

# Critically evaluate the management model of baumol

[Business](#), [Management](#)



Under the traditional economic understanding, it is always assumed that profit maximization is treated as the main goal or objective for businesses, subject to perfect knowledge, single entity and rational logic. However, as illustrated by the principal-agency problem, managers do not usually make rational decision entirely like owners who take company interest as their sole basis for their decisions. Past examples have shown that managers do take their own personal goals and satisfactions as consideration in their decision-making.

In addition, information gathering is not always perfect as managers do make decision by relying solely on the implicit knowledge gained from past experiences, without referencing to the macro-economic environment and the current market changes. Combining all these factors, it is therefore understandable that businesses do not always work toward profit maximization, at least in the short term, and other objectives like financial objective, market share, executive power, etc. do involve in business decision making.

However, as pointed out by various academics (Baumol, 1962; Marris, 1964; Williamson, 1963), profit maximization does not always serve as the only correct objective for a firm, especially at various phases of the business on a timeline scale. A point-in-hand is Baumol model. As an alternative to profit maximization model, Baumol model works on the correlation between price and output decision with the objective of maximizing sales revenue, subjected to minimum profit constraint by shareholders.

In profit maximization model, profit is maximized at the output where Marginal Revenue (MR) is equaled to Marginal Cost (MC) whereas Baumol Model emphasizes on maximizing sales revenue (TR) and may miss the  $MC = MR$  point to achieve its goal. This model argues that businesses try to maximize sales revenues rather than profits with the possible motives such as growing or sustaining market share, to fill up spare capacity, discourage new entrants, management performance and etc.

In addition, Baumol model provides a platform to understand some of the pricing strategies adopted by certain industries, which usually share common characteristics of having huge sunk cost and low variable cost. In such industries where fixed cost or sunk cost takes up a huge part of the total cost, producing a single unit and its maximum allowable output (without expanding its capacity in the short term) does not have any significant impact to the total cost.

In such instances, profit maximization model is neither practical nor feasible as a focus of the model relies on seeking the output point where  $MC = MR$ . In the case of Walt Disney, the operational cost does not differ much whether there is one patronage or maximum allowable patronages as a theme park has to be fully functional during its operation hours, which render the MC at zero or near zero level. The objective of the company to seek sales revenue maximization for the day rather than focusing its effort to achieve the output point where  $MC = MR$  to maximize its profit does make sense.

This explains the two-part pricing strategy adopted by Walt Disney where a fix initialization fee per entry is charged and allows the patronage to have as many free rides as they wish. Another example is the telecommunication industry, where the initial investment/fixed cost (for example launching the satellite and setting up the infrastructure) is huge, and the variable cost per call is insignificant to the total cost. In such industry, firms will focus on maximizing sales revenue (with constraints to maximum capacity/output) by using strategies like pricediscriminationstrategy.

In this strategy, the firms charge a different unit price to peak and off-peak hours, as there is plenty of spare capacity at off-peak hours. Since MC of output is low, any additional revenue that can be generated from this surplus capacity will be profit to the firms. As such instance, it is rational for telecommunication industrial to adopt sales maximization model like Baumol. In addition, as short term capacity is always constraint and limited, telecommunication industries would not want to experience loss sales due to their inability to meet customer demand, especially during peak hour usage.

As service providers, consistent and frequent servicefailurecould prove to be fatal in term of their survival and their long-term brand reputation. Therefore it would make sense for telecommunication firms to divert the peak-hours traffic into non-peak hours by using a price discrimination strategy which segments the users based upon their willingness and abilities to pay. For instance, business-users are willing to pay higher price for peak-hours usage due to their inelastic demand whereas in contrast, leisure-users' demand is

elastic and are willing to make call during off-peak hours in return for lower price.

By adopting the price discrimination strategy, telecommunication firms are able to maximize sales revenue during peak and off-peak hours by balancing the air-time traffic based upon different market segment of users. At this point, it is also noticeable that one of the characteristics of Baumol firms lies in the perishable products/services offered which cannot be inventoried. The loss sale of the day on the unutilized capacity/outputs is an opportunity cost to the firms.

Baumol model is not only applicable to huge/large corporations, but also to small retailers like bakery shop or wet market, which explains the reason why some bakery shops offer a special discount one hour before the shop closed to maximize the revenue. The rationales applied similarly to the low cost carriers (LCC) where price discrimination is used as a strategy to maximize revenue. LCCs sell a cheaper price to early booking passengers and a higher price for last minute passengers to increase the revenue.

LCCs used the existence of multiple segments to serve and the opportunity to utilize surplus capacities to generate additional revenue. The adoption of sales revenue maximization model is also used as an effective way of securing additional market share within a regulated market with limited players where market dominance is vital. In related to pricing, add-on product/services like travel insurance, priority boarding and choosing-a-seat are used as bundled offering to the customer to gain extra profit.

Firms are willing to earn a smaller profit if it means that they are able to gain a competitive advantage from their rival firms. As an illustration, Fitness club is a good example to elaborate how Baumol model is applied through adopting different pricing strategies. The reasons behind Fitness Club in adopting Baumol model include penetration to new market segments, retaining existing customer and to fill up spare capacity. True Fitness, which is a chained fitness centre, is effectively using Baumol model by offering different pricing strategies to capture different market segments, for instance, offering monthly fees to uncertain-customer and yearly/lifetime membership to certain-customer. Two types of pricing strategies are used by True Fitness to maximize its sales revenue, which are:- i) Two part pricing (lifetime membership) The company offers a lifetime membership at ₹ 1.5K as one-off payment and charges a minimal price of ₹ 20 yearly as administration/subscription fee. By paying a lifetime membership fee as a fixed price, the customers are able to enjoy the facilities for life for as low as ₹ 1.67 per month, which no other rival is able to compete with this low price. As per other industries discussed above, fitness clubs have the similar characteristic like high initial set up cost and low marginal cost to adopt the Baumol model. The company charges an upfront fee to gain maximum consumer surplus and utilizes the yearly subscription fees, which is equated to the marginal cost/average variable cost, to cover its yearly running costs.

In addition, in order to adopt the two-part pricing strategy to maximize sales revenue, the company needs to have a minimum output (also known as critical mass), so that the full consumer surplus can be derived from the

fixed fees. For example, if the yearly running cost (without considering the depreciation cost of the initial set up) is ? 200, 000, in order to offer a yearly subscription fee of ? 20, the company needs to have a minimum membership of 10, 000 in order to reduce the average variable cost/marginal cost to this level.

By adopting Baumol model, which gives a higher output with lower price, this is achievable. This pricing strategy is also applicable to other chained-companies where the firms can derive the maximum profit from the fixed fee and use it as capital/investment to set up a new chain store. At the same time, individual chain store is able to run by itself from the revenue derived from the minimal pricing. ii) Price discrimination ( monthly membership vs. lifetime membership) True Fitness segments their customers into certain and uncertain customer by offering different pricing to monthly and lifetime membership. The club is willing to offer a lower price to customers who are willing to commit, in comparison to uncertain customers. As illustrated in earlier examples, fitness clubs need to fill up spare capacities as any unutilized capacity carried an opportunity cost. With customers' commitment, they are able to secure their stability in term of both volume and sales revenue. For those uncertain customers, the company charges a higher price, which customer willing to pay due to the flexibility and short-term commitment.

From the above illustrations, it is apparent that a key characteristic of the Baumol model hinges on the elasticity of demand. As shown, Baumol model uses pricing strategies as a mean to achieve revenue maximization, and is

therefore heavily dependent on the price elasticity to achieve the objective of the model. If the demand is inelastic, Baumol model will not work as the demand of the product/services will not increase proportionately and therefore the sales revenue will not maximize from the reduction in price.

In addition, advertising effect has not been considered in the above examples, which is a common tactic used to increase the inelasticity of demand. The psychological effect of advertising has been proven effective in occupying the mindset of consumers through brand image building, which increases the affiliation of the consumers to certain products/services, thus increasing the inelasticity of the demand. The pointers from the last paragraph are well-illustrated by the Memo 1 example in Baye text book.

In this example, it is shown that the price change does not correlate with the demand. By reducing the price from the current, \$10.50 to \$10, the subscribers drop from 881 subscribers to 842, causing the revenue to drop from \$9251 to \$8240 and therefore a profit drop of \$614.5. (Appendix 1). In reverse, the firm should increase the price to \$11.5 to maximize the revenue at \$11282 and a price of \$12.5 to maximize the profit at \$4734.

One of the reasons is due to the advertising and promotional effort from the company which increases the inelasticity of the demand.

Secondly, since a loyal group of subscribers has already been amassed, STARZ network functions more as an add-on product to the existing subscribers. The combination of these two factors explained the reason why sales revenues and profit actually increase with price increases. In addition,



from the data on STARZ network (Appendix 1), it is apparent that STARZ network does not share the same characteristics of high fixed cost or excess capacity to apply Baumol model. Instead, it seems like advertising or bundled pricing works better for STARZ network rather than price reduction.

Further to the points above, Baumol model players are highly susceptible to the price reaction from their rivals, which could easily result in a price-war especially in an oligopolistic market. The existence of a floor triggering price in Baumol model constrained the players from lowering the price too much which will defeat the purpose of revenue maximization. Thus, it is highly unfavorable for Baumol model players to induce a price-cutting reaction from their rivals when they attempt to lower the price.

This explained why certain Baumol model players used “ noise” as disguise to their rivals when lowering the price to achieve revenue maximization. To summarize, long-term profit pursuance remains as the ultimate objective for any business. However, due to dissimilar characteristics of different industries, there are various models that can be used to achieve this long-term objective, which explains why certain firms are willing to sacrifice profit today in exchange for profit tomorrow.

As illustrated through various examples in this assignment, the application of the correct model for the right industries and at the correct phase of the company life-cycle becomes an even more important decision for managers to make. With the understanding and knowledge gained through the detailed analysis and critique of Baumol model, an useful insight to the economic

rationale adopted by various industries, like Walt Disney, LCC and telecommunication firms is achieved. Bibliography Mercurio, N. , Haralambos, S. Gerald, W. , 1992. Ownership Structure, Value of the Firm and the Bargaining Power of the Manager. *Southern Economic Journal*, 59(2), pp. 273-83. Baumol, W. J. , 1996. Prediction and the logic of the Averages Variable Cost Test. *Journal of Law and Economics*, 39(1), pp. 49 - 72. McNutt, P. A. , 2008, " Signalling, Strategy & Management Type", Available at: [http://www.patrickmcnutt.com/docs/PatrickMcNutt.com\\_ebook](http://www.patrickmcnutt.com/docs/PatrickMcNutt.com_ebook) [Accesses 20 Jan 2009]. Baye, M. R. , 2009. *Managerial Economics and Business Strategy*.

International ed. New York: McGraw-Hill. Conway, L. L. & Craycraft, J. L. , 1974. Sales Maximisation and Oligopoly: A Case Study. *Journal of Industrial Economics*, 23(2), pp. 81-95. Armstrong, M. & Vickers, J. , 2001. Competitive Price Discrimination. *The Rand Journal of Economics*, 32(4), pp. 579-605. Oi, W. Y. , 1971. A Disneyland Dilemma: Two-Part Tariffs for a Mickey Mouse Monopoly. *The Journal of Economics*, 85(1), pp. 77-96. McNutt, P. A.. *Management Objectives and Stakeholder Value (Study Guide Unit 1)*.