DYNAMIC PRICING AND MODELLING IN FINANCIAL MARKET

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ABSTRACT:
Dynamic pricingmodelling sizzling topic in pricing concept of the day. It refers that dynamic adjustment to the tune of consumer attribution towards services and the product nature. Mathematical model provides ways and means to the fix the price in competitive situation. Pricing automation method prompts the agility and flexibility in business application. Optimum pricing will help the consumers to make right decisions. Heavy competition almost all business organization wants to maximum consumer value and by creating real-time based pricing.It offers to go for flexible pricing. It is not new and restricted with one industry. The other industries like retail, transportation industry are applying these techniques to match with balance of demand and supply conditions. The feedback loop methods are applied to find dynamic pricing in order to gain competitive edge over the other. This study provides basis of dynamic pricing and modelling techniques are useful for business decisions. And how it is implemented and possible and potential danger if rules and ethical considerations are violated. This study helps to underscore how this approach works in financial market settings and what are current challenges and organizational benefits.

Keywords: Insurance market, Dynamic pricing, Challenges Modelling, Optimization

1.1. INTRODUCTION:

The pricing decisions is not going to be easy method, it becomes more of complex. The competitive companies are facing tough pricing strategies, profit realization, and capacity to fight each other especially modern-day business organization in the financial markets rest with the application of dynamic pricing based on various parameter with in stipulated time period with the help of algorithms[1]. There is dare need for dynamic pricing because of ever changing pricing change minute -to-minute on continuous basis or day- by-day influences policy changes and influence the market.

The other names of dynamic pricing are: a) Surge pricing b). Time-based pricing. It iskind a pricing approach in which business set variable flexible prices for products or services based on current market demands[2].

The changes in the business and prices which is based on algorithms by considering opponent pricing, mismatch of demand and supply and other influence of uncontrollable factors in the market[3].

This type of pricing is usually applied by many industries namely hospital, tourism industry, entertainment industry, retail, electricity, and public transport. Each industry takes a slightly different approach to dynamic pricing based on its individual needs and the demand for the product.

The ill –feeling is all about that the approach of dynamic pricing, because many feel it favours the category of wealthy; which are less component in overall market; especially

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during peak demand. For example food industry and charges for the use of electricity during a famine situations[4].

The only major difference in applying dynamic pricing is not focus on individual product but rather focus individual customer portfolio which is treated as "REVENUE DRIVER" i.e., product centric to customer centric. If dynamic pricing is not implemented properly it will have adverse impact with entre business system. If everything goes smooth then market reality will emerge to the next level by arriving making win-win situation for both owners and the customers. Failing in which results will have an cascading-effect on sale of the product and service and eventually affect the profitability of the company.

1.2. DYNAMIC PRICING AND MODELLING

Thanks to digital technology advancement such as Artificial Intelligence AI and big data results helpful to resolve the price behavior. Dynamic pricing becomes operational model and thereby helps the insurance, retail, e-commerce industry to manage and with hectic competitive position and agility and changing characteristics customer. This approach is highly useful when dynamic pricing system works well with time factor and context of sale with price of any financial product or service. For example in financial (insurance) industry the decision about policy price will be less if it is for the low level risk averters, whereas it will be more for the higher the risk. Dynamic pricing refers price changes with reflection with customer behavior. It is real time data based. Assuming the risk factor the price will vary. Dynamic pricing becomes paramount due to the challenges faced by the company in terms of a). Customer retention b). attracting new customer. With this dynamic pricing model the one can make instant decision with large volume of data with algorithm simulation model and it bestows the risk profile with profitability position. This technique will hold good only when with following conditions certain a). Company continually adjust its price throughout day b). Kind of pricing strategy that goes with term "Variable price" Concept c). the objective is to gain profit margin and increase sales volume.

To sum up, this pricing considers the relative method or approach in the market. This personalised approaching deals with individual consumer and their behaviors and products value shopping experience.

The following questions will help to understand the importance of modelling. Dynamic pricing is powerful tool? It really helps to solve real world problems? It risks type of pricing technique? Time consuming approach?

It is believed that, this DP method enhances "Quality Work" and "the nature of rework". No doubt it is process of scientific research involving both product and process development.It adds value to and does not replace scientific approach. It has become immensely popular and applied worldwide due to increasing computation power and computing methods.Pricing that gives room to tailor made insurance coverage with premiums adapted to individual need and evolving in respect to individual client behavior. (Source: https://en.finance.sia-partners.com). The other considerations are:

a) The Customer centric and pricing
b) The Risk modelling
c) Technological influence

d) The evolutional pricing approaches

IT HAS BECOME SO HARD?

Dynamic pricing is said to be the lucrative and popular pricing strategies used today.

1. Handles complex issues
2. Handling data and generation of data
3. Pay-off between risk and reward
4. Time management
5. Is it trustworthy

1.3. TRADITIONAL APPROACH VS MODERN APPROACH OF PRICING BEHAVIOR:

The former on focus on large volume of date an anticipated changes rather new approach outlines the inclusion of pricing method along with client the so called "Client Bhaviour characteristics" alternatively called as "dynamic personal pricing modelling" [DPPM]. According to BCG analysis study result reveals that a) consumers are looking for more of real time data with transparency b) Expecting required information about pricing c) Influence of regulatory mechanism d). Competitive forces are among will alter the shape of business. (Source: BCG analysis). These concepts are illustrated with the following table how industry is managing business today.

TABLE NO.01.DYNAMIC PRICING MODEL

DYNAMIC PRICING MODEL (3C MODEL)		
Customer orientation pricing	Competition orientation pricing	Cost Orientation pricing

This pricing method is also called as the "Lucrative Pricing strategy" employed to mint money. It simple refers that the product prices continuously change even by minutes of time.

1.4. CHALLENGES AND PROSPECTS

In order to understand dynamic pricing model and develop a framework the following points are taken into consideration.

- Chu Shiu Li, (2012), article published in the journal of business research about insurance pricing structure and study result shows that the individual claim (coefficients) with the firm level and price changes occurs. Also it states the pricing strategies will alter the position of customer is to stay in the business or not. It is customary that every insurer wants to get maximum what amount is invested.
- Citing the challenges in financial market the study result reveals that it strategically important for financial (banking) system and dynamic pricing considered as s de-facto strategy resulting legacy problem.

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- In 1986, Taylor introduced a discrete model based on stochastic generalization considering general insurance pricing. This model helps to predict optimal level of premium pricing.
- It makes change from hard-coded and legacy to a real time business user-end initiate pricing and automates the ups and downs.
- This dynamic pricing model means that one set of product selling variable pricing to group of people or under different conditions.
- **challenges of dynamic pricing include**:
    a) Algorithm error or mistakes
    b) Customer behavioral changes
    c) Customer perception
    d) Data clarity and accuracy
- **Essentials of Dynamic Pricing:**This method is popularly used and this model sometimes quite powerful. The success of this method relies on the following criteria:
    a) Two set prices are better than one.
    b) Proper value metric must be used
    c) Time horizon and
    d) Couponing and discounts
- **Benefits Of This Approach**
    a) Strategic approach
    b) More loyal customer
    c) Enhanced customer experience
    d) Increased ability to re-bundle and cross sell and
    e) Increased awareness about their requirements

1.5. CONCLUSION

This is more useful and widely applied across the world. This is flexible approach provides to set right complex pricing problems. It helps to manage the equation of demand and supply. This approach provides the consume to choose the right price and right time and right price ad get desired products. It is ideal to the traders to reach optimal level of profit.It guarantees both sides of the deal-makers gain its best benefit often. It is a win-win game.Future development of the technologies will offer more opportunities for dynamic pricing.

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