

demand stimulation can generate additional turnover at a relatively low marginal cost;

- **Competitive environment and customer loyalty:** in emerging markets, customers are volatile due to fierce competition, whereas in more mature markets, mobile number portability lowers the barriers to changing carrier. Dynamic Pricing helps to keep customers on the carrier's network, by minimising subscriptions cancellation (Churn). In emerging countries it can increase use of the main SIM card by winning a large share of the multi-SIM telecoms budget;
- **Regional differences:** Dynamic Pricing allows to address regional differences in customer segments and associated consumer behaviour via geo-marketing campaigns.

Whether called Dynamic Pricing or Revenue Management, such an approach is a genuine opportunity for telecoms operators in data services. After dramatically reducing mobile data prices, data costs are soaring while revenue is not increasing as it is based on *"One-size-fits-all"* plans for all customers, unlimited ones (*"All you can eat"*) and on flat-rate tariffs. RM could be a winning solution for telecoms operators who wish to introduce a new tariffs system. Indeed, telecoms operators have all the information needed in terms of network and consumption data, as well as customer and segmentation profiles (Customer insight) in order to leverage RM. Using this information, telecoms operators

could create various data plan offering that would better match various customer segments and associated usage behaviours: progressive connectivity and data volume for each package; access to certain sites/applications (e.g. social networks) included in specific plans (This kind of micro-segmentation implemented by the carrier "3" in the UK in 2006 with its *X-Series* Bronze, Silver and Gold packages); options for time-limited access to mobile sites or applications with no data cap.

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