SV Ltd. manufactures a product which is obtained basically from a series of mixing operations. The finished product is packaged in the company-made glass bottles and packed in attractive cartons. The company is organised into two independent divisions viz. one for the manufacture of the end-product and the other for the manufacture of glass bottles. The product manufacturing division can buy all the bottle requirements from the bottle manufacturing division. The General Manager of the bottle manufacturing division has obtained the following quotations from the outside manufacturers for the supply of empty bottles.

Outside (Bottle)

No. of empty bottles	Total purchase value (Rs.)
8,00,000	14,00,000
12,00,000	20,00,000

A cost analysis of the bottle manufacturing division for the manufacture of empty bottles reveals the following production costs: (Bottle)

No. of empty bottles	Total cost (Rs.)
8,00,000	10,40,000 3a
12,00,000	14,40,000 3b

The production cost and sales value of the end product marketed by the product manufacturing division are as under:

Volume (Bottles of end product)	Total cost of end product (excluding cost of empty bottles)	Sales value (Packed in bottles)
	(Rs.)	(Rs.)
8,00,000	64,80,000 2a	91,20,000 1a
12,00,000	96,80,000 2b	1,27,80,000 1b

There has been considerable discussion at the corporate level as to the use of proper price for transfer of empty bottles from the bottle manufacturing division to product manufacturing division. This interest is heightened because a significant portion of the Divisional General Manager's salary is in incentive bonus based on profit centre results.

As the corporate management accountant responsible for defining the proper transfer prices for the supply of empty bottles by the bottle manufacturing division to the product manufacturing division, you are required to show for the two levels of volumes of 8,00,000 and 12,00,000 bottles, the profitability by using (i) market price and (ii) shared profit relative to the costs involved basis for the determination of transfer prices. The profitability position should be furnished separately for the two divisions and the company as a whole under each method. Discuss also the effect of these methods on the profitability of the two divisions.

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Solution

Statement showing profitability of two divisions at two different levels of output using different transfer prices

No. of bottles	8,00,000	12,00,000
	(*Rs.*)	(*Rs.*)
Sales value (Packed Product) : (A)	91,20,000	1,27,80,000
Less : Costs		
Product Manufacturing Division	64,80,000	96,80,000
Bottle Manufacturing Division	10,40,000	14,40,000
Total costs : (B)	**75,20,000**	**1,11,20,000**
Profit :{(A) – (B)}	**16,00,000**	**16,60,000**
Profit prorated to Bottle Mfg. Division and Product Mfg. Division.		
Share of Bottle Manufacturing Division:		
16,00,000 × 10,40,000/75,20,000	**2,21,276**	
16,60,000 × 14,40,000/1,11,20,000		**2,14,964**
Balance profit relates to Product Mfg. Division	13,78,724	14,45,036
	16,00,000	**16,60,000**
	(*Rs.*)	(*Rs.*)
Transfer prices of bottles		
Costs	10,40,000	14,40,000
Profit as computed above	2,21,276	2,14,964
Total price	12,61,276	16,54,964
Transfer price per bottle	(*Rs.*) 1.577	(*Rs.*)1.379

Unitary method

From the above computations, it is observed that shared profit relative to the cost involved is (*Rs.*) 2,21,276 (*Rs.* 0.2766 per bottle) at 8,00,000 production level and (*Rs.*) 2,14,964 (*Rs.* 0.179 per bottle) at 12,00,000 production level. The profit of Product Mfg. Division is (*Rs.*) 13,78,724 (*Rs.*1.723per bottle) at 8,00,000 production level and (*Rs.*) 14,45,036 (*Rs.* 1.2042 per bottle) at 12,00,000 production level.

Profitability based on market price

If purchase from market

No. of bottles	8,00,000	12,00,000
Bottle Mfg. Division	**(Rs.)**	**(Rs.)**
Market price	14,00,000	20,00,000
Less: Cost	10,40,000	14,40,000
Profit (i)	**3,60,000**	**5,60,000**
Product Mfg. Division		
Sales value	91,20,000	1,27,80,000
Less: Bottle cost (at Market Price)	14,00,000	20,00,000
Product cost	64,80,000	96,80,000
Profit (ii)	**12,40,000**	**11,00,000**
Total profit : (i) + (ii)	16,00,000	16,60,000

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Production level	Profit based on cost (Rs.)		Profit based on Market price (Rs.)	
	Bottle Mfg. Div.	Product Mfg. Div.	Bottle Mfg. Div.	Product Mfg. Div.
8,00,000 bottles	2,21,276	13,78,724	3,60,000	12,40,000
12,00,000 bottles	2,14,964	14,45,036	5,60,000	11,00,000

Observations:

1. Market price methods give a better profitability to Bottle Mfg. Division at both the production levels.
2. Market price method gives a lower profitability to Product Mfg. Division as compared to Bottle Mfg. Division.
3. Under Cost-based method, there is a better profit at lower level of production in Bottle Mfg. Division. However in Product Mfg. Division 12,00,000 production level gives a higher profit. But in Market price method, the position is quite reverse.

Methods of Transfer Pricing

Cost Based Transfer Price

1) Variable Manufacturing Cost
   (Idle capacity)
2) Full manufacturing Cost.
   (Variable + fixed)
   (Spare capacity)
3) Total Cost Approach
   (All cost including Administrative and selling/distribution cost)
4) Standard Cost Approach
   (whatever I will charge)
5) Cost + Mark up
   (adding profit percentage)

Based on Market Price

1) Market price of intermediate product (not the finished product).
2) Market price of the substitute product (in case of unavailability of intermediate product, in the market- it is available in proper condition).

Based on Negotiations

Here a range is fixed or finalised, like [10–20].
Hence there will exist one minimum price and another maximum price.

(1) Minimum Transfer price from the point of view of Transferring Division

⇒ MTP ⇒ Variable Cost + Specific fixed Cost + Opportunity loss (if spare capacity is not available)

(2) Maximum Transfer Price from the Point of Recepient Division.

(a) Outside Purchase Price + Buying Cost (eg. Transportation cost)

OR

(b) Ability to Pay
i.e. [Selling Price of Recepient Division product – Own Variable cost of Recepient Division.]

which ever is lower.

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Transfer Pricing

Pricing Decisions vs. Transfer Pricing

- When any company or a parent company sell its goods or services to other company (excluding it's subsidiary company), the price it costs is known as selling price.
- Whereas, a parent company's subsidiary company, sell or transfer it's goods or services to it's parent company (internal transfer), the price they charge is known as transfer price.

Let us understand it by the following diagram:-

Company Tata

Company Infosys

Dept. A.

Product A (Tyres)

Dept. B

Product B (Finished Product) or Car

Transfer to Dept. B.

In this transfer, transfer pricing chapter is applicable.

Infosys buying types for their purpose of works.

(Here transfer pricing chapter is not applicable, as Tata's Dept. A is selling externally)

Situation 1

Dept. A. — Produces Shirt

Dept. B — Produces Jeans

Transfer pricing not applicable. As there is no link between the two products, but both are produced under same company

Situation 2

Dept. A — Stiching

Dept. B — Finished Product

Transfer pricing is applicable

Situation 3.

Dept. A — Bicycle Bell

Dept. B — Bicycle.

Transfer pricing is applicable.

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