Chapter 6 – Pricing Decision

Case Study Digest – Case Study Q 17 – Pricing Strategy

ITB is a multi-brand diversified conglomerate corporation that deals in a wide range of industries, from hotels to FMCG; from paper to tobacco; from IT solutions to agro/agri (AGRO) business through its different divisions and departments, which are working independently. Managers of some of these divisions are accountable for their cost and revenue, while in others they are additionally accountable for the capital employed too. ITB is still diversifying its business.

FMCG Division

In the recent quarter, the FMCG Division of ITB launched moonfeast dream cream biscuits, which are flavoured twin cream biscuits. These biscuits are available in two different sizes of packing or price ₹5 for 35 grams and ₹10 for 80 grams. Division decided the price considering the cost it incurred and a preferred margin. The margin stipulated by manager for two years period.

The market segment relevant to such cream biscuits is highly competitive and hostile, customers are price sensitive too, but the segment has a turnover value of nearly ₹4.5 crores during such recent quarter. Response to moonfeast dream cream biscuits is merely reasonable. The Division is looking forward to launching a range of flavours. A report containing investment requirements regarding the new flavours sent to corporate head office for approval. As per market research report of a trade association, during the same quarter total of around 375 MT biscuit was sold in the relevant segment.

AGRO Division

A high-yield variety of hybrid maize seed HY-10 was developed after incurring the huge R&D cost, nearly ₹2.35 crores by AGRO Division. Maize is largely a Rabi crop and seed rate depends upon the factors like purpose, seed size, season, plant type, sowing method (For winter and spring maize seed rate of 8-10 kg/acre is desired, whereas for sweet corn, baby corn, and pop-corn seed rate of 8, 16, and 7 kg/acre is respectively desired). HY-10 committed and provide high yield and big-deep grains; also reduces the seed rate requirements to 80%- 90% of aforementioned. CP-555 was a prominent seller prior to the lunch of HY-10 and its 4 kg packing was sold for in the range of ₹1,450-1,500 generally. Other players are also working on developing HYV maize seeds.

AGRO Division has lined up many such more development projects which are duly approved by the divisional head, and some are in pipeline. HY-10 approved by the regulator and government authorities three seasons ago and available for commercial sale thereafter in the market. HY-10 sold in a pack of 2, 10, and 25 kgs only. Figures pertaining to these three seasons are tabled below–

Season	Revenue (thousand ₹)	Volume of sale (quintal)
First	7,460	149.2
Second	13,185	293.0
Third	12,460	311.5

ITB Hotels

ITB hotels are known for state of art amenities and great hospitality. The occupancy rate ranges from 70% to 80% on average, but for few metropolitan locations, the occupancy touches to 90% to 100%. ITB hotels follow tariff policy, wherein tariff is based upon the cost of living of individual city (wherein hotel is located) and occupancy rate (of the individual hotel) when customer check-in. Dr. Angel Gupta

who is a regular guest at ITB in Mumbai (due to her medical conferences) surprised to see the variation between the tariffs. She was charged ₹5,400 per night when her stay during the trip falls on weekdays and ₹8,000 when it falls on weekends.

Required

i. COMMENT on the ITB's organisational structure and its appropriateness.
ii. DEFINE responsibility accounting and responsibility centre.
iii. EXPLAIN profit centre and investment centre.
iv. IDENTIFY the nature of FMCG and AGRO Divisions from the preview of responsibility accounting.
v. EVALUATE the pricing strategies adopted (along with appropriateness, and set of advice where it seems inappropriate) by–
   a. FMCG Division
   b. AGRO Division
   c. ITB Hotels

(Support your answer with facts and figures (calculation thereof) given in the case)

Solution

(i) Organisational Structure outlines the roles of individuals in the organisation and decides the way in which authority and responsibility are allocated among them and how they are coordinating with each other to attain organisational objectives.

ITB is following the divisional structure wherein various divisions operating autonomously. Since divisions are operating independently hence may be termed as strategic business units (SBUs). Due to high autonomy, the decision-making process is usually decentralized.

This type of organisation structure is fit for growing companies that are diversifying because it's easy to bolt on another division. Since ITB is a multi-brand diversified conglomerate corporation that deals in a wide range of industries and still diversifying its business hence the divisional form of organisational structure best fits ITB.

Mind it, in divisional structure too, some functional departments are working horizontally throughout the organisation and known as corporate function or shared/support services, such as Accounts and HR & Payroll, etc.

(ii) Responsibility accounting is that type of management accounting that collects and reports planned actual accounting information in terms of responsibility centers. A responsibility centre is a specific unit of an organisation assigned to a manager who is held responsible for its operation and resources. The division can be designate as either of cost, profit, revenue, or investment centre depending upon the responsibility (accountability) assigned to its manager (s)/ divisional manager.

(iii) Profit Centre and Investment Centre.

Wherein the manager of division is accountable for the cost and revenue of division it shall be categorised as profit centre. Thus, the performance of such division shall be measured in terms of the difference between the revenues and costs (the absolute amount of profit).

But wherein manager is additionally (apart from cost and revenue) accountable for the capital employed too –categories as investment centre. The performance of an investment centre can be

measured by appraising profit/return in relation to the investment base of centre, ROI, RI, and EVA are some prominent financial performance measures.

(iv) FMCG Division is a profit centre because it decided its own prices as well as a cost but for investment, it has to take the approval of the head office, as it is mentioned in the case that a report containing investment requirement regarding the new flavours sent to corporate head office for approval. Moreover, the desired margin, which is used to determine the price also stipulated by the manager only.

AGRO Division is an investment centre because it takes investment decisions on its own, without the intervention of head office, as it is mentioned in the case that AGRO Division has lined up many such more development projects which are duly approved by the divisional head, and some are in pipeline

(v) (a) FMCG Division

FMCG Division determines the prices based upon the cost it incurred and desired margin stipulated by manager. Hence, pricing strategy (hence the decision) adopted is the cost-plus margin approach.

Concept Insight

It is important to note the limitations of cost-plus margin approach:

- It ignores the price charged by the competitors,
- It also ignores the price which customer ready to pay, and
- Enterprise not looking towards cost control and management.

FMCG Division determines the two different prices of moonfeast dream cream biscuits; ₹5 for 35 grams and ₹10 for 80 grams; hence the price ranges from ₹ 125 to ₹ 142.86 per kg in comparison to an average price of ₹120 per kg only (see the working note below) charged by other players in the relevant segment.

It is mentioned in the case that the market segment relevant to such cream biscuits is highly competitive and hostile, customers are price sensitive too; hence selling them product at a premium price (which more than the average price) is not a good strategy to penetrate into the market and acquire market share. This is the reason that response to moonfeast dream cream biscuits is merely reasonable.

Hence it is advisable for divisional managers of the FMCG Division to pick the penetration strategy, which means keep the prices low initially (in comparison to average market price or near rival) to gain the market share (and product acceptance), once market share reach a reasonable level then prices can be reinstated to normal level (the average market price).

Note – FMCG Division can practice techniques like Target costing, Kaizen to bring the cost down to reduce the price and sell the product at or lower than market-led prices.

Working note– Determination of price charge by other players in the relevant segment during the said quarter.

Turnover – ₹4.5 crores

Quantity sold – 375 MT (Metric Ton) - since 1 MT is equal to 1,000 kg hence 3,75,000 kg biscuits were sold during the said quarter.

Average price per kg – ₹4.5 crores / 3,75,000 kg = ₹120 per kg.

(b) AGRO Division

The price charged by the AGRO Division for HY-10 during three previous sessions are tabled below, which depicts AGRO Division use the strategy of price skimming in the case of HY-10 because the prices were initially high (₹500 per kg) and continually decline thereafter (₹450 then ₹400 per kg). The price initially charged for HY-10 was much more than the price range of ₹362.5-375 per kg that CP-555 charged which was a prominent seller prior to lunch of HY-10.

Season	Revenue (in thousand ₹)	Volume of sale (in quintal)	Volume of sale (in kg)	Price per kg (in ₹)
First	7,460	149.2	14,920	500
Second	13,185	293.0	29,300	450
Third	12,460	311.5	31,150	400

Price skimming seems an appropriate strategy for the AGRO Division because HY-10 was developed after incurring the huge R&D cost (nearly ₹2.35 crores), that need to be recovered in few early years because some other players are also working on developing HYV maize seeds; if once they developed HYV maize seeds then ITB may not be in a position to charge the high price to recover its R&D cost from the product.

Customer (formers) might not mind paying a high price for HY-10 because it committed and actually provide high yield and big-deep grains and also reduce the seed rate requirements to 80%-90% of normal requirement.

(c) Hotels

The tariff charged by ITB hotels is based upon the cost of living of an individual city (wherein the hotel is located) and occupancy rate (of the individual hotel) when customers check-in. It means ITB is relying upon the strategy of differential pricing.

One of the factors that determine the price in the case of ITB hotels is occupancy rate. It means ITB considers the importance of capacity constraints. The practice of charging a higher price for the same product or service when the demand for it approaches the physical limit of the capacity to produce that product or service is known as peak-load pricing.

The pricing strategy seems appropriate largely, but for regular guests like Dr. Gupta, it may be annoying.

Peak–load pricing, on one hand, generates high profit for ITB at the same time it brings equilibrium in demand and supply. But guests like Dr. Gupta, who is a regular guest of ITB may not be happy with differential pricing (tariff ₹5,400 per night on weekdays and ₹8,000 per night on weekends) on account of the peak load factor. The impact of peak-load pricing will be more likely to be seen in those metropolitan locations when the occupancy rate touches 90% to 100%.

Case Study Digest – Skill Based Q 37 – Profit Maximisation

Zutus Ltd. is a leading Indian Pharmaceutical company which is a fully integrated, global healthcare provider. With in-depth domain expertise in the field of healthcare, it has strong capabilities across the spectrum of the pharmaceutical value chain. Zutus has earned reputation worldwide amongst pharmaceutical companies for providing comprehensive and complete healthcare solutions.

One of the drugs, Rifmn is an antibiotic used to treat contagious disease "Tbis". Rifmn is a patented medicine. The patent for which is now going to expire, and several other competitors are expected to enter in the market for selling the medicine using the same components of chemicals, under different other name. In order to reposition itself in the market, the company is reviewing its pricing policy considering the market change and other threat.

The market research for Rifmn indicates that for every ₹4 decrease in price, demand would be expected to increase by 8,000 batches, with maximum demand for Rifmn being one million batches.

Each batch of Rifmn is currently made of using chemical salts:

Salt X: 367.50 gm at ₹0.08 per gm Salt Y: 301.50 gm at ₹0.40 per gm

Each batch of Rifmn requires 30 minutes of machine time to make and the variable running costs for machine time are ₹40 per hour. The fixed production overhead cost is expected to be ₹35 per batch for the period, based on a budgeted production level of 3,00,000 batches.

The skilled workforce who has been working on Rifmn until now are being shifted onto the production of Zutus company's new antiviral drug (injection) for Viral Disease-19 which costs millions of Rs. to develop. Zutus has obtained patent for this revolutionary drug and it is expected to save millions of lives all across the world. The launch of this drug is excitedly anticipated all over the world, while its demand in unknown and no other similar specific drug exists. The average labor cost (outsourcing) of each batch of Rifmn is ₹38.60.

The management of Zutus considers that pricing decision of Rifmn should be based on each batch.

Required

(i) CALCULATE the optimum (profit-maximizing) selling price for Rifmn and the resulting annual profit which Zutus will make from charging this price.

(ii) RECOMMEND the pricing strategy for launching of new antiviral drug.

[Note– If P = a - bQ, then MR = a - 2bQ]

Solution

(i) Demand function

b = change in price/change in quantity b = ₹4/8,000 units = 0.0005

The maximum demand for Rifmn is 10,00,000 units, so where P = 0, Q = 10,00,000, so 'a' is established by substituting these values for P and Q into the demand function:

0 = a – (0.0005 × 10,00,000)

0 = a – 500

Therefore, a = 500

Demand function is therefore: P = 500 – 0.0005Q

Marginal cost

		Total ₹
Salt X	367.50g × ₹0.08	29.40
Salt Y	301.50g × ₹0.40	120.60
Labour	Given in ques	38.60
Machine running cost	(30/60 × ₹40.00)	20
Total marginal cost per batch		208.60

Marginal revenue function: MR = a – 2bQ

Equate MC and MR and insert the values for 'a' and 'b' from the demand function in step 1

⇒ 208.60 = 500 – (2 × 0.0005 × Q)

Solve the MR function (to determine optimum quantity, Q)

⇒ 208.60 = 500 – 0.001Q

⇒ 0.001Q = 291.4

⇒ Q = 291,400 batches

Calculate the optimum price

⇒ P = 500 – (0.0005 × 291,400)

⇒ P = ₹354.30

Calculate Profit

	₹
Revenue (2,91,400 batches × ₹354.3)	10,32,43,020
Less: Variable costs (2,91,400 batches × ₹208.60)	6,07,86,040
Less: Fixed costs (3,00,000 batches × ₹35)	1,05,00,000
Profit	3,19,56,980

(ii) Firms often use different pricing strategies when their products are first launched into the market. The most two common approaches are price skimming and penetration pricing.

In penetration pricing, low price is charged initially, thought behind this is that low price will make the product accessible to large number of buyers, so high sales will compensate the low price being charged getting the benefits of economy of scale. This approach works best when customers are price sensitive, R & D and marketing expenses are low, or when competitors will quickly enter the market.

In this case, medicines are highly inelastic in nature so any reduction in price will not increase the demand of the drug, which clearly indicates that market penetration pricing will not help.

Skimming Pricing refers to charging high price initially than lower the prices. High price in the early stage of the product's life cycle is expected to generate high initial cash flows, which will help the

company to recover high development cost. This would enable the company to take advantage of unique nature of the product.

In present case, the unique nature of drug, entry barrier (since company has taken patent) requires huge initial investment and considering this market skimming pricing strategy would be more favorable pricing strategy. However, this strategy only works as long as drug is protected by patent.

In addition, a drug firm is required to consider the expected reactions from national price controllers who in turn may be influenced by political factors and public opinion.

Practical Insight

Most of the people in developing countries buy medicines through out-of-pocket payments, high prices of medicines might force people to forego treatment or go into debt. As a result, price of the medicines may be regulated by the health organisations/ agencies.

Case Study Digest – Skill Based Q 39 – Pricing Strategy

"Zinc" a brand of Zink Pen and Plastic Limited (ZPPL), is a household name for stationery products. The R&D Division of "Zinc" developed a new pen 'Zentonic' with assorted ink colours with the tagline 'give your writing a Zen energy'.

"Zinc" has used market research/ studies to determine that if price of Rs. 40 is charged for pen, demand will be NIL. It has also been established that demand will rise or fall by 2,000 units for every Re. 1 fall/ rise in the selling price. The further information is also available in Annexure as a result of these studies.

The Board members in presence of functional heads at ZPPL are discussing the different pricing strategies that can be adopted in context to 'Zentonic'.

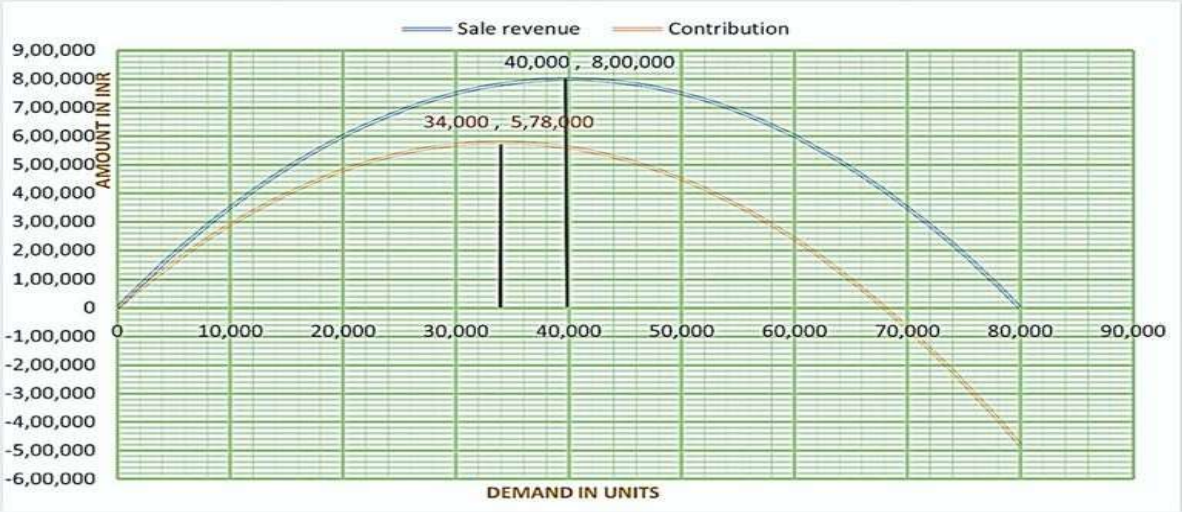
Dissension is clearly visible between the marketing head and the finance head. The marketing head is striving to keep the price as low as possible to capture the commercial space and maximise the revenue, whereas the finance head argued in favour of keeping the price high to maximise the profit because the design and R&D of 'Zentonic' will not be matched by the competitors currently. The distinct parameters (revenue and profit) of performance linked pay seem to be the major reason for contradiction between two functional heads. Board members consider both the thoughts and instruct you (management accountant) to drive the price(s).

ZPPL diversifies itself into the online learning space and starts a web-based platform 'ZenZick', which offers quality videos for competitive and professional exams such as JEE, NEET, UPSC, KVPY and etc. In order to attract the viewer, 'ZenZick' offers few lectures on fundamental concepts of curriculum after registration at the website without any cost, but for complete access, candidates need to have paid account.

Required

(i) CALCULATE the unit selling price of 'Zentonic' that will maximise revenue and maximise profit.

(ii) ELUCIDATE the pricing strategy advocated by marketing head and finance head for 'Zentonic' and pricing strategy adopted for 'ZenZick'.



Solution

(i) The unit selling price of 'Zentonic' that will maximise revenue and maximise profit can be easily derived through demand function. The graph shows sales revenue is maximised at 40,000 units and contribution (so profit) is maximised at 34,000 units.

Note – Fixed cost will be fixed irrespective of the level of activity (presuming fixed cost does not hold feature of step cost).

To calculate the selling price for these two levels of output, we can insert the number of units into the equation for the demand function.

Demand function q = 80,000 – 2,000p or p = 40 – 0.0005q Whereas p represents selling price and q represents level of output. Revenue will be maximum when the selling price will be Rs. 20.

When q is 40,000 units of Zentonic pens,

40,000 = 80,000 – 2,000p

2,000p = 40,000

Then p will be 20

Profit will be maximum when the selling price will be Rs. 23

When q is 34,000 units of Zentonic pens,

34000 = 80,000 – 2,000p

2,000p = 46000

Then p will be 23

Accordingly, sales revenue at profit maximisation level would be Rs. 7,82,000 (23 × 34,000 units) and the expected profit at this level is already given i.e., Rs. 5,78,000 (refer graph). Therefore, variable cost will be Rs. 2,04,000 or Rs. 6 per unit. [not required in question]

(ii) The marketing head is striving to keep the price low as possible to make capture the commercial space and maximise the revenue. The pricing strategy advocated by him is penetration pricing. It includes setting the price low with the goals of attracting customers and gaining market share. The price will be raised later once this market share is gained.

The finance head argued in favour of keeping the price high to maximise the profit because the design and R&D of Zentonic will not be matched by the competitors currently. The pricing strategy advocated by him is price skimming. Under price skimming, high prices are set when a new product is launched so that fewer sales are needed to break even and to reimburse the cost of investment of the original research into the product. Since it involves selling a product at a high price, sacrificing high sales to gain a high profit is therefore called "skimming" the market. Price dropped to increase demand once the customers who are willing to pay more have been 'skimmed off'.

The pricing strategy adopted for 'ZenZick' is freemium, freemium is a revenue model that works by offering a product or service free of charge (typically digital offerings such as software) while charging a premium for advanced features, functionality, or related products and services. The word "freemium" is a portmanteau combining the two aspects of the business model i.e., "free" and "premium".