Question 6: A company has two divisions. Division A produces a Product which is used by division B in making a final product.

Division A has a capacity to produce 3,000 units and the whole quantity can be transferred to Division B. The transfer price for such component would be ₹ 250 per unit which division A would like to charge from division B. Davison B however, can purchase from the outside market at ₹ 220 each. The selling price of final product is ₹ 500.

The variable costs Division A is ₹ 180 and fixed costs ₹ 10000. The variable costs of Division B in manufacturing the final product by using the component is₹ 180 (excluding the component cost). Present statements indicating the position of each Division and the company as a whole taking each of the following situations separately:

(i) What transfer price would you fix for the component in each of the following three circumstances?

(ii) If there are no alternative uses for the production facilities of A, will the company benefit if division B buys from outside suppliers at ₹ 220 per component?

(iii) If internal facilities of A are not otherwise idle and the alternative use of the facilities will give an annual cash operating saving of ₹ 2,00,000 to Division A, should Division B purchase the component from outside suppliers?

(iv) If there are no alternative uses for the production facilities of Division A and the selling price for the component in the outside market drops by ₹ 50, should Division B purchase from outside suppliers?

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Question 24: Boush& Lomb Ltd. Produces two kinds of products, X (lenses) and Y (Swimming goggles) in divisions X and Y respectively. X is an input for Y and two units X are needed to make one unit of Y.

The following data is given to you for a period:

	X (₹/u of X)	**Y (₹/u of Y)**
External Demand (units)	3,000	3,000
Capacity (units)	7,000	2,500
Selling Price ₹/u (outside market)	100	410
Direct Materials	20	25 (excluding X)
Direct Labour& Variable Overhead	40	55

If division Y buys X from outside, it has the following costs:

For order quantity 2,499 or less	₹ 90 per unit for the entire quantity ordered
For order quantity 2,500 – 5,000	₹80 per unit for the entire quantity ordered
For order quantity more than 5,000	₹ 70 per unit for the entire quantity ordered

Required:

Evaluate the best strategies for Division X and Y.

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Question 31: Celestial Electronics and Consumer Durables Corporation (CECDC), is a Taiwan (a state, Republic of China) based consumer electronics manufacturer. To expand its market share in South Asia it has formed CECDC India Pvt. Ltd. (CIPL) in India. For the purpose of performance evaluation, the Indian part is treated as responsibility centre. CIPL imports components from the CECDC and assembles these components into a LED TV to make it saleable in the Indian market. To manufacture an LED TV two units of component 'LX' are required. The following cost is incurred by the CECDC to manufacture a unit of component 'LX':

	Amount (TWD)
Direct Material*	440.00
Direct Labour (3 hours)	120.00
Variable Overheads	40.00
	600

(*) purchased from domestic market.

CECDC incurs TWD 30 per unit as Wharfage Charges.

CECDC has a normal manufacturing capacity of 5,00,000 units of component 'LX' per annum, 70% of its production is exported to CIPL and rest are sold to other South-east Asian countries at TWD 750 per component(where demand exist 1,50,000 unit). The tax authorities both in Taiwan and India, consider TWD 750 (= ₹1,500) per component 'LX' as arm's length price for all transfers to CIPL. CIPL

incurs ₹10 per unit as shipment charges.

The cost data relevant to the LED TVs are as follows:

	Amount (₹)
Variable Costs per unit:	
Direct Material (excluding component 'LX')	6,200
Direct Labour	115
Fixed Cost:	
Office and Administrative Overheads	1,18,00,000
Selling & Distribution Overheads	2,58,00,000

CIPL can sell 1,75,000 units of LED TV at ₹11,000 per unit.

There is a dispute on the transfer pricing of component 'LX' between the CECDC and CIPL. CECDC is in favour of charging TWD 750 per component to CIPL as it is the arm's length price and it has to pay tax on this. On the other hand CIPL in its argument saying that the substitute of component 'LX' can be purchased from the Indian market at ₹1,490 only and moreover it has to pay import duty on import of component 'Lx' so the transfer price suggested by CECDC is not acceptable.

The following are the direct/indirect tax structure in India and Taiwan:

Type of Tax/Duty	India	Taiwan
Corporate Tax Rate	30%	25%
Import (Custom) Duty	10%	15%
Export Duty	Nil	Nil

From the above information, Calculate:

(i) Minimum Price at which CECDC can transfer component 'LX' to CIPL.

(ii) Maximum Price that can be paid by CIPL to CECDC for each component 'LX'.

(iii) Profitability Statement for the group in TWD.

Note:

(i) For Duty and Tax calculation, consider arm's length price only.

(ii) Ignore the DTAA and other tax provisions.

(iii) Conversion Rate 1 INR = 0.50 TWD

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Transfer Price with Application of Calculus (Derivatives)

(Linear Pricing Model)

Question 29: Eastern Company Ltd. Has two Divisions namely Casnub Bogie Division (CBD) and Wagon Division (WD). CBD manufactures Casnub Bogies and WD manufactures BOBN type of Wagons. To manufacture a Wagon WD needs four Casnub Bogies. CBD is the only manufacturer of the Casnub Bogies and supplies both WD and outside customers. Details of CBD and WD for the coming financial year 2014-15 are as follows:

	CBD	**WD**
Fixed Costs (₹)	9,20,20,000	16,45,36,000
Variable Cost per unit (₹)	2,20,000	4,80,000*
Capacity per month (units)	320	12

* excluding transfer costs

Market research has indicated that the demands in the market for Eastern Company Ltd. 's products at different quotations are as follows:

For Casnub Bogies: Quotation price of ₹ 3,20,000 no tender will be awarded, but demand will increase by 30 Casnub Bogies with every ₹ 10,000 reduction in the unit quotation price below ₹ 3,20,000.

For Wagons: Quotation price of ₹ 17,10,000 no tender will be awarded, but the demand for Wagons will be increased by two Wagons with every ₹ 50,000 reduction in the unit quotation price below ₹ 17,10,000.

Required:

(i) Calculate the unit quotation price of the Wagon that will maximize Eastern Company Ltd.'s profit for the financial year 2014-15.

(ii) Calculate the unit quotation price of the Wagon that is likely to emerge if the divisional managers of CBD and WD both set quotation prices calculated to maximize divisional profit from sales to outside customers and the transfer price is set at market selling (quotation) price.

[**Note:**If P = a – bQ then MR = a – 2bQ]

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Case Scenario

Global Multinational Ltd. (GML) has two Divisions 'Dx' and 'Dz' with full profit responsibility. The Division 'Dx' produces Component 'X' which it sells to 'outside' customers only. The Division 'Dz' produces a product called the 'Z' which incorporates Component 'X' in its design. 'Dz' Division is currently purchasing required units of Component 'X' per year from an outside supplier at market price.

New CEO for Indian Operations has explored that 'Dx' Division has enough capacity to meet entire requirements of Division 'Dz' and accordingly he requires internal transfer between the divisions at marginal cost from the overall company's perspective.

Manager of Division 'Dx' claims that transfer at marginal cost are unsuitable for performance evaluation since they don't provide an incentive to the division to transfer goods internally. He stressed that transfer price should be 'Cost plus a Mark-Up'.

New CEO worries that transfer price suggested by the manager of Division 'Dx' will not induce managers of both Divisions to make optimum decisions.

Required

DISCUSS transfer pricing methods to overcome performance evaluation conflicts.

Solution

To overcome the **optimum decision making** and **performance evaluation conflicts** that can occur with **marginal cost-based transfer pricing** following methods has been proposed:

Dual Rate Transfer Pricing System

"With a 'Dual Rate Transfer Pricing System' the 'Receiving Division' is charged with marginal cost of the intermediate product and 'Supplying Division' is credited with full cost per unit plus a profit margin".
Accordingly Division 'Dx' should be allowed to record the transactions at full cost per unit plus a profit margin. On the other hand Division 'Dz' may be charged only marginal cost. Any inter divisional profits can be eliminated by accounting adjustment.

Impact:

- Division 'Dx' will earn a profit on inter-division transfers.
- Division 'Dz' can chose the output level at which the marginal cost of the component 'X' is

equal to the net marginal revenue of the product 'Z'.

Two Part Transfer Pricing System

"The 'Two Part Transfer Pricing System' involves transfers being made at the marginal cost per unit of output of the 'Supplying Division' plus a lump-sum fixed fee charged by the 'Supplying Division' to the 'Receiving Division' for the use of the capacity allocated to the intermediate product."

Accordingly Division 'Dx' can transfer its products to Division 'Dz' at marginal cost per unit and a lump-sum fixed fee.

Impact:

- 'Two Part Transfer Pricing System' will inspire the Division 'Dz' to choose the optimal output level.

This pricing system also enable the Division 'Dx' to obtain a profit on inter-division transfer.

INTERNATIONAL TRANSFER PRICING

Dynamic business models enable business to spread their business across countries. In the recent decades, with the acceptance of a globalized environment, benefits of such business models are being enjoyed across countries. Business have benefitted from a multi-national business model. For multinationals considerations for such business models are driven by many factors:

- Demand for its final products
- Availability of raw materials in a specific country. To source such inputs, multi-national companies can have business set-up in the foreign country. Example DeBeers Group that sources diamonds from across the world or from India the Tata Group of companies.
- Availability of low-cost labor with specialized skills. India has been one of the major beneficiaries of this outsourcing model.

It can be concluded that transactions between divisions of these multi-national companies could involve transfer of goods, provision of services or even for intangibles for use of parents, copyrights, brands in the form of royalty payments.

In few cases, they could be inter-company loans to take advantage of excess funds lying with a company, meeting the needs of a company in another country.

Taxation, profit repatriation and transfer prices are critical considerations to the senior management of the multi-national companies. Multi-national organizations try to maximize profits by using transfer pricing as a tool to reduce the tax impact on earnings. Where, the supplying division is in a country with higher tax rate, the

transfer price will be set lower in -order to reflect higher earnings (resulting from lower purchase cost) in the purchasing division, which has a lower tax rate. Likewise, supply from lower tax rate countries may be priced higher, in order to reflect higher earnings for that unit, thereby reducing the tax impact.

As explained in the beginning of the chapter, from a taxation perspective, transfer price is analyzed as to whether it is at an "arms-length" price. However, what is "arms-length" is a subjective question.

A recent case in point is the ruling on Starbucks UK subsidiary by the British authorities: Known for their world famous coffee, that generate high margins for the company. Although management claimed that business was good, the tax records reported losses. Investigations revealed that the UK subsidiary paid its Netherlands unit 6% of sales as royalty for intellectual property such as its brand and business processes. This agreement "6% of sale" is the transfer price between the units. The question tax authorities raised was whether this was at arms-length, is it comparable with market terms for similar transactions.

In India such tax avoidance measures are being regulated by the government with the introduction of Section 92A to 92F in the Income Tax Act, 1961. This concept is covered in further detail in your taxation syllabus.

International Transfer Pricing and Currency Management

International firms are exposed to exchange fluctuation risks. These fluctuations create uncertain cash flows in corporate currency and also can misrepresent performance of subsidiaries. With inter-divisional trading between subsidiaries in different countries, when one subsidiary makes a loss on a contrary exchange rate movement, the other will make a profit. The company as a whole should manage its exposures to currency risks. The management of currency risk is the responsibility of either the profit centre managers or a treasury department. A multinational company might be keen to set transfer prices in a currency such that any currency losses arise in the subsidiary in the high-tax country, and currency profits arise in the country with the lower tax rate if it is fairly - certain about exchange rate movement in the future.

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Question17: GL Ltd. is a multiproduct manufacturing concern functioning with four divisions. The Electrical Division of the Company is producing many electrical products including electrical switches. This division functioning at its maximum capacity sells its switches in the open market at ₹25 each. The variable cost per switch to the division is ₹16.

The household Division, another division of GL Ltd. functioning at 70% capacity asked

the Electrical Division to supply 5,000 switches per month at the rate of ₹18 each to fit in night lamps produced by it. The total cost per night lamp is being estimated as detailed below:

	₹
Components purchased from outside Suppliers	50.00
Switch If purchased internally	18.00
Other Variable costs	40.00
Fixed Overheads	21.00
Total cost per night lamp	129.00

The Household Division is marketing night lamps at a price of ₹130 each, with a very small margin, as it is doing business in any increase in price made by the division will push out the division from the market.Therefore, the division cannot pay anything more to switches to the Electrical Division. Further the manager of the division informed that it is very much essential to keep on the market share for night lamps by the Household Division to retain the experienced workers of the division. The company is using return on investment (ROI) as a scale to measure the divisional performances and also marginal costing approach for decision making.

Required

Would you Recommend the supply switches to Household Division by Electrical Division at a price of ₹18 each? Substantiate your recommenda-tion with suitable reasons.

Analyze whether it would be beneficial to company as a whole the supply of switches to Household Division at a unit price of ₹18 by Electrical Division.

Do you fee that-The Divisional Managers should accept the inter-divisional transfers in principle? If yes, what should be the range of transfer price?

Suggest the steps to be taken by the chief executive of the company to change the attitude of divisional heads if they are against the inter-divisional transfers.

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