Chapter 14 – Case Study

Case Study 1 – Porter's 5 Forces

Safe and Wise Advisory Limited (SWAL) is well established financial planning & risk advisory firm of the country with nation-wide presence. SWAL is engaged in selling third party products be it financial products or insurance products (life assurance only). Financial advisory business of SWAL is doing well and contributing to the half of gross revenue of group and two- third of overall group's bottom line, but insurance brokerage business is not performing as per expectation. 'Independent and impartial advice' to client is unique selling point of SWAL.

SWAL was established by Mr Kaushal Jaiswal around two decade ago (when life-assurance business goes private), at then it was one division business i.e., assurance brokerage business. Mr. Kaushal Jaiswal is dynamic leader and presently leading the company as CEO, apart from being major shareholder of the company.

SWAL is widely acknowledged in market for two distinct features, first being presence wide across the nation, in form of 'sub-agency offices' equipped with professionally trained sale staff headed by financial planner or advisor, where customer can take advise and discuss opinion prior to investing/ buying any insurance or financial product. SWAL has 'sub-agency offices' in 580 cities, towns and blocks. Locations are semi-commercial in nature but prominent. SWAL has practice to sign 30-year lease, when so ever taking and 'sub-agency office' on lease in order to reduce the lease cost and bring stability.

Secondly, SWAL sold product of all third parties, hence provide a range of products to its client to choose from. In 2010, SWAL signed a 15-year agency agreement with all 23 life insurance companies recognised then. SWAL's tagline is also depicting the same 'we are ethically committed to understand and deliver your needs'. SWAL believes in organic growth and listed on stock market 3 years back to float additional capital to fund more 'sub-agency offices'.

22 out of these 23 life assurance companies are private and registered themselves with regulatory between the year 2000-2009 for a period of 25 years. Considering the default by few insurance firms and increasing customer complaints, regulator of insurance business in country tightens the registration criteria and harden the norms.

Typically each of 'sub-agency office' comprises three regular and one contractual employee. One being financial planner/ advisor, 2 sales and relationship officer and contractual worker in role of support staff and vested with miscellaneous clerical responsibilities. The on-roll number of employees engaged in assurance brokerage business has been increased to 1,564 from 720 five year ago (up-till 3 year ago number was 845 but since expansion of 'sub-agency' office division it is around 1,500).

Market trend is changing, since the SWAL commence the business. Each of such insurance company, now has their own network of branch offices to sale their insurance product directly; that too at more prominent locations. SWAL counter this, by highlighting its 'independence and impartial advice' practice, although SWAL managed to retain the revenue at same level, but this result in low profitability of 'sub-agency office' business. Now these insurance companies are not authorising any new agent.

Being in service industry and further in order to ensure wider market reach to compensate the loss of profitability in 'sub-agency office' business, SWAL has established own 'E-platform'- 'Policy at you click' to sell the insurance product with total staff of 50 professionals, as a separate division under insurance brokerage business from 'sub-agency office' division. 'E- platform' division is prospering but 'sub-agency office' business is certainly in trouble.

Supported by revenue figures given below (in '000 Crores), analysts reach to conclusion that growth in the assurance brokerage business is slowing down both for SWAL and industry overall:

Market Size/Year	2019-20	2018-19	2017-18	2016-17	2015-16
SWAL's assurance brokerage business	326	320	312	298	280
Total market size of life assurance	2,240	2,198	2,122	2,004	1,960

Revenue earned by each division of assurance brokerage business (in term of age of the client), is shown in table below for year 2019-20:

Division/Age	20-30	30-40	40-50	50-60	60+	Total
'Sub-agency office' division	2	25	38	164	51	280
'E-platform' division	8	28	8	2	0	46
Total Business of SWAL						326

Since the profitability of 'sub-agency office' division is declining, hence the strategic review committee of board of directors are concerned about the company's declining profitability due to poor performance of 'sub-agency office' division and suggest that the 'sub-agency office' division should be sold off and that SWAL shall re-position its assurance business as an online solution.

Extract from financial statement for agency office division only (figures in '000 Crores)

Particulars/Year	2019-20	2018-19	2017-18
Revenue	280	272	250
Profit before interest and tax	18	16	31
Shareholder's' Equity	156	150	150
8% Long term debt	78	64	50
Current Liabilities	455	437	395
Current Assets	605	565	540

Applicable tax rate is 22%. The nature of cost incurred by 'sub-agency office' division is more or less balanced between the variable and fixed. Fixed costs are largely committed in nature. But the CEO is not agreed to the suggestion made by strategic planning committee, because CEO is of belief that SWAL's USP or original business model is 'sub-agency offices' through which they ensure 'independence and impartial advice' to their clients. In next board meeting, board is expected to pass resolution on this agenda item in order to decide either to continue or sale the 'sub-agency office' division.

Required

i. ASSESS the competitive environment of life-assurance business of SWAL (including 'sub-agency office' division).

ii. EVALUATE the case for holding the 'sub-agency office' division, backed by financial viability among other criteria.

Solution

(i) Michael E Porter, in 1980 in his book "Competitive strategy: Techniques' for analysing industries and competitors" suggested five force model to assess the competitive environment of an industry. The five forces which are enumerated by this model are the bargaining power of suppliers; the bargaining power of customers (buyers); the threat of new entrants; threat of substitute products; and the level of rivalry among current competitors in the industry.

This model is also named as porter's five force analysis. Since each of these five forces affect the competitiveness of business, hence can be used to assess the potential of any organisation or entity; life-assurance business of SWAL (including 'sub-agency office' division) is not an exception to this.

The bargaining power of suppliers

Number of suppliers will decide the dominance they possess in term of bargaining power regarding the price of good and service they supply to business. In case of 'sub-agency office' division following factors will affect the suppliers' power–

Control over Value Chain – By adopting the strategy of forward integration the insurance companies themselves getting into the direct sale through own network of branch offices in order to enhance their margin or reducing the margin earned by SWAL's 'sub-agency office' division. Since number of insurance companies are neither too less nor too much, hence bargaining power of insurance companies; in terms of percentage brokerage they offered to SWAL is moderate.

Importance of product – SWAL is also dealing in financial product's marketing and advisory, which contribute 50% of group sales and around 67% of group's profit; thus assurance business which is no doubt significant but only choice (business) available to SWAL. Hence, bargaining power of supplier is moderate.

Substitution among the brand – Life assurance product offers similar utility to client; hence easily substitutes among the brands, means if insurance company 1 charge lesser premier then insurance company 2, client will buy assurance of company 1. No doubt switching is less viable once policy subscribed. Since SWAL's 'sub-agency' division is offering the product from all 23 insurance companies, hence bargaining power of suppliers become low.

Supply of other factors – Other factor such 'sub-agency offices', which are largely on lease, has 30-year lease, this will reduce the lease cost as well as bargaining power of land-lord apart from bringing stability.

The bargaining power of customers

Whether seller is price taker or makes, this is outcome of bargaining power of customers (true sense competition). If the bargaining power is high seller will become price taker, else he is price maker. Following factors affect the bargaining power of customers of SWAL's 'sub-agency' division–

Number of buyers – In assurance industry the buyers are large (in comparison to few number of suppliers) and diversified, hence their bargaining power is low.

Standardised products – Since the life assurance is the product, which is standard from prospective of core functionality, hence buyers can easily substitute brands and can negotiate to reasonable extent.

Switching – Once policy subscribed cannot be easily switched with another, hence due to high switching cost bargaining power reduced to some extent at-least.

The threat of new entrants

Although entry of a new firm to the industry/ market depends upon the level of entry barriers, but if new entity enters into the industry; it will surely bring additional capacity which enhance the stiffness of competition; hence become a kind of threat. In case of 'sub-agency office' division, there are some major barriers to entry–

Less number of new life-assurance licenses by regulator due to tough regulations – As mentioned in the case that after considering the default by few insurance firms and increasing customer complaints, regulator of insurance business in country tighten the registration criteria and harden the norms; hence this may act as entry barrier and reduce the threat of new entrants.

Less number of new insurance agent due to no new authorisation by insurance companies – As market is revamping, the agents is becoming competitor to the insurance companies and as mentioned insurance companies stopped authorising new insurance agents, hence this will act an entry barrier for new insurance agents, which is a great positive for SWAL's 'sub-agency office' division and intact the competitive advantage.

Learning curve and economies of scale – Since all the 23 insurance companies dealing in life assurance and SWAL are 10- to 20-year-old organisations; hence learning curve and economies of scale (shared services for the 580 offices - presence in 580 cities) which they are enjoying may become entry barriers for new firm. Since new firms require huge capital to be at par to such learning curve and economies of scale.

Threat of substitution

Substitution means the product from some other industry which can render the same function which life assurance is rending. The threat of substitute product is quiet low.

Competitive rivalry

The level of competition among the players to acquire or retain the market share directly affects the profitability in an industry. Following factor is affecting the competitive rivalry–

Number of competitors and respective market size – Since there are good number of competitors, hence competition will be intense; may cutthroat rivalry. Presently SWAL's insurance business represent 14.55% of market share (in 2019-20) in comparison to 14.29% of market share five year ago, without any major variation, hence possibility of gaining new market share is limited that too at high cost (in form of advertisement and more after sale services).

Lack of differentiation – Standardise product results in high rivalry, since the life assurance is standard product hence rivalry may be high on account of easy substitution effect among the different brands.

Slow market growth – If market is growing at high rate, rivalry may be stiffer or may be moderate; because everyone has reasonable opportunity to grow. The moment growth stagnated rivalry become stiffer because no one wish to lose market share. The industry life cycle curve is flatter here, because during last four years overall industry wide CAGR (compounded annual growth rate) of life assurance business is 3.39%, whereas year-on- year growth from 2018-19 to 2019-20 is 1.91%. Although potential is limited, but competition is still high.

Exit barriers – If the exit cost for player to move out of industry is high, it will have to be in industry and fight for survival, which may make competition tougher. Since agency agreement and lease agreement is already signed by SWAL hence, it becomes difficult to exit from the business, hence need to participate in competition to retain the share.

(ii) Case for holding the 'sub-agency office' division

The strategic review committee suggests that the SWAL's 'sub-agency office' division should be sold off and that SWAL shall re-position its assurance business as an online solution, but the same suggestion firstly needs to be evaluated in terms of financial perspective among the other criteria.

The growth in life assurance business is stagnated and industry is in maturity stage of industry life cycle. This is evident from industry size and growth in the same. During last four years overall industry wide CAGR (compound annual growth rate) of life assurance business is 3.39%, whereas year-on-year growth from 2018-19 to 2019-20 is 1.91%. The moment growth stagnated rivalry become stiffer because no one wish to lose market share. Hence, there is intense competition in market. In cases where market witnesses intense competition, operating efficiently is essential and reduction in cost become key success factor; in order to offer competitive deals to clients and retain market share.

Hence, it becomes need of hour, that we review the operating processes followed at 'sub- agency offices' to check whether they are efficient or not, in order to ensure greater profitability rather thinking to sale off the entire 'sub-agency office' division.

Now, move to financial analysis, which suggests it is beneficial to hold back 'sub-agency' division.

Contribution to the group – Insurance business is contributing 50% of top-line of overall group revenue (and 1/3rd of bottom line), and around 86% (280/ 326) of this comes from 'sub-agency office' division and 'E-platform' division contribute only remaining 14%.

Profitability – Margins are positive. There are two major parameters to evaluate profitability further on –

- Operating profit (EBIT/ Revenue) – No doubt, operating profit shrink from 12.4% to 6.43% in three years' time frame. But as earlier quoted, margin is positive and secondly, there is sign of recovery as well. EBIT increased in absolute terms (from 16 to 18).

- Return on capital employed (ROCE) [EBIT / (Equity + Long Term Debt)] – No doubt, ROCE shrink from 15.5% to 7.69% in three years' time frame. But reduction in EBIT is not only a reason, another major reason for decline is change in capital structure. Long term debt is increased in absolute terms (from 50 to 78).

Liquidity – Current ratio (Current Assets / Current Liabilities) being reasonable measure of liquidity indicates enough liquidity in 'sub-agency office' division to meets it obligation. There is minor decline from 1.367 times to 1.33 times. Component analysis of working capital can be performed for greater insight.

Gearing (Debt / Equity) – Gearing ratio depicts the financial leverage, a measure of risk. Gearing ratio no doubt increased as result of introduction of debt, from 1/2 to 1/3, but under control.

<u>Some other quasi-finance and significant factors relevant to the decision of sale of 'sub- agency office' division and full focus on 'E-platform' division–</u>

Client's demography – Clients from all age groups from 20 to 60+ are clients of SWAL's assurance brokerage business. 66.56% (217/326) of revenue coming from clients with 50+ years of age, and 99% (215/217) out of them are associated through 'sub-agency offices', hence holding of 'sub-agency' division become essential. Secondly, clients from all age group may not find it convenient to shift to 'E-platform' 'Policy at you click' and their resistance may result in losing business. Thirdly, they have easily available substitute, because competitors also have branch offices which will give them same feel.

Resistance from employees – Out of 1,564 on-roll employees of assurance brokerage business, only 50 are associated in 'E-platform' division- 'Policy at you click', rest all in 'sub-agency office' division. If SWAL re-structure itself fully as online solution for life assurance then also cannot absorb all the employees, many of them need to be retrenched. Resistance will be there in both the cases because transferred employee may not have requisite skill set, result in poor quality of service and no job satisfaction to employee. Whereas in case of retrenched workers redundancy cost will become additional financial burden. This can be seen as exit barrier.

Legal aspect in term of pre-closure of lease - SWAL has practice to sign 30-year lease, when so ever taking and 'sub-agency office' on lease in order to reduce the lease cost and bring stability. It started the business 2 decades ago and expanded it 3 years ago and many of leases are active right now, in case of pre-closure, it may be possible to bear additional financial burden as per terms of lease agreement.

Loosing USP – 'Independence and impartial advice' with presence wide across the nation, in form of 'sub-agency offices' equipped with professionally trained sale staff headed by financial planner or advisor, where customer can take advise and discuss opinion prior to investing/ buying any insurance or financial product is USP for SWAL's assurance brokerage business. By disposing the 'sub-agency office' division this central idea, with which SWAL was established may be washed out.

In nutshell, the life assurance market has matured in recent years, and result in low growth potential and lower profitability but still yielding positive numbers. Hence, sale of 'sub-agency' division will adversely hit the revenue as well as profitability.

Case Study 2 – Competitive Advantage

BA is the second largest airline in the Country "X". Aviation industry in the Country "X" is growing fast. In 2011, 45 million people travelled to/ from/ or within the Country "X". By 2020 that doubled to 100 million. This number is expected to treble to 300 million by 2030. Also, by 2025, Country "X" is expected to be the third largest air transport market in the world, behind the US and China.

Government is trying to meet the significant growth potential of aviation Industry. However, it will create challenges also for the airline industry and its industry partners. Government also wants to ensure that broader business and policy environment should not place hurdles which inhibit growth and reduce the level of benefits that aviation can deliver to the nation. The industry, its supply chain partners, and the government and policy makers have a clear mandate to work in collaboration towards the common goal of ensuring that aviation's economic and social benefits are fulfilled.

Despite of operating in World's fastest growing market BA struggles for passengers. Also, BA is facing following problems:

- Aviation Turbine Fuel (ATF) prices constitute about 40% of operational costs in Country "X" and are taxed higher here than anywhere else in the World. The Central government charges 14% duty on ATF. While the state government pile on their own local tax that can go as high as 29%.
- The currency depreciation is hitting Airline harder. About 25% to 30% of their costs, excluding ATF, are dollar denominated, from aircraft lease rents, maintenance costs to ground handling and parking charges abroad etc.
- With the entry of Low Budget Carriers, full-service carrier like BA that have higher overhead costs have been forced to offer discount to passengers looking for great bargain.
- Continuous improvements in tourism infrastructure, tourism policies, human resources development, airport infrastructure density are among the areas that could further enhance Country "X"'s competitiveness. Ease of doing business over the last five years has risen.
- The intense competition among domestic airlines carriers, the need to capture a slice of the ever-expanding market and passenger price sensitivity makes the airlines difficult to raise ticket prices.

Together, these factors have now plunged Country "X"'s aviation industry to its most precarious phase in the last three years or so.

BA is facing huge competition as a "year of sharp U-turns" for "X"'s aviation industry from record profit in Financial Year 2019-20 to mega losses, resulting in direct need of recapitalisation. BA has been appealing to the government for a decade for a reduction in taxes on fuel, but all in vain. ATF is 35-40% more expensive in Country "X" than in the rest of the world, because of relatively high tax rates.

Required

ADVISE the strategy that BA should follow in order to gain superior performance and competitive advantage over its competitors.

Solution

In consideration to Michael Porter's theory about creating a superior performance and competitive advantage, a firm's overall competitive advantage derives from the difference between the value it offers to customer and its cost of creating that customer value. In order to survive and prosper in industry, firm must meet two criteria– they must supply what customers want to buy and they must survive competition.

To attain superior performance and attain competitive advantage, firm must have distinctive competencies. Distinctive competencies can take any of the following two forms:

Relative low-Cost advantage– under which customers gain when a firm's total costs undercut those of its average competitor.

An offering or differentiation advantage– If customer perceive a product or service as superior, they become more willing to pay a premium price relative to the price they will have to pay for competing offerings.

Low-Cost Advantage (Cost Leadership)

BA can enjoy relative cost advantage if its total costs are lower than those of its competitors. This relative cost advantage enables a business to do one of the following:

- Charge a lower price than its competitors for its services to gain market share and still maintain current profitability; or
- Match with the price of competing services and increase its profitability.

Cost reductions in BA can be achieved through yield management with variable pricing depending on capacity utilization with careful monitoring; application of computer and communication technology in cost effective way i.e. selling seats via the internet rather than through travel agents; trimming overhead costs by using lower cost out-of-town airports, no printed tickets, seat allocations, or free meals and drinks; efficient operations i.e. fast turnaround times for aircraft to improve utilization; and no exceptions policies to reduce the cost of handling exceptions (e.g. no flexibility for passengers who arrive late). Cost economies can also be realized from large scale operations. However, it is important to note that as soon as more firms strive to become the cost leader, rivalry become so fierce that the consequences for the profitability in the industry are disastrous.

Differentiation Advantage

It occurs when customers perceive that a business services offering is of higher quality, involves fewer risks and/or outperform services offered by competitors. In other words, customers perceive the service offered by a business to be superior. For example, differentiation may include a firm's ability to deliver services, and other factors that provide unique customer value. BA is a multinational passenger airline. It can adopt a differentiation approach by offering passengers a higher-quality experience than many of its rivals. This allows it to charge a premium for its flights compared to many other airlines.

A differentiation advantage can be achieved by offering enhanced features such as prime landing slots can be obtained at major airports around the world; using superior and advance technology; well-maintained, clean, and comfortable aircraft; training in customer care and the recruitment of high-quality staff; providing complementary services such as in-flight entertainment, high-quality food, and drink. Customer value can also be increased by subjective features such as brand image, advertising based on quality of service provided. However, differentiator cannot ignore its cost position. If costs are too high the premium price are nullified.

On successfully differentiated its offering, management of BA may exploit the advantage in one of two ways viz., either increase price until it just offsets the cost of improvement in customer benefits, thus maintaining current market share; or price below the “full premium” level to build market share.

Alternatively, BA may focus on geographical region and short point to point flights to reduce costs. Michael Porter enlightens focus as attaining low cost or product differentiation for a particular buyer group, segment of product line, or geographic market rather than for the industry as a whole. The focuser can attain competitive advantage within a niche, because large firms are either not attracted to niche or have ignored the potential. The narrow focus in itself though is not adequate for a competitive advantage. The firms need to optimize the strategy on two variants: cost focus and differentiation focus. One risk of a ‘focus strategy’ is that broadly targeted competitors devastate the segment once it becomes economically attractive.

In addition, the currency depreciation is hitting Airlines harder and international overhead costs have risen, the BA should attempt to increase the number of internal domestic flights. Moreover, ATF cost can also be lowered by investment in fuel saving modern Airbuses, however, the reduction in operating costs may outweigh the capital equipment costs.

To gain competitive advantage BA may also assess Value Shop Model. Value Shop generates value by organizing resources (e.g. people, knowledge, and skills) and deploying them to solve specific problems, for example, delivering airline services to the passengers or delivering a solution to the business problem. Shops are organized around making executing decisions- identifying and assessing problems or opportunities, developing alternative solutions or approaches, choosing one, executing it and evaluating results.

In this way, the above discussed strategies may be more appropriate for helping BA in achieving superior performance and competitive advantage over its competitors.

Concept in Practice

Southwest Airlines (SA) targeted on a geographic region and short point-to- point flights to reduce costs. Even though it offered no-frills service (no-frills or no-frills service is one for which the non-essential features like food, entertainment, printing of boarding pass etc. have been removed to keep the price low) and was based in secondary airports, SA improved quality relative to the limited set of competing alternatives by offering direct flights rather than connecting flights requiring changing planes at large hub airports. The SA also offered better on-time performance and friendly amenities.

Case Study 3 – Tripple Bottom Line

A preliminary investigation for the Vidyut Dam Project was completed in 1962 in a South- Asian country (here-in-after referred as country) and its design was completed in 1973 with a 600 MW capacity power plant. Construction began in 1979, but was delayed due to economic, environmental and social impacts. In year 1987, technical and financial assistance was provided by the neighbouring country to said country after signing of MoU, but this was interrupted just a year later with political instability. Hence, said country was forced to take control of the project and at the first, it was placed under the direction of the irrigation department of concerned home state of said country. However, in July 1989 the Vidyut Hydro

Development Corporation Limited (VHDCL) was formed to manage 1,900 MW Vidyut Hydro Power Complex; wherein 75% stake held by union government and remaining 25% stake by concerned home state government. The 1,900 MW Vidyut Hydro Power Complex comprises of Vidyut Dam & 1,000 MW Vidyut Hydro Power Plant (250MW×4), Beejuree HEP (400 MW), and Vidyut PSP (500 MW).

The Vidyut Dam is a 260.61 m (855 ft) multi-purpose high rock and earth-fill embankment dam on the Karaka River near Chapala town. Its length is 574.85 m (1,886 ft), crest width 20.11 m (66 ft), and base width 1,128.06 m (3,701 ft). The dam creates a reservoir of 4.0 cubic kilometres (~32,00,000 acre ft).

The 1,000 MW Vidyut Hydro Power Plant (Vidyut HPP) was commissioned in 2007-08 as a multipurpose project, with variable speed features which can optimize the round-trip efficiency under varying water levels in its reservoirs. Power is distributed to 10 northern states (including concerned home state) of said country. The complex will afford irrigation to an area of 2,71,139 hectares (=6,70,000 acres), irrigation stabilization to an area of 6,07,028 hectares (=15,00,000 acres), and a supply of 270 million imperial gallons (1.23×106 m3) of drinking water per day. 162 million gallons of drinking water for around 4 million people of the neighbouring state, apart from 108 million gallons of drinking water for around 3 million people of the concerned home state. Due to regulated releases from the Vidyut storage reservoir, the existing downstream hydro projects are also benefited by way of augmentation in generation at no additional cost to them. Concerned home state also gets 15% of generated power as free. The total expenditure for this project was USD 1 billion. Since 2007-08, which was the first year of operation, VHDCL has been a profit making company.

The Vidyut Dam has been the object of protests by environmental organizations and local people of the region. The protest was against the displacement of town inhabitants and environmental consequences of the weak ecosystem. "We don't want the dam. The dam is the mountain's end" was the prominent slogan.

The relocation of nearly 1.5 lakh people or may be even more, from the area has led to protracted legal battles over resettlement rights and, ultimately, resulted in the project's delayed completion despite the fact that land acquisition was started in 1980. There is no master plan for rehabilitation nor even a clear estimate of the number of people affected. According to the 2003 status report of the public work department of Chapala town, the Dam replaced 15,550 families. This estimate excludes a large number of people who lost their lands but have not been officially recognised as project affected. Among those officially recognised, allotted with land of poor quality or with multiple ownership claims.

Near to year 2006, while filling of the reservoir has led to the reduced flow of Karaka River’s water from the normal 1,000 cu ft/s (28 m3/s) to a mere 220 cu ft/s (6.3 m3/s). This reduction has been central to local protest against the dam, since the Karaka River is considered sacred river whose waters are crucial to religious beliefs.

Old Chapala town shifted and named as New Chapala Town (NCT) which is semi-ultra- modern hill station at height of 1,555-1,855 m above MSL, with better road network and district head quarter (shifted to NCT, earlier about 65 kms away from Chapala). NCT equipped with better health (got 80 bed modern hospital against 25 bed hospital in old Chapala, and also got 5 primary health centres with additional 75 bed facility in total) and education facilities (hostel facility of 900 students, degree college with university campus which can accommodate 440 residential students and faculties, and against 1 inter college in old Chapala, 5 inter-college established (one in NCT and 4 in nearby villages). This all done at project cost.

In addition to the human rights concerns, the project has spurred concerns about the environmental consequences of locating such a large dam in the fragile ecosystem of the foothills of great mountain range. There are further concerns regarding the dam's geological stability. The Vidyut dam is in a major geologic fault zone. This region was the site of a 6.7 magnitude earthquake in September 1992, with an epicentre 55 km (34 mi) from the dam. Dam proponents claim that the complex is designed to withstand an earthquake of 8.4 magnitude, but some seismologists say that earthquakes with a magnitude of 8.5 or more could occur in this region. Were such a catastrophe to occur, the potentially resulting dam- break would submerge numerous towns downstream, whose populations total near half a million.

In spite of concerns and protestation, operation of the Vidyut Dam continues and is completed. But VHDCL was aware of these and tried to respond in a constructive way. The spirit of CSR initiative is depicted by its CSR initiative title 'VHDC Sahridaya' (Corporate with a Human heart), wherein focus areas are:

- Shiksha - Education Development
- Svasth - Nutritional Health and Sanitation and Drinking Water Projects
- Nipun - Livelihood Generation and Skill Development Initiatives
- Unnaati - Rural & Infrastructure Development
- Yogy - Empowerment Initiatives
- Srrishti - Environment Protection Initiatives

Out of these 'VHDC Srrishti" has some special mentions, 'Environment Focused Initiatives' is working with three objectives Soil & Water Conservation, Green Energy Generation & Technology Promotions and Environment Protection & Promotion.

To conserve soil and water VHDCL is working on water harvesting and water harvesting tanks (capacity 3,000 litres each) were installed in the project affected villages for rainwater harvesting. Through this activity, beneficiaries were able to store almost 9 lakh litres of rainwater during monsoon. In addition, VHDCL under this program installed more than 730 LED based Solar Street Lights and more than 180 LED based Solar High Mast Lights in near- by towns and villages in year 2019-20. Moreover, to promote plantation of different fruit, fodder, and medicinal plants, VHDCL planted 2,70,202 plants/sampling till now.

VHDCL has won many awards in last decade in different categories including CSR domain, but most recent and relevant (for case study) among them are→

- HR Platinum Award for Training Excellence in 2019-20
- National CSR Leadership Award 2020
- CSR Innovation and Leadership Award 2020
- It not only recognition in term of awards, VHDCL has obtained following Certifications:
- ISO 9001:2015 Certification (Quality Management System).
- ISO 14001:2015 Certification (Environment Management System).
- OHSAS 18001:2007 Certification (Occupational Health and Safety Management System).

Required

As part of policy initiative, if VHDCL is willing to implement the Triple Bottom Line (TBL) reporting initiative; then ADVISE the management regarding dimensions of TBL, and what are perspectives composed by different dimensions of TBL. Also, enumerate the challenges, expected benefits, and initiatives under each dimension in context of Vidyut Dam & Vidyut Hydroelectric Power Plant (1,000 MW).

Solution

British business author John Brett Elkington in year 1994 coined the term TBL. Every business needs to be sustainable, rather than only profitable. A business is said to be sustainable, when management makes sustainable business decisions. To consider sustainability of business decision there are three bottom lines i.e. People, Planet and Profit (also known as dimensions of TBL), instead of single bottom line (i.e. Profit).

Here-in VHDCL, shows strong commitment for CSR through the certification (regarding quality, environment and safety) they obtained and also through the awards they won (in the domain of CSR and Training).

Dimensions (sets) of TBL

(i) **People, the social equity** bottom line relates to corporate governance, motivation, incentives, health and safety, human capital development, human rights and ethical behaviour.

The project has major concerns about the displacement of town inhabitants, followed by reduction in flow of Karaka River from the normal 1,000 cu ft/s (28 m3/s) to a mere 220 cu ft/s (6.3 m3/s). Former concern is more significant than the later concern, because later was of short duration; it is obvious when the reservoir is filled to its maximum capacity, the flow of the river will again become normal. Regarding the displacement, it is mentioned in the case itself that according to the 2003 status report of the public work department, the Dam replaced 15,550 families. Further, this estimate excludes a large number of people who lost their lands but have not been officially recognised as project affected. Even those officially recognised, allotted with land of poor quality or with multiple ownership claims. This concern substantiates in absence of a full-proof master plan.

It is not the case that local resident were/are in complete distress, they were/are compensated with alternative and better facilities and remedies as well that too at project cost, which includes the:

- Development of hill station to attraction for tourism – The New Chapala Town (NCT) is developed with semi-ultra-modern facility at height of 1,555-1,855 m above MSL as pre-planned hill station which will attract the tourist. By creation of lake due to the impoundment of the reservoir of Vidyut Dam, scope of water sports is there. Hotels, Guides and Tour and travels will cause employment opportunities for locals.
- Better road network leads to ease of living and improved communication channels which also help in establishing suitable industries according to environmental aspects.
- Shifting of district head quarter to NCT results in reduction of distance of travel by town residents to reach to district head quarter for any task by about 65 kms, hence life of locals will be further eased.
- Improved health facilities - NCT equipped with better health facilities. It got 80 bed modern hospital against a 25-bed hospital situated in old Chapala town. Apart from this also got 5 primary health centres with additional 75 bed in total.
- Improved Education facilities in term of hostel facility of 900 students and increase in number of inter-colleges.

Not only the local resident (directly affected), other too got benefit from project, such as 250 cusecs (~162 million gallons per day) of water supply to neighbouring state, which will meet drinking water need of around 4 million people, apart from 167 cusecs (~108 million gallons per day) of water supply to concerned home state, which will meet the drinking water need of around 3 million people. Power is also distributed to 10 northern states (including concerned home state) of said country.

VHDCL showed social commitment through Shiksha, Svasth, Nipun, Unnaati, and Yogy as part of their CSR initiative.

(ii) Planet, the environmental bottom line measures the impact on resources, such as air, water, ground and emissions to determine the environmental impact and ecological footprints.

The project has spurred concerns about the environmental consequences of locating such a large dam in the fragile ecosystem of the foothills of great mountain range, which will result in weak ecosystem and concerns over a catastrophe to occur (due to earthquake - the potential dam-break). Regarding the later concern, it is also mentioned in the case that the Vidyut dam is in a major geologic fault zone. This region was the site of a 6.7 magnitude earthquake in September 1992, with an epicentre 55 km from the dam. In response to which the Dam proponents claim that the complex is designed to withstand an earthquake of 8.4 magnitude, but some seismologists say that earthquakes with a magnitude of 8.5 or more could occur in this region. Were such a catastrophe to occur, the potentially resulting dam-break would submerge numerous towns downstream, whose populations total near half a million.

The major environmental benefit is generation of 1,000 MW (3,532 MU of Annual Energy) of environment friendly peaking power.
In order to leave improved environment footprint and to trade-off the environmental loss caused during construction, VHDCL through initiative 'VHDC Srrishti' working on:

- Rainwater Harvesting – It has installed the necessary infrastructure in the affected areas to harvest almost 9 lakh litres of rainwater during monsoon.
- Green Energy Generation & Technology Promotions through installing LED based Solar Street Lights and LED based Solar High Mast Lights.
- Environment Protection & Promotion through plantation of 2,70,202 samplings so far, of different fruit, fodder, and medicinal plants.

(iii) Profit, the economic bottom line refers to measures maintaining or improving the company's success in terms of adding value to shareholders.

It is an inherent feature (rather project specific concern) of hydro power projects that the duration of construction is quite lengthy and huge capital outlay is involved. In case of Vidyut Dam too, Construction began in 1979, but was delayed due to economic impact apart from social and environmental pressure. In 1987, technical and financial assistance was provided by the neighbouring country, but this was interrupted years later with political instability. Project then placed under the direction of the irrigation department of concerned home state of said country. However, in July 1989 the Vidyut Hydro Development Corporation Limited (VHDCL) was formed to manage such 1,900 MW Vidyut Hydro Power Complex; wherein 75% stake held by union government and remaining 25% stake by concerned home state government. The total expenditure for this project was USD 1 billion. Since 2007-08, which was the first year of operation, VHDCL is a profit making company.

The initiative includes the feature of variable speed, the 1,000 MW Vidyut HPP has variable speed features which can optimize the round-trip efficiency under varying water levels in its reservoirs to keep the cost of operation low.

The quantifiable economic benefits include:

- The generation of 1,000 MW (3,532 MU of Annual Energy) of environment friendly peaking power. This will no doubt lead to industrial and agricultural growth in the northern region.
- 15% of generated power will be given free to the concerned home state, apart from power as per their share, where the distress is caused due setting up of the project. Hence, the state has economic benefit from the project too.
- Irrigation of 2.71 lakhs hectares of area, beside irrigation stabilization of 6.07 lakhs hectares. Hence, supporting other economic activities as well indirectly.

To conclude, the project largely seems **sustainable** as running in profit since it was operational, leaving minimal and positive environmental footprint, and also payback society (especially directly affected local population) with alternate better facilities and compensation (may be with few minor exceptions or irregularity on case-to-case basis).

Case Study 4 – Performance Measurement in Not-for-Profit Sector

The world fame **Taj Mahal** is situated on the banks of Yamuna River in the city of Agra, Uttar Pradesh, known for its beautiful design and is counted as one of the Seven Wonders of the World; the city attracts a lot of tourist from all around the world. The Tourism is one of the main sources of livelihood for its residents. Consequently, cleanliness and maintenance of garden area within the Taj Mahal campus is of prime importance in order to sustain and develop this industry.

The local government has recently employed a contractor to clean and maintain the garden area within the Taj Mahal campus. The contractor uses cleaning machines pulled by horses to avoid pollution. The contractor has been selected through an online competitive tendering/bidding process. Majority of the litter comprises of plastic waste (bags, bottles etc.) while some portion also includes glass, aluminium cans, paper and cardboard. A detailed log is held by the contractor about the waste that has been cleaned, time taken for the clean-up, number of horses used, etc. This log is also checked and signed by local government officials. This record is used to process payments at the end of the month.

In addition to contracting, the local government has also placed bins at various locations within the campus for the public to dispose their waste. The Nagar Nigam's workers clean these bins every morning. Again, detailed logs of the manpower and other resources employed are kept by the respective department. In addition, the government has· started a mobile messaging system, whereby the public can message ·the concerned department if 'they find litter anywhere in the campus. Depending on whether it is from overflowing bins or scattered waste, the Nagar Nigam's workers will take action to clean it within 12 hours. A detailed log of these operations is also maintained. Patrons can also suggest measures for improving cleanliness on the above-mentioned areas.

Due to its importance to the economy, the local government has allotted substantial budget for these operations. At the same time, it is essential to know if this is sufficient for the purpose of maintaining the cleanliness of the campus. Therefore, the government wants to assess whether the city is getting, "good value for money" from expenditure. The "value for money" concept can be looked at from three perspective's: (i) economy, (ii) efficiency and (iii) effectiveness. The internal audit department that has been requested to undertake this study has requested for guidelines on whether the audit should focus on economy and efficiency of the Taj Mahal campus cleaning operations or on· effectiveness of the same. Economy and efficiency audit assess whether the same level of service can be procured at lower cost or resources while effectiveness audit assess whether better service can be procured at same cost.

Depending on the outcome of the audits, if required, Policy decisions like requesting for additional funding from the state government, alternate policy measures like levying penalty for littering etc. can be taken.

Required

(i) RECOMMEND guidelines to assess economy, efficiency and effectiveness of Taj Mahal and campus cleaning operations.

(ii) IDENTIFY challenges involved in assessment of effectiveness.

(iii) RECOMMEND general guidelines, how the audit team may conclude the audit based on the combined outcomes of economy, efficiency and effectiveness.

Solution

(i) Economy, efficiency and effectiveness are three dimensions of value for money. Economy and efficiency audit of an operation focuses on the consumption of resources and the output achieved. Whereas effectiveness audit of an operations focuses on the comparison of outputs achieved with the desired level of output.

Economy

The Dimension of economy assesses the financial aspects of the activity i.e. are the objectives of the activity being achieved at reasonable cost?

To look at economy of cleaning and maintaining (of the garden area in-side the campus of Taj-Mahal) operations, the cleaning expenses need to be bifurcated into different cost centres such as payments made to the contractor, the expenses of emptying waste from bins, and mobile messaging system. At this stage only the competitive tendering process may be reviewed to ensure that the contractor getting the order is offering the required quality of service at the lowest price, similar way bins are procured at lowest possible price etc.

Further subcategories of these expenses into cost head such as labour, material, disposal van expenses etc. also need to be collated from the cost records. (This will help in comparison over a period as well).

Then afterwards, these shall be compared to the budgets that were approved by the local government of Agra. If the quality of cleaning has been achieved, by staying within budget, the operation is economical. However, if the actuals exceed the budgeted, then government shall make comparison of cost with cost of similar cleaning operation**. On comparison, if found that cost incurred by Agra local government is more; then the cleaning operations are said to be non-economical and these may not be efficient too.**

Efficiency

Efficiency assesses the volume of input consumed to derive the desired output i.e. are the resources and funds being consumed to get maximum output?

Efficiency of cleaning and maintaining operations can be determined by checking the log records maintained for cleaning operation by the contractor and municipality workers. These would have details of activities carried out and the resources utilized for each of them.

For each of these services (be it cleaning and maintaining garden or emptying out bins or mobile messaging system), the cost drivers can be identified, and certain metrics can be developed for analysis. For example, cost of cleaning per square metre of garden can be computed or cost of emptying each bin can be computed or cost to respond each call.

While analysing these activities, certain operational considerations have to be given. For example, certain stretches or corners of the garden (where landscaping structure is complex) may take more time or resources to clean. Cost of emptying and re-clean the bin used for dry and wet waste may be different. Therefore, if resources for operations are disproportionate for certain parts of the gardens, then multiple categories of garden shall be formed and cost for each category need to be worked out. But data to get this information will depend on the extent of details maintained in the logs. This information has to be tracked over some period of time in order to understand trends in operations and related expenses.

The data collected from the mobile messaging system should also be investigated. Frequency and area of the campus regarding which complaints are frequent or maximum? Reasons for these lapses need to be taken from the contractor (for cleaning the garden) and the concerned Nagar Nigam workers (for emptying bins) in order to find out whether resources are being employed properly.

Effectiveness

As mentioned earlier that effectiveness of cleaning and maintaining operations would focus on how the actual cleanliness of garden area inside the campus compares with the desired level as laid out when budget was allocated. To assess whether performance has been met, the target.

To begin with, it should be clear as to what constitutes litter. From an operational angle, it would be difficult to clean out every bit of dry leaf (falling from tree) lying on garden floor. However, it is possible to pick up every plastic bag or bottle or empty soft drink can. Hence, the government authorities must be clear on what constitutes litter? and tolerance level for each types of litter e.g. tolerance level of aluminium can and dry leaves will be different, because few of dry leaf may left behind even after cleaning. Quantity of waste collected would be the indicator to make the above assessment.

Certain other parameters like safety standards can also be defined. Safety problems could be cuts from sharp objects like glass. Assessment has to be made whether these standards have been met.

For this, the primary source of information about cleanliness would be feedback from the patrons. These could be in the form of complaints received directly or those through the mobile messaging system would provide data to work out the metrics. This would be an indicator of “customer satisfaction”. The measure for can be how many mobile messages are responded within the time-cap of 12 hours. Other inputs could also be the suggestions given by the patrons about the ways to improve cleanliness.

Observation by making surprise visits to inspect immediately after the cleaning operations would also provide sufficient evidence about the effectiveness of operations.

(ii) Challenges Involved in assessment of effectiveness would be:

- Defining what constitutes litter? These are subjective guidelines, the perception of which may differ from person to person. One can consider dry leaves that have been fallen from trees as litter other may not.
- Establishing the tolerance level of waste (litter) or acceptable level of cleanliness/ High amount of subjectivity is also involved in determination of level.
- Frequency of cleaning and when to measure the effectiveness, it is obvious the cleanliness will not be at same level throughout the day.
- Certain forms of litter out of operational control such as animals' or birds' dropping, are they also considered as part of litter or ignored when effectiveness is measured. Basically, what matrix of desired objective contain is critical to determine the level of effectiveness.
- Indicator of effectiveness- There has to be a conscious civic sense of duty not to litter, failing which this initiative will most likely be ineffective. Therefore, while measuring performance for effectiveness, collection of more litter does not necessarily indicate effective operations. More litter requires more cleaning and more resources, therefore is actually not a positive indicator of effectiveness. On the contrary, in the long run, lesser litter collected to maintain desired level of cleanliness would be a good indicator of effectiveness.

(iii) The outcome of the audits can indicate achievement of any or none of the three parameters of economy, efficiency and effectiveness of cleaning and maintaining (of the garden area in-side the campus of Taj-Mahal) operations. To form an integrated conclusion based on the different outcomes of individual audits, the audit team may consider the following guidelines:

(a) **Has the objective of the cleaning operation been achieved as per the guidelines in the relevant policy or white paper (based upon which budget is allocated)? i.e. have the operations been effective?**

(b) If the answer to (a) is yes, **are the expenses within budget**. If so, then the operations are economical and efficient. Given that the operations have been effective at the same time economy and efficiency have been achieved, the team can conclude that the cleaning operations policy has been a success. A cost-over run can also be justified if the operations have been effective. In that case, the audit team has to conclude whether all expenses incurred are indeed justified and that the resources have been put to the best possible use. If not, can the operations be made more economical or efficient?

(c) If the answer to (a) is no, the operation has not been effective, then next question is the difference from the target is marginal or huge? If the operations have not been entirely effective, but only by a marginal gap say 95% success, then analysis of expenses can be made similar to the point (b) mentioned above. However, if the operations have been ineffective to a larger extent, then the cleaning drive initiative has been ineffective. The local government has t look at alternate solutions of tackling the problem. These could include imposing heavy penalty for littering, requesting for additional funding from the state government to employ better resources etc.

Therefore, it can be seen that achievement of one objective does not automatically lead to achievement of other objectives. A holistic approach would be needed to draw conclusions about the performance of the cleaning operations.

Case Study 5 - 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%.