

Feasibility study Lecture (1)

Feasibility study

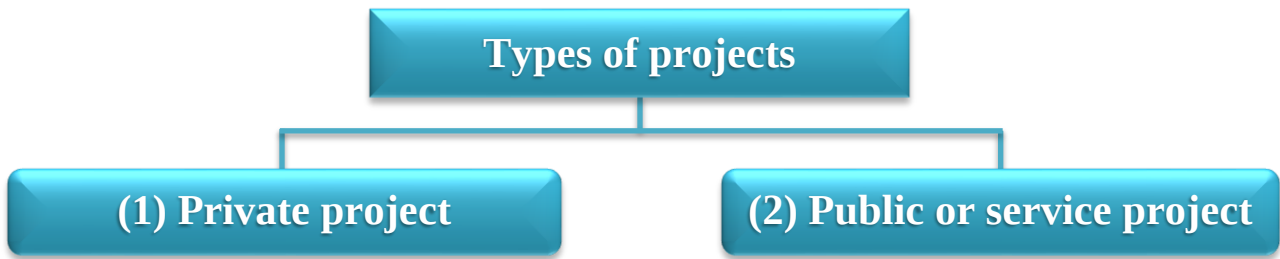
- A **project evaluation**.
- **Profitability** of project.
- **Commercial project assessment**.
- A main part of **project life cycle**.
- A **study** or a **tool** provides potential investors with right decision, whether to undertake project or not.

• Feasibility study answers **two** main questions:

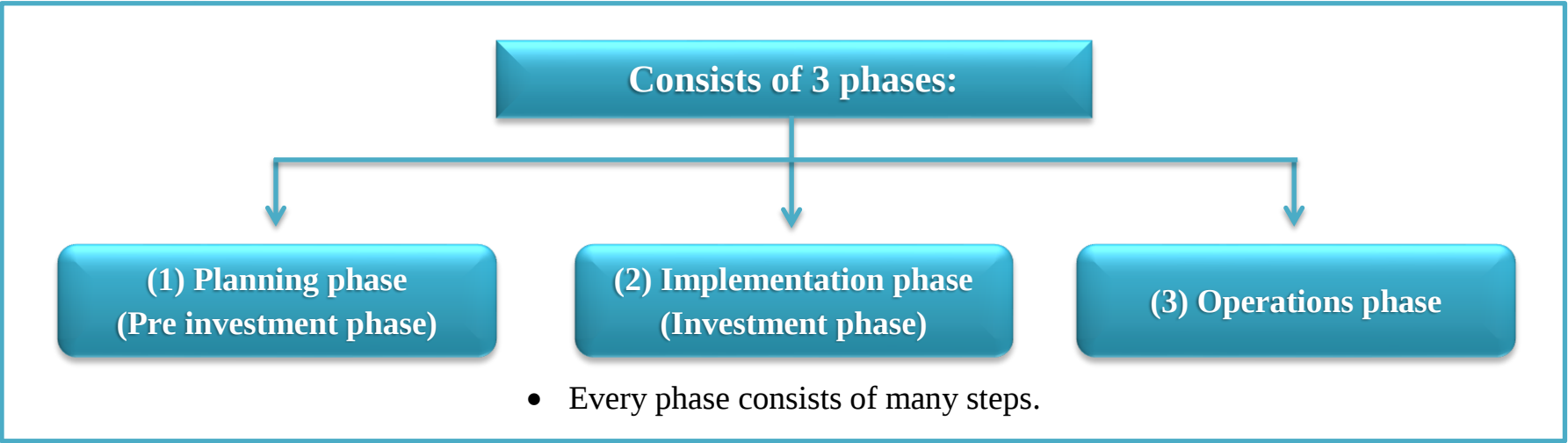
- Is the project **feasible** or not?
- From where we are going to **finance** the project?

Project

- **Along term** commitment in order to achieve **net gain** in the future (by comparing between **costs** and **revenues**).
- A set of **activation** where we use a number of **inputs** to reach **outputs**.
- **Inputs:** (labor – capital – technology – land).
- **Outputs:** (products – services).



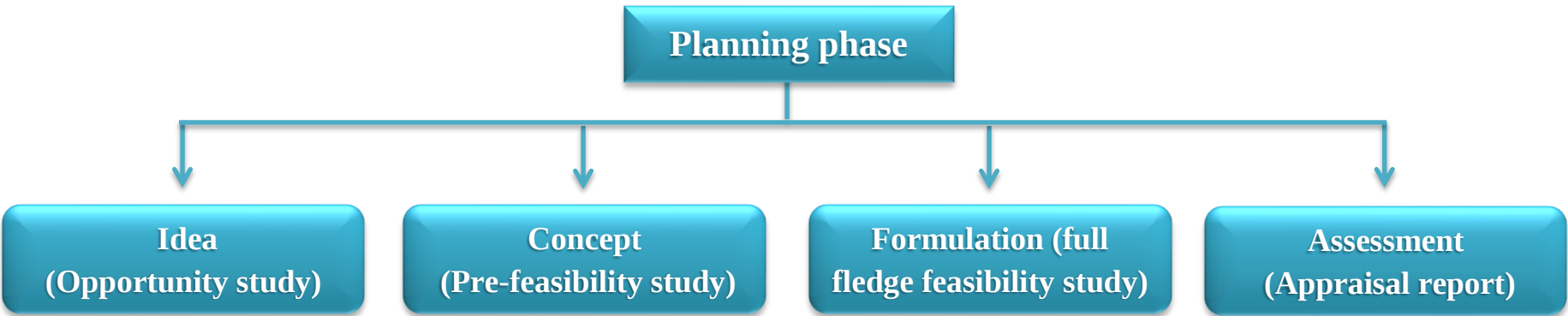
Project life cycle



Phase	Nature	
(1) Planning phase	Idea	➤ Whether to deposit money at bank or do a project.
	Concept	➤ I will focus on a certain value .
	Formulation	➤ I will mobilize revenues .
	Assessment (evaluation – appraisal)	➤ I evaluated all stages (idea – concept – formulation).
(2) Implementation phase	➤ I will start: (designing project – constructing it – training personals – trial runs production).	
(3) Operations phase	➤ Is start with partial operation (50% total capacity) then full operation (100% total capacity).	

- Where if feasibility study in project life cycle? It's covering **the first phase (Planning phase)**.

(1) Planning phase



Study	Time	Nature	degree of error	degree of risk	Cover	Content
(1) Idea (opportunity study)	Very short (2 to 3 months)	Sketchy Without details Inexpensive	Very high (30%)	Very high	General framework of project	aggregate estimates
(2) Concept (pre-feasibility study)	6 months	A more detailed study than opportunity study A less detailed study than feasibility study	Less than opportunity study	Less than opportunity study	structure of feasibility study	Project background market indicators Input used (quantity, quality) Location and environment of project
(3) Formulation (full fledge feasibility study)	Very long	A more detailed Expensive	Very low (doesn't exceed 5%)	Less risky (high degree of accuracy)	formulation of project	Micro content of project

- The difference between 3 steps is in: (**content** – **accuracy** – **costs** – ...).

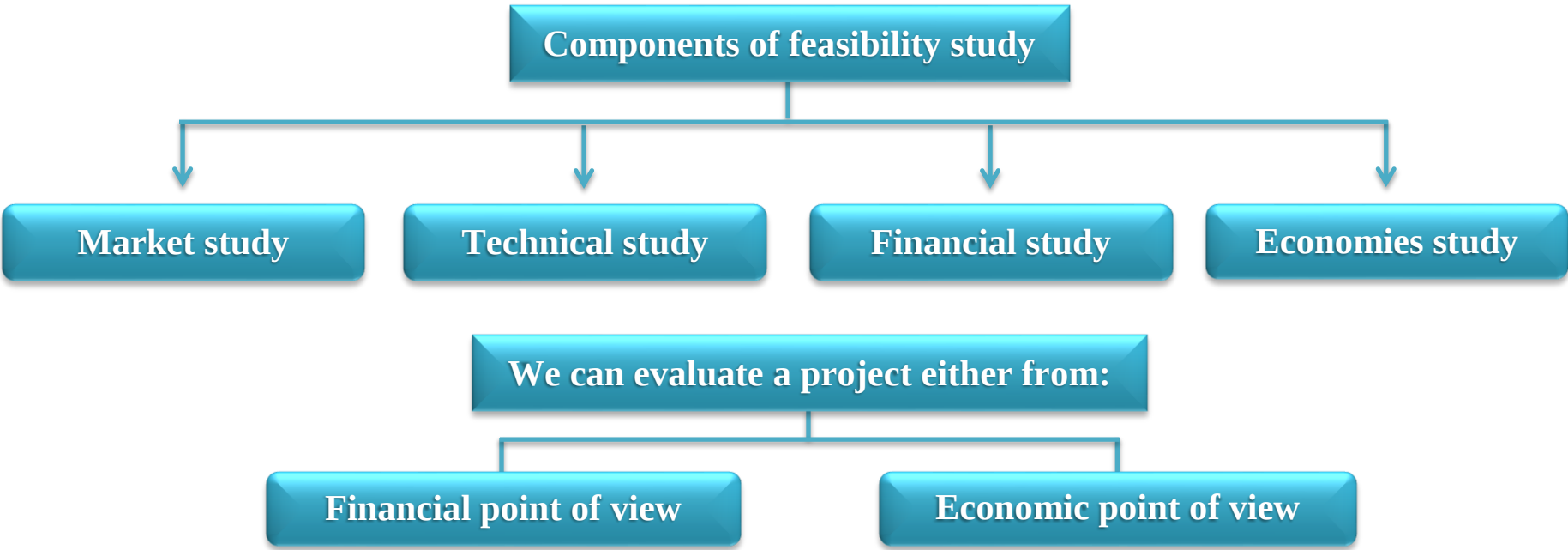
(4) Project appraisal

- A **summary** of all studies.
- We reach **findings** (yes or no).
- It evaluates **costs** and **revenues** (after the feasibility study is done).
- It contains: (**risk analysis** – **sensitivity analysis**).

- If we find that project is promising, we go to the **implementation phase** where I am going to:
 - (**negotiate** – decide where to locate the project – buy land – design building – contact with different authorities – finally doing **trial runs**).

Feasibility study Lecture (2)

- **Project evaluation** should be done over a period of time.
- **Feasibility study** is usually done for project extends or continues **for 5 to 10 year**.
- We should evaluate project for the: **(1) same currency.** **(2) same price (market price or shadow price).**



- For **private** project → **financial** feasibility study.
- For **public** project → **Economic** feasibility study.

	Financial Analysis	Economic Analysis
<i>Feasibility study can either be carried out from financial or economic perspective</i>		
Focus	Concerned with monetary and financial flows (cash equivalent)	Concerned with opportunity cost (resource equivalent)
Costs and Benefits	Focuses only on direct costs and benefits (explicit). As shown in financial statements	Focuses on both direct and indirect costs and benefits (explicit and implicit). Reconsideration of financial flows (Addition/ Elimination/ Adjustment)
Pricing	Market prices	Shadow, accounting or adjusted market prices as market prices are distorted.
Discounting	Market interest rates	Social discount rates
Return	Private indicators (IRR)	Economic indicators (EIRR)
Impact	Profitability	Economic efficiency / Saving and growth / Equity.

✚ **Financial cost (market price) = Economic cost (shadow price) – subsidies + indirect taxes.**

✚ **Economic cost (shadow price) = Financial cost (market price) + subsidies – indirect taxes.**

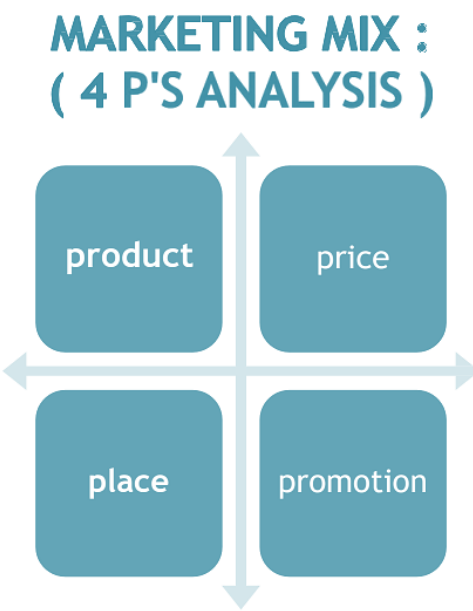
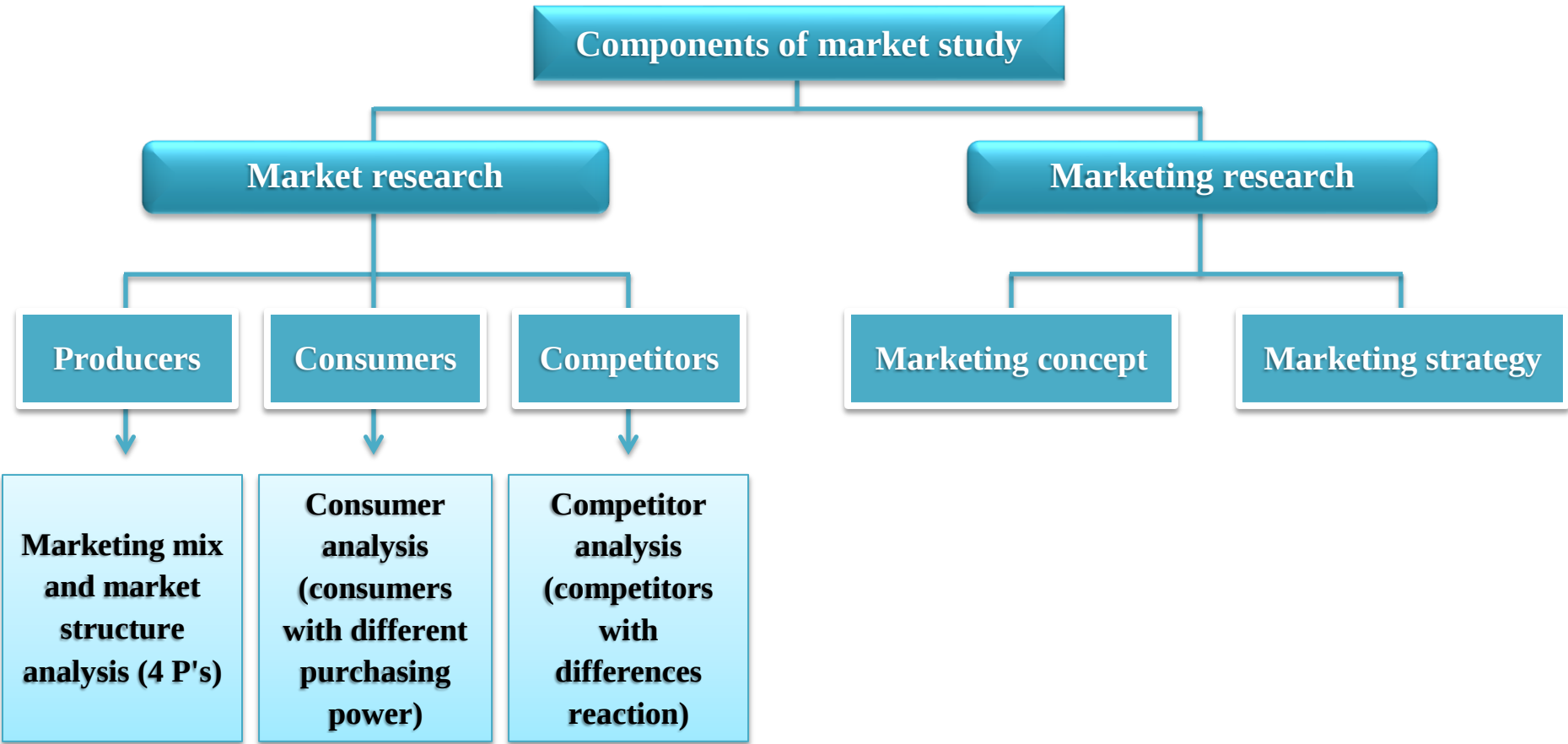
- If a newly launched project paved the road and do some reconstructions for the area surrounding the project,
From benefits perspective:
- There was **no financial return** for the project.
- Here was an **economic benefit** for the society.

(1) Market study

- **First step** of feasibility study.
- **Main basic component** of feasibility study.

Why is market study important?

- Because if the market allows the existence of new entrance then, the project will be applied. Otherwise, the project won't be applied and I won't move to technical study.



(1) Product (The first P)

- Define product specification.
- Determine: (site of product – colure – quality).
- Is it better to be specialized in one quality or different qualities?
- Is it better to concentrate on one product or different products?
- The main aim of product analyze is to calculate "Market gap".

Market gap

- Difference between demand and supply.
- Market gap = TD – TS

TD	TS
TD = Domestic demand + Exports	TS = Domestic production + Imports

- Step (1): we start by production:

- How many **units** are produce?
- How many **producers** produce it?
- There **total capacity** or **unused capacity**?
- Are producers form **private sector** or **general sector**?

Imports	Exports
How many units are imported ?	How many units are exported ?

- We have to take into account: **(1) past terms. (2) future terms.**
 - I collect data from **past data** then expect the data in **future terms**.
-

Feasibility study
Lecture (3)

Market demand

- **Total value of product** that would be bought:
 - By a defined **customers group**.
 - By a defined **geographic area**.
 - In **specific time period**.
 - In a defined **marketing environment**.
 - Under a defined **marketing program**.
- It could be calculated in **units**.
- It could specify by: (**area** or **type of market**).

Type of market	Percentage	Definition
(1) Potential market	100%	➤ Set of consumers have: (1) some interest in product.
(2) Available market	40%	➤ Set of consumers have: (1) interest . (2) income . (3) access to product.
(3) Qualified available	20%	➤ Set of consumers have: (1) interest . (2) income . (3) access . (4) qualifications for product.
(4) Served (target) market	10%	➤ Part of qualified available that the project would target.
(5) Sales promotion	5%	➤ Set of consumers who have already bought product .

Market gap	Market share
➤ Difference between demand and supply .	➤ Amount from the gap that project wants to cover. ➤ Depends on: (production capacity & market gap).
Market gap = TD – TS	Market share = $\frac{\text{total capacity}}{\text{market gap}}$

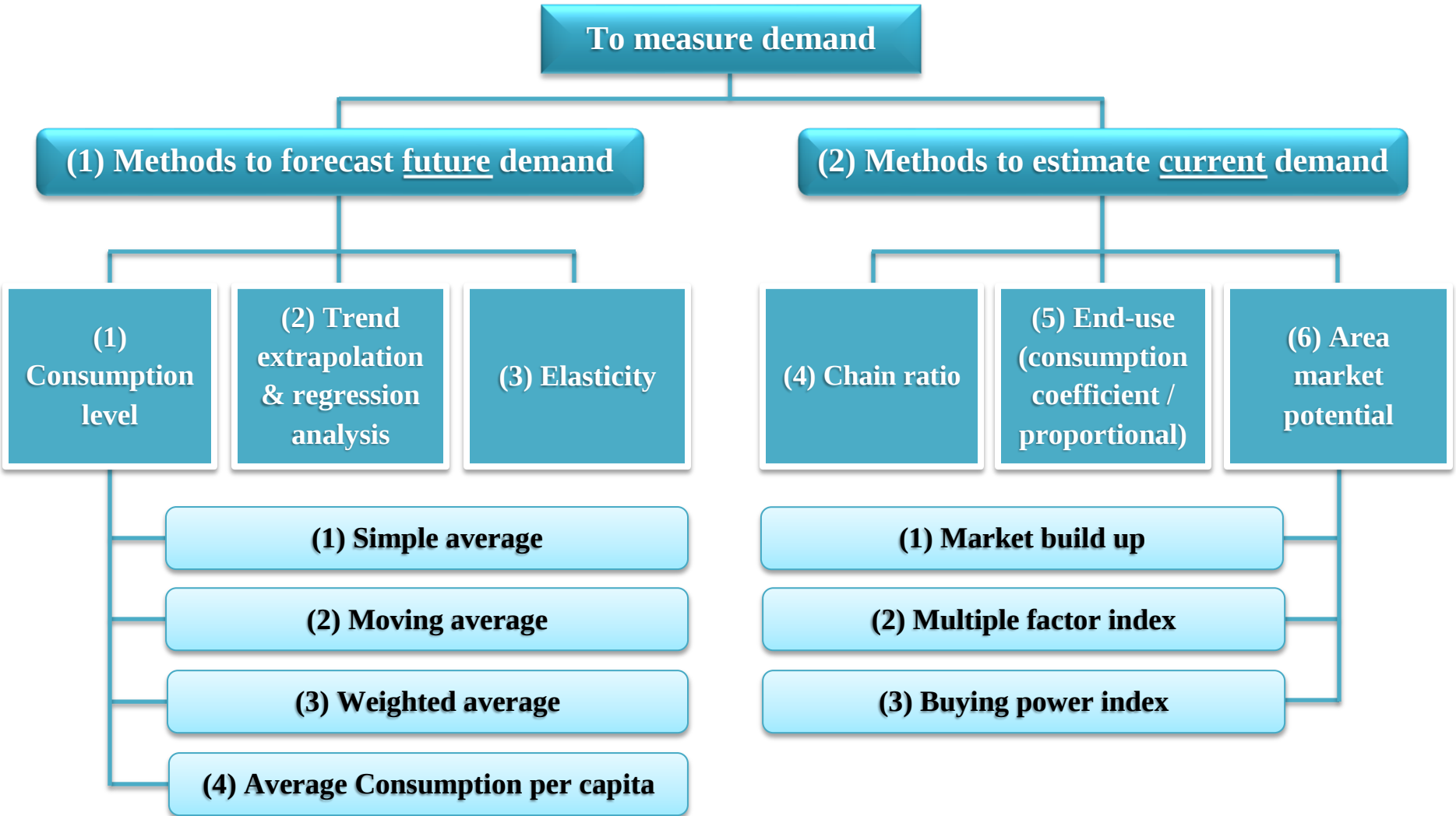
- The **larger my share** is compared to market gap **the riskier** in my positions?
 - As I will be exposed to **any new entrance**.
 - If new entrance enter market: (1) **TS** will be **exhausted**. (2) **Price** would be **decrease**.

➤ While we are talking about **product**, we have to know at which **cycle** we are.

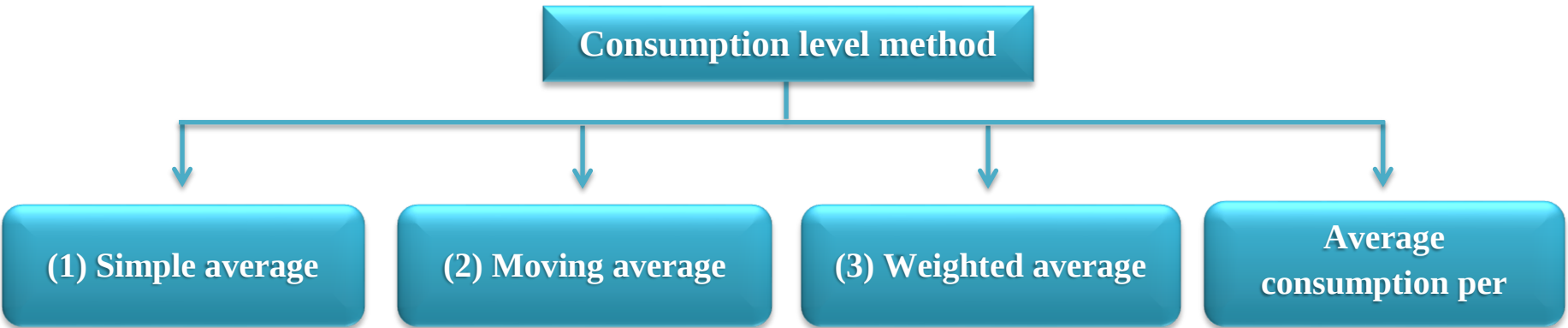
Product cycle

- (1) **Start up**. (2) **Growth**. (3) **Maturity**. (4) **Saturation**. (5) **Shrinking**.

We have 6 methods to estimate forecasting demand (N)



(1) Consumption level method



Method	Definition	Equation	Assumptions	Advantages	Disadvantages
(A) Simple average method	Sum of all past information and take average by dividing number of past years	$D = \frac{\sum D}{N}$	Constant trend of demand	Simple Easy Direct	Assume constant trend of demand Large time series Doesn't take into account the relative importance of each time period (weight)
(B) Moving average method	Not all past information	$D = \sum_{i=1}^n (\frac{D_i}{N})$	Constant trend of demand	Simple – Easy No large time series Expectation is more accurate	Assume constant trend of demand Doesn't take into account the relative importance of each time period (weight)
(C) Weighted average method	Assign weight for each time period using specific number of years	$D = \sum_{i=1}^n W_i D_i$	Constant trend of demand Assign weights	Easy Assign weight for each time period. No large time series	Assume constant trend of demand
(D) Average consumption per capita		$D_n = \frac{\text{Average consumption per capita}_{n-1} \times \text{Average consumption per capita}_{n-1}}{\text{total consumption}_{n-1} / \text{population}_{n-1}}$ $\text{Population}_n = \text{Population}_{n-1} (1 + \text{annual pop growth rate})^1$	Constant average consumption per capita Patterns of consumption are the same for all income classes	Simple – Easy No large time series	Assume constant average consumption per capita (unrealistic assumption) Assume patterns of consumption are the same for all income classes (unrealistic assumption)

Feasibility study
Lecture (4)

(2) Trend extrapolation & regression analysis

- We use **past data** in expecting **future demand**.
- Assumed **constant growth rate of demand** (**demand** has the **same trend** over time).

Regression analysis		Trend extrapolation	
$y = a + bx$ $y^* = a^* + b^*x$ $b^* = \frac{\sum xy - n\bar{x}\bar{y}}{\sum x^2 - n\bar{x}^2}$ $a^* = \bar{y} - b^*\bar{x}$ $\bar{x} = \frac{\sum x}{n} \qquad \bar{y} = \frac{\sum y}{n}$		$y = a + bt$ $y^* = a^* + b^*t$ $b^* = \frac{\sum ty - n\bar{t}\bar{y}}{\sum t^2 - n\bar{t}^2}$ $a^* = \bar{y} - b^*\bar{t}$ $\bar{t} = \frac{\sum t}{n} \qquad \bar{y} = \frac{\sum y}{n}$	
y^*	➡ Dependent variable (demand).		
a^*	➡ Intercept (value of y when X = 0).		
b^*	➡ Slope (rate of growth of demand).		
x	➡ Independent variable (income – price – advertising).		
t	➡ Time series.		

(3) Elasticity (price – income – cross)

- It means the **%Δ in quantity demanded** due to a **1%Δ** in (**price** – **income** – **price of other goods**) holding other factors constant.

Elasticity (price – income – cross)	
Assumption	➤ Elasticity coefficient is constant. ➤ So it can be applied to any future year to obtain demand in that year.
Advantages	➤ It doesn't need large time series.
Disadvantages	➤ Constant elasticity is unrealistic, especially when a large variation in (price or income) exists. ➤ It doesn't take into other factors affecting demand.

(1) Price elasticity	(2) Income elasticity	(3) Cross elasticity
Measure %Δ in quantity demanded due to a 1%Δ in price (<u>holding other factors constant</u>)	Measure %Δ in quantity demanded due to a 1%Δ in income (<u>holding other factors constant</u>)	Measure %Δ in quantity demanded due to a 1%Δ in price of good (y) (<u>holding other factors constant</u>)
$= \frac{\Delta Q}{Q} \div \frac{\Delta P}{P} = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$	$= \frac{\Delta Q}{Q} \div \frac{\Delta I}{I} = \frac{\Delta Q}{\Delta I} \times \frac{I}{Q}$	$= \frac{\Delta Q_x}{Q_x} \div \frac{\Delta P_y}{P_y} = \frac{\Delta Q_x}{\Delta P_y} \times \frac{P_y}{Q_x}$

- Price elasticity: **negative** elasticity.

(4) Chain ratio method

- Involves multi playing a basic numbers by several adjusted percentages.

Example (1)

- To forecast demand of diet Pepsi cola and we have no parameter, population is 80 million.

(1) First step	➤ Multiply base no. "Populations 80 million" by per capita income = Total income inhabitant.
(2) Second step	➤ Multiply no. "Total income inhabitant" by % of income spent on food & beverage = income spent on food & beverage.
(3) Third step	➤ Multiply no. "Income spent on food & beverage" by % of income spent on nonalcoholic beverage only = income spent on nonalcoholic beverage only.
(4) Fourth step	➤ Multiply no. "Income spent on nonalcoholic beverage only" by % of income spent on Pepsi cola = income spent on Pepsi cola.
(5) Fifth step	➤ Multiply no. "Income spent on Pepsi cola" by % of income spent on diet Pepsi cola = income spent on diet Pepsi cola. ➤ Then divide income spent on diet Pepsi cola on price = quantity demanded of diet Pepsi cola.

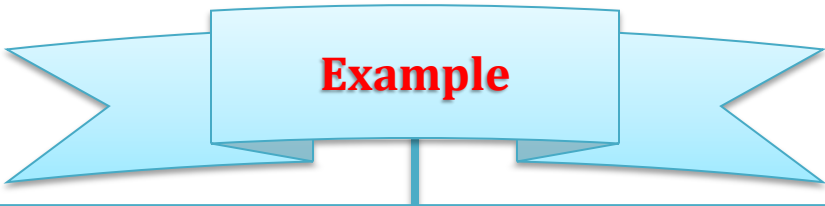
Example (2)

- Estimate the demand on Nile cruse by tourists if we know total arrival in Egypt.

(1) First step	➤ Multiply no. "Total arrival in Egypt (Egyptian & foreigner)" by % of total foreigner arrivals = Total foreigner arrivals (tourists & non tourists).
(2) Second step	➤ Multiply no. "Total foreigner arrivals (tourists & non tourists)" by % of foreigner for tourism = foreigner for tourism.
(3) Third step	➤ Multiply no. "Foreigner for tourism" by % of foreigner tourist who will stay more than one day = foreigner tourist who will stay more than one day.
(4) Fourth step	➤ Multiply no. "Foreigner tourist who will stay more than one day" by % of foreigner tourist who will go to Luxor & Aswan = foreigner tourist who will go to Luxor & Aswan.
(5) Fifth step	➤ Multiply no. "Foreigner tourist who will go to Luxor & Aswan" by % of who will stay for one day for Nile Cruse = foreigner tourist who will stay for one day for Nile Cruse.

(5) End used method

- It forecasts intermediate products only.
- We need to know: (1) End users. (2) Input – output coefficient. (3) Total demand on output.



- We need to forecast total demand on cement.
- End users: (1) Private housing. (2) Public housing. (3) Public units. (4) Factories. (5) Others.

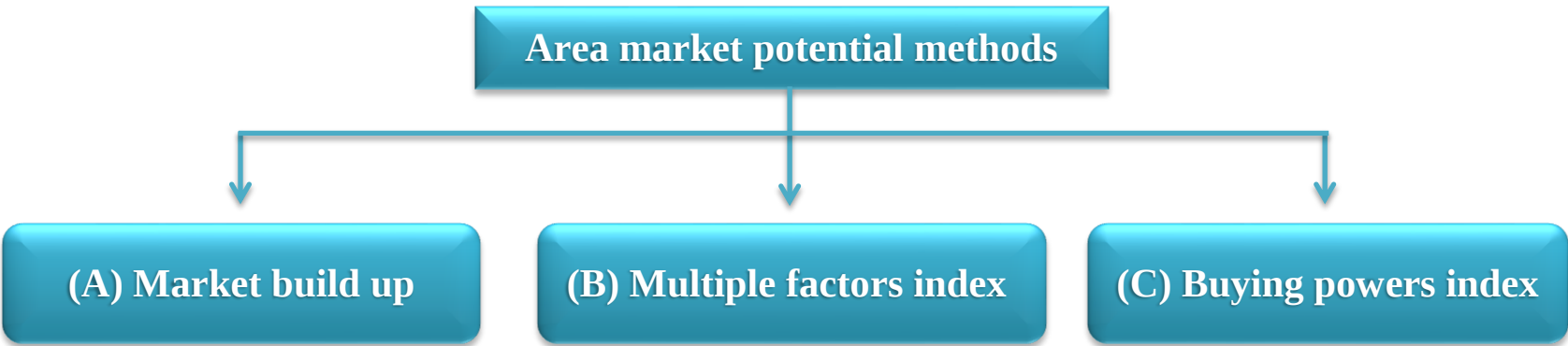
End users	Input – output coefficient	Output by thousands	Demand on cement
Private housing	0.2 tons / 1000 units	10	2
Public housing	0.1	14	1.4
Public units	0.4	15	6
Factories	0.3	8	2.4
Others	0.12	6	0.4

➤ Total demand on cement = 2 + 1.4 + 6 + 2.4 + 0.4 = 11.8 (thousands ton).

Feasibility study Lecture (5)

(6) Area market potential

- To estimate demand within **a specific area**: we have **three** methods.
- We estimate **market potential** for **different areas** to select **the best area** to sell a certain product.



(A) Market build up

- **Same as "End use consumption coefficient method"** but for **a specific area**.

- Steps of "market build up method" are:

- 1** ➤ Identify Number of **companies** at each region.
- 2** ➤ Determine Number of **units** needed for **each million sales** of the final product.
- 3** ➤ Determine **annual sales** for each company.

- **Multiply $1 \times 2 \times 3$ = demand for every region.**

+ Total market potential (Total demand on input for each region) = Number of companies $\times$ Number of units needed for each million sales of the final product $\times$ Annual sales for each company.

- We can choose the **"highest region potential demand"**.

Example

- IF we have 3 areas (Cairo – Giza – Qaliobia).

Region	Number of companies	Number of units needed for each million sales of the final product	Annual sales for each company	Total demand
Cairo	5	0.6	1000	$5 \times 0.6 \times 1000 = 3000$
Giza	4	0.9	1100	$4 \times 0.9 \times 1100 = 3900$
Qaliobia	3	0.4	1200	$3 \times 0.4 \times 1200 = 1440$

- Giza is **"highest region potential demand"**.

(B) Multiple factor index

➤ Reflects relative purchasing power of consumer in different areas.

$B_i = d_1y_i + d_2R_i + d_3P_i$	
i	➤ A certain area.
y	➤ % of total national disposable income in area i.
P	➤ % population located in area i.
R	➤ % national retail sales in area i.
B_i	➤ % of national purchasing power in area i.

Example

- We want to estimate demand on beverage at certain areas which depends on several factors.
- $d_1 = 0.5 \quad d_2 = 0.3 \quad d_3 = 0.2$
- $B_i = 0.5 y_i + 0.3 R_i + 0.2 P_i$
- If Giza has:
 - (1) 20% of Egypt’s disposable income.
 - (2) 10% of Egypt’s retail sales of soft.
 - (3) 40 % of Egypt’s total population.
- Estimate the % of demand on beverage in Giza.

➤ $B = 0.5 (20\%) + 0.3 (10\%) + 0.2 (40\%) = 0.21$

- Demand on beverage in Giza is 21% of Egypt.
- The project is located at region with "the higher demand".
- The more the value of "Multiple factor index", the more attractive the region.
- We will do these steps for different areas and chose the area with highest % of demand.

(C) Buying power index (Market opportunity index)

- We want to know which area has the "highest buying power".
- To tell the producer which area is the most attractive to develop a brand.
- First, we set the area of the project potential.

✚ $\text{Buying power index} = \frac{\text{Category development index}}{\text{Brand development index}}$

✚ $\text{Category development index} = \left(\frac{\text{Percentage of product sales}}{\text{Percentage of Population}} \right) \times 100$

✚ $\text{Brand development index} = \left(\frac{\text{Percentage of brand sales}}{\text{Percentage of Population}} \right) \times 100$

- To Calculate "buying power index":

- 1

➤ List area of interest.
- 2

➤ Calculate percentages %.
- 3

➤ Calculate: (1) Category development index. (2) Brand development index. (3) Buying power index.

Example

- IF we have 3 areas (Cairo – Giza – Qaliobia).

Region	(1) % of population	(2) % Of product sales	(3) % of total sales of diet Pepsi cola	(4) Category development index = (2) / (1)	(5) Brand development index = (3) / (1)	(6) Buying power index = (4) / (5)
Cairo	4.501%	8%	4.9%	177.73	108.64	1.636
Giza	0.374	0.4	1%	106.95	267.37	0.4
Qaliobia	2.009%	1.3%	1.895%	64.7	94.325	0.686

- Cairo has the "highest buying power index" relative to the other regions.
- Cairo has the "highest market opportunity index".
- The higher "buying powers" means the greeter profitability of product.
- We are working on percentages not numbers.

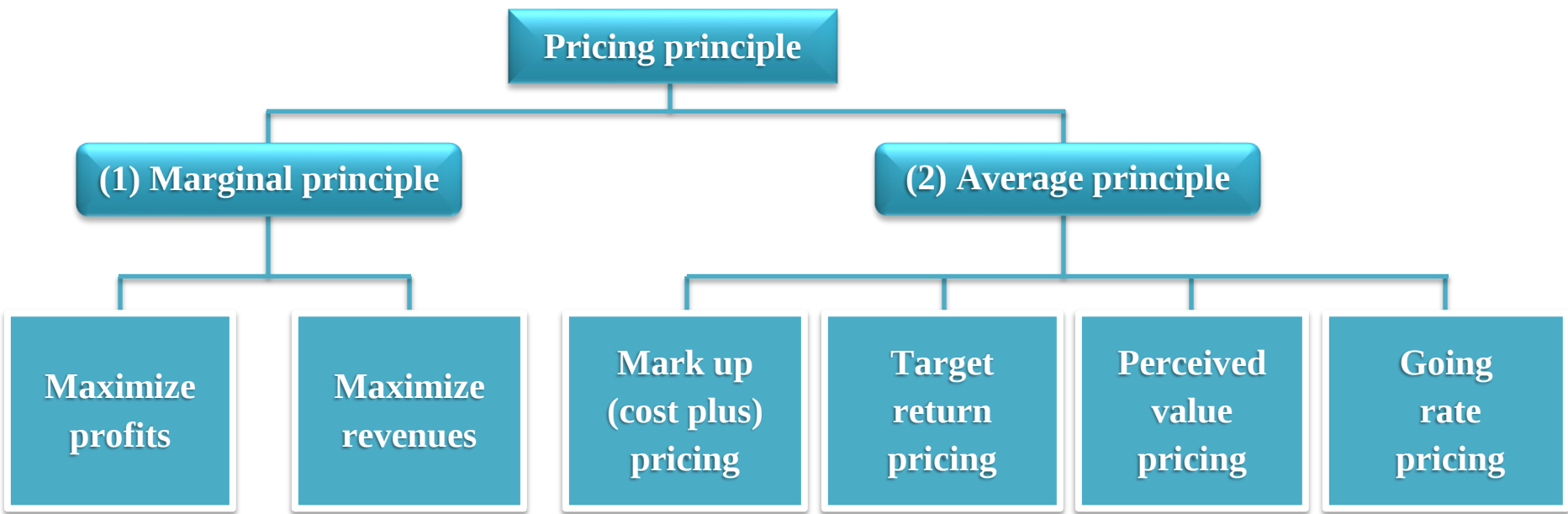
(2) Price and price policy (The second P)

- Price is important task for profit organization or not profit service company organization.

(A) Pricing objectives

Objective	Case	Price charged	Definition
(1) Survival	➤ To keep the plant going. ➤ To survive and preserving "current market share".	Average price: ➤ Cover VC & part of FC.	A short time objective usually when company faced by: ➤ Intense competition. ➤ Overcapacity. ➤ Changing consumer wants.
(2) Maximize current profit	➤ Assuming good knowledge of demand ➤ $\text{Max } \pi = \text{TR} - \text{TC}$	Higher price	
(3) Maximize current sales revenues (not profit)		Low or medium price to increase its sales	
(4) Maximize sales growth	➤ Higher sales volume lead to: ➤ Lower unit cost. ➤ Higher run profit.		
(5) Skim the market	➤ Company sell to the elites.	Very high price	
(6) Product quality leadership		High price to cover high product quality and RSD	

(B) Pricing principles



(1) Marginal principle

➤ Firms charge price that: (1) **Maximize profits**. Or (2) **Maximize revenues**.

To maximize profits	To maximize revenues
Firms set price at which: MR = MC	Firms set price at which: MR = 0

Disadvantages of "Marginal principle"	Advantages of "Average principle"
➤ It's not widely used . ➤ It needs a lot of calculations .	➤ It's more widely used .

(2) Average principle

Principle	Orientation	Equation	Assumptions	Advantages	Disadvantages
(1) Mark up pricing	Cost oriented	$\text{Mark up price} = \frac{\text{unit cost}}{1 - \text{desired return on sales}}$ $\text{Unit cost} = \text{AVC} + \text{AFC}$		➤ Seller has more certainty about costs than demand. ➤ Cost pricing is fairer to both (buyer – seller). ➤ If all firms use this method, their prices tend to be similar.	➤ A cost oriented method. ➤ Ignore (demand side – market competition).
(2) Target return pricing	Cost oriented	$\text{Mark up price} = \frac{\text{unit cost} + \text{rate of return} \times \text{invested capital}}{\text{unit sales}}$ $\text{Unit cost} = \text{AVC} + \text{AFC}$	➤ We look to targeted return. ➤ Company set price at the level that would yield the targeted rate of return.		➤ A cost oriented method. ➤ Ignore demand. ➤ More complicated.
(3) Perceived value pricing	Demand oriented		Producer could add features for its product (guarantee – services) to enhance its perceived value by consumers.	• It considers: ➤ Consumers' demand. ➤ Willingness to pay. ➤ Affordability to determine price.	
(4) Going rate pricing	Seller oriented		• Producer determines price based upon: ➤ Prevailing market prices of similar products. ➤ Competitors' pricing level.	Widely used	We can't measure cost accurately

Feasibility study
Lecture (6)

Relationship between price and quality

- Any new entrance should know its position (price – quality).
- We have 9 strategies (matrix of 9 possible strategies).

Quality \ Price	High	Medium	Low
High	(1) Premium strategy	(2) High value strategy	(3) Super B value strategy
Medium	(4) Over charge strategy	(5) Average strategy	(6) Good value strategy
Low	(7) Rip-off	(8) False economy strategy	(9) Economic strategy

Strategy	Quality	Price
(1) Premium strategy	High	High
(2) High value strategy		Medium
(3) Super B value strategy		Low
(4) Over charge strategy	Medium	High
(5) Average strategy		Medium
(6) Good value strategy		Low
(7) Rip-off	Low	High
(8) False economy strategy		Medium
(9) Economic strategy		Low

(1) Premium strategy	(5) Average strategy	(9) Economy strategy
for consumer who wants quality	for consumer who wants some of both average position	for consumer who care only for price

Strategies	Similarities
Strategies (1 – 5 – 9) (Premium – Average – Economy)	➤ We can found it in the same market. ➤ (high – medium – low) quality at (high – medium – low) price. ➤ Market consist of 3 groups: ➢ Who insist on quality (Premium strategy). ➢ Who insist on price (Economy strategy). ➢ Who balance between two: quality and price (Average strategy).
Strategies (2 – 3 – 6) (High value – Super B value – Good value)	➤ Best to be applied from consumer perspective. ➤ Offer high quality at reasonable price.
Strategies (4 – 7 – 8) (Over charge – Rip-off – False economy)	➤ Reflect overpricing product relative to quality.

- To set **price**: firm should decide where to position it's "**quality** – **price**" throw **matrix of strategies** considering:

1

➤ **Amount of demand**.

2

➤ **Cost** of each **unit**.

3

➤ Relation of consumer to price (**Price elasticity**).

4

➤ What rang of **return** to get back.

5

➤ **Rats return** of other firms to get back.

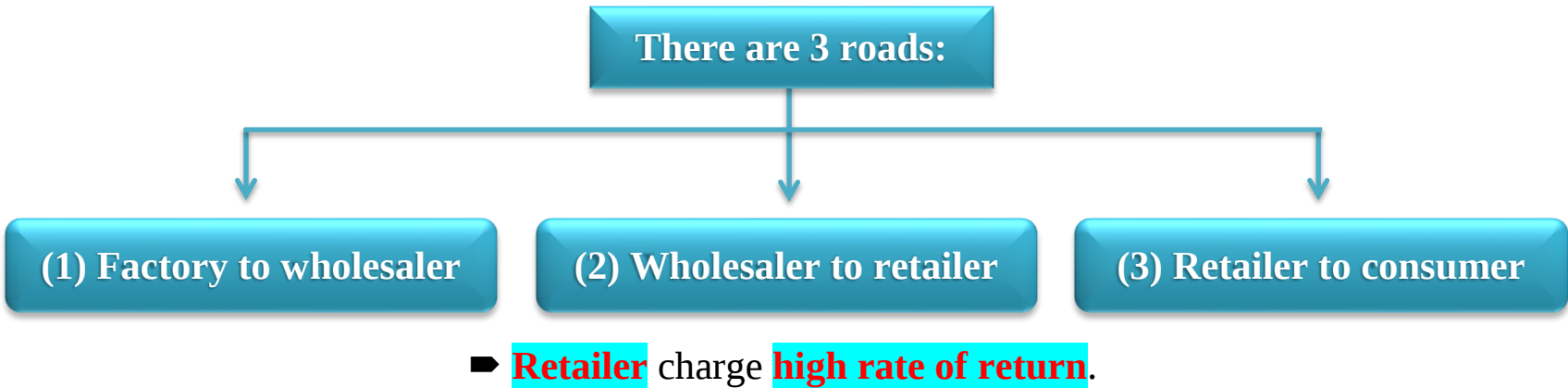
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➤ **Reaction** of other **competitor**.

(3) Place and place policy (The third P)

Place and place policy

- **Channel of distribution**.
 - **Channel** connecting between **producer** and **end users**.
 - **How to sell product**.
 - What's consumer **kind** and **time** that product is needed.



Explain place and distributional channels on component of "marketing mix"

➤ **The main task of distribution** is: to get the products **from manufacturer to consumer**, that is place where and at time when goods are needed.

• We can identify **place** through identifying the following.

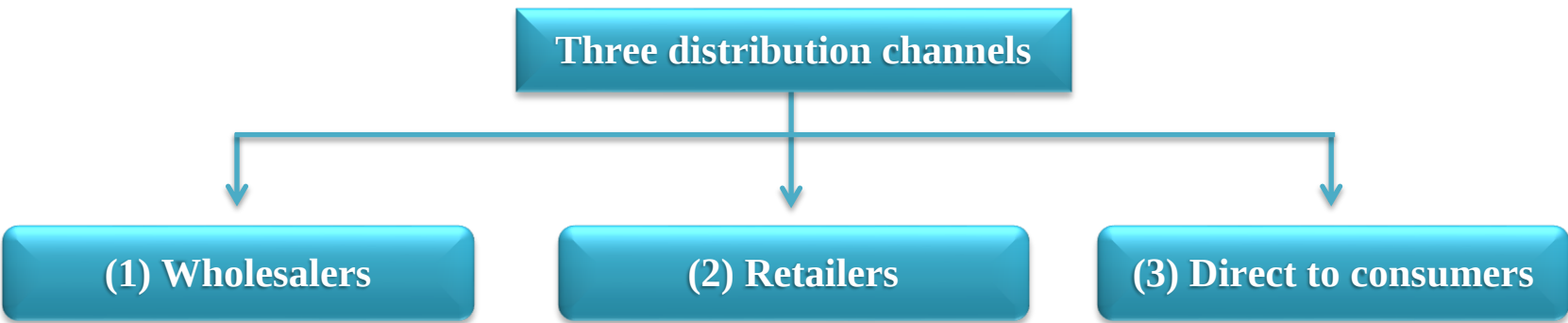
1 ➤ **Terms of delivery** (**time** – **condition**).

2 ➤ **Means of transportation**.

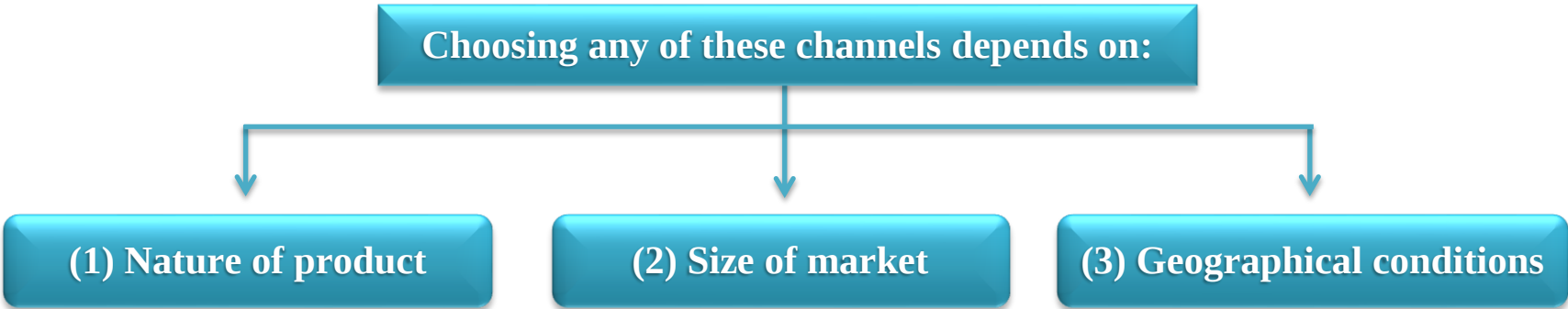
3 ➤ **Protection of goods** during transport.

4 ➤ **Control of stock**.

5 ➤ **Distribution channels**.



Distribution channel	Type of good or product	Advantages
(1) Wholesalers	many different goods	➤ Whole seller accept large amount to hold on stock. ➤ Reach many small retails. ➤ Decrease transportation cost.
(2) Retailers	Mainly suitable for products that is (high quality – branded – advertised nationally or regionally)	➤ Producer is closer to consumer.
(3) Direct to consumers	Mainly sustainable for industrial and capital goods	➤ Closer control of relation. ➤ Better services.



Feasibility study
Lecture (7)

(4) Promotion and promotion policy (The Fourth P)

- Why **promotion** is required by project?

1

➡ **Entering market** with **new product**.

2

➡ **Stay in market** and reach **long term objectives**.

➡ **Promotion tools** are needed to reach **projects sales volume**.

Promotion tools	
Promotion tool	Definition
(1) Advertising	- Has made mass production is possible for consumer good. - Through media by using specialized agencies.
(2) Public relations	- How to reach and influence key persons in relevant position. - Ex: public institutions and media.
(3) presentation at fairs	National & international fairs.
(4) Personal sales	Traditional way of sales (face to face). Very effective in sales by (phone – mail). Costs of salesmen should be considered.
(5) Sales promotion	- It supports especially retailers. - Ex: display at point of sale. - Ex: start up events for new products. - Ex: Free sample presentation at fairs.
(6) Soft opening	Business is opened for the first time only for limited number of people.
(7) Brand policy	Producer should decide whether to develop a brand name or not. Consumer expect brand to be of certain quality to be available in every shopping area at same price. Brand name is cost intensive, so FS should take this into consideration.

➡ In any method of **promotion** we must identify: **(1) target audience**. **(2) their characteristics**.

(2) Customers analysis and market segment (6W's)

(A) Customers analysis

Customers' analysis

- First define **market structure**.
- Define consumer **behavior**.
- Consumer analysis contains **6** questions.



(B) Market segment

- It's central perquisites of efficient use of **marketing tools (4P's)**.
- It's advisable to find market to be **segment education** (we have woman , children ,).



➤ Dividing market into **segment** for efficient use of **marketing tools (4P's)**.

4 basis of market segmentation	
Criteria	Definition
(1) Geographical criteria	➤ (<u>Nationality</u> – <u>Region</u> – <u>Urban</u> / <u>Rural</u>).
(2) Social demographic criteria	➤ (<u>Age</u> – <u>Sex</u> – <u>Income</u> – <u>Education</u>) for individual . ➤ (<u>Corporate</u> – <u>Size</u> – <u>Industrial branch</u>) for enterprise .
(3) Physiological criteria	➤ (<u>Life style</u> – <u>Personality</u> – <u>Social class</u> – <u>Values</u>).
(4) Behavioral criteria	➤ (<u>Loyalty</u> – <u>Mode of payments</u> – <u>Reaction to certain decisions</u>).

- Why is it important to have effective segmentation?
- **Effective communication** with customers.
 - Better understanding of **market needs**.
 - More appropriate and effective **marketing mix**.
 - Efficient use of resources.
 - Better assessment of competition.
 - Identifying **market opportunities**.

(3) Competitor analysis

- The objective of Competitor analysis is to identify extent and effectiveness of competition, through:
 - 1 Identifying the potential competitors.
 - 2 Analyzing: (Size of competitors – market share – impact on market – marketing mix – objectives – current strategies).
 - 3 Assessing main **strength** and **weakness** of competitors.
 - 4 Predicts competitors' reactions to new entrance in market.
- The analysis should state:
 - (1) **Appropriate policies** to deal with those competitors.
 - (2) **Firm's competitive advantage**.

Strengths and Weaknesses Analysis of Competitors

Elements	equal	better
Product	√	
Design	√	
Quality		√
Size	√	
Colour		√
Price		√
Promotion		√

Feasibility study
Lecture (8)

Marketing research (2 components)

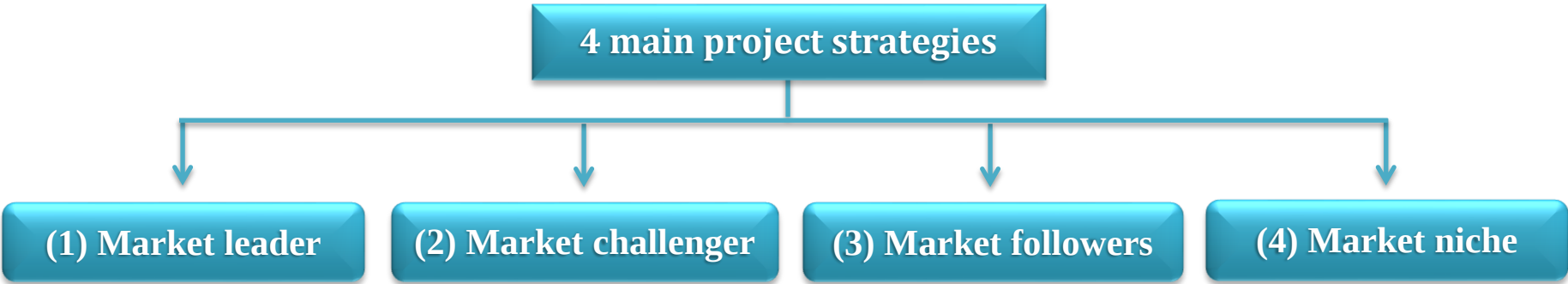


(A) Marketing strategy or project strategy



Group of (rules – principles – objectives) that defined in project.

(1) Objectives	(2) Principles	(3) Rules
- Indicate direction of project (Export – Import – Earning)	- Indicate means and activity to reach to objective.	- Success and failure criteria.



(1) Market leader



- A project is **leader** of market firms.
- A firm covers **highest share** and other firms follow this demand firm.
- A **dominate firm (leader firm)** will set price and take decision of production tools and all other firms follow all decisions of dominate firm over this dominate firm expand in market.

3 Objectives of any leader firm to still number 1 in the market

(1) Expand total market demand	(2) Protect market share	(3) Expand market share
Finding new users (market penetration by advertising)	By maintaining quality of product innovation	Even if market size remain constant

(2) Market challenger

(2) Market challenger

- Firms that occupying **second** or **third** position in market.
- Its **objective**: is **surviving** in the existence of leader.
- Its **share**: is **limited**.

Challenger firms can adopt one of the 2 position

(1) Attack the leader and other competitors(same size or smaller)	(2) To be market follower
➤ It's for future market share. ➤ It has to do: (1) Many discounts. (2) Selling product with best quality with low price.	

(3) Market followers

(3) Market followers

- Any market should have **follower firms** to be **leader firm**.
- **Followers** are firms: (1) **don't want to compete**. (2) Follow **followership strategies**. (3) Follow what **leader** do.

3 followers strategies

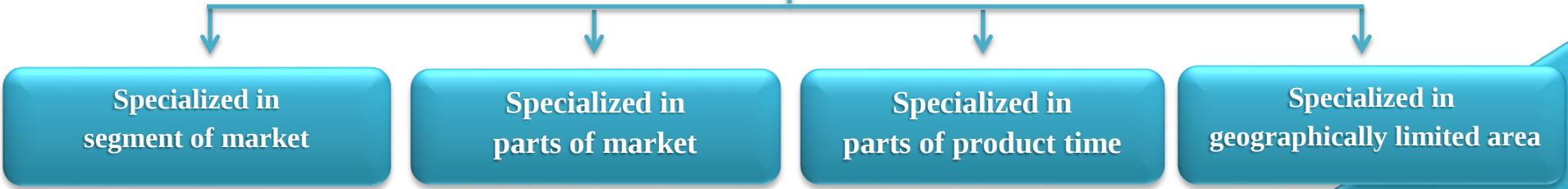
Strategy	Definition
(1) Following closely	➤ It sees what leader do and make this closely. ➤ If leader change (Price – Promotion mix – Quality – Place). It will change all these.
(2) Follower distance	➤ Maintain some differentiation, but follow leader in main aspects like: (Product innovation – General Price level). ➤ Followers will make discount but less then leader.
(3) Follower selectively	➤ It selects some ideas and follows it.

(4) Market niche

(4) Market niche

- It's strategy of **specialization**.
- Firm specialize in **part of production** or **social segment** and avoid clasher with majors.

Niche firms focus on:



- Requirements:
- 1

➤ Nicher: should have **required skills** to serve effectively.
- 2

➤ Market: must be **sufficient size** and to allow **profit**.
- 3

➤ Potential demand: must have **growth**.

(B) Marketing concept

Difference between market and marketing	
Marketing	Market
➤ Focuses on polices to achieve project objectives (how to sell). ➤ Covers (Promotional techniques – Pricing polices).	➤ A broader concept. ➤ Covers (Demand – Supply – Market gap & share)

➤ When a **project strategy** has been defined, **suitable marketing concept** can be designed.

Product – market relations and basic strategies

➤ The selected **product – market relation** determine **strategies dimensions** of marketing concept.

Market \ Product	Old	New
Old	Market penetration	Product development
New	Market development	Diversification

4 product – market strategies		
Strategy	Definition	Suitable for
(1) Market penetration	➤ <u>Main means</u> : are (Advertising – Selling). ➤ <u>Focus</u> : is on existing products .	Leader
(2) Market development	➤ With existing products enterprise aims at: ➤ New geographical areas . ➤ New customer segments . ➤ New distribution channels for increasing sales .	Challenger
(3) Product development	➤ Enterprise aims at: ➤ Developing products . ➤ New solutions for future costumers .	
(4) Diversification	➤ Enterprise aims at succeeding on: ➤ New markets . ➤ New products .	Nicher

Feasibility study Lecture (10)

(3) Financial study or financial analysis

Financial analysis

- It's the **third** component of feasibility study.
- It's feed by all findings of **technical analysis** which means that:
 - Technical analysis feeds **financial analyses**.
 - Technical analysis is feed by **market analysis**.
- We can't do financial analyses unless going through **market** and **technical** analysis.

Financial

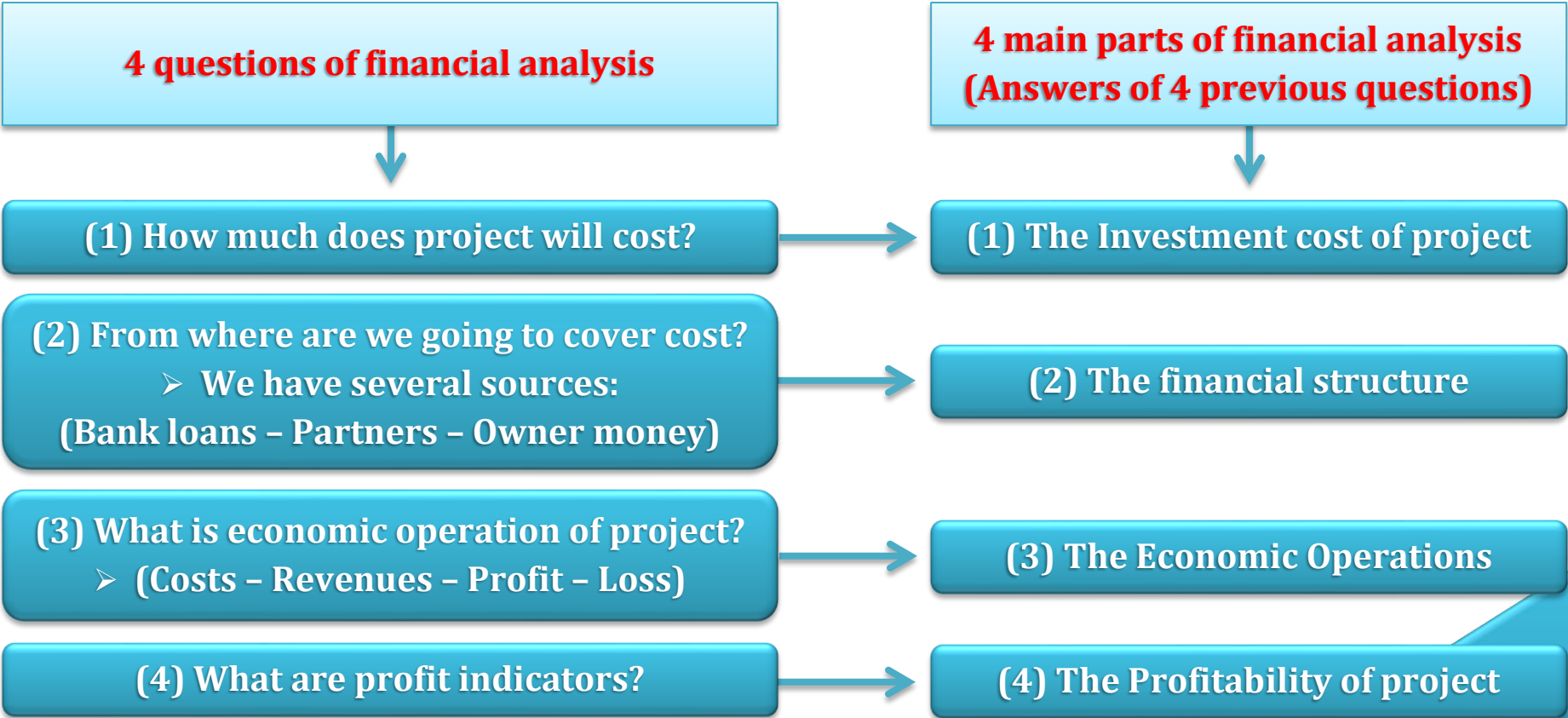
- Means how much project will cost from **financial point of view** not from economic point of view.
- Means what is **value of money** not economic use of money.
- We wants to reach decision to apply project or refuse project (viable or not).
- **Financial analysis** gives me last answer to question: "does this project is **profitable** or not?"

Financial profitability analysis

➤ Means analyzing **revenues** & **costs**, then compare between them.

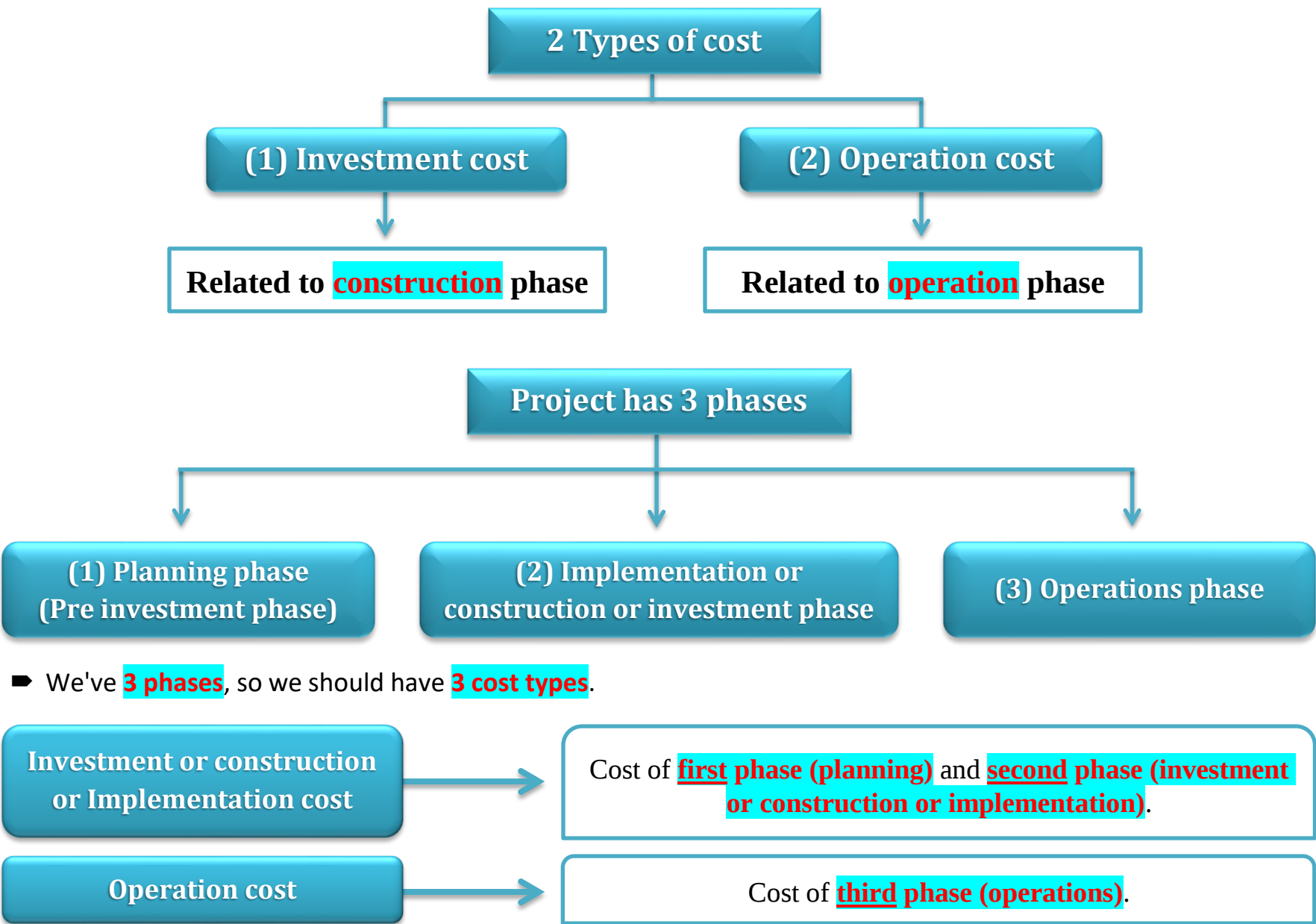
Difference between Revenues & Costs	Revenues & Costs relation	Profitable of lose
Positive (+ve)	Revenues > Costs	Profitable
Negative (-ve)	Revenues < Costs	Lose

➤ **Financial analysis** is giving answer by Answering **4** questions



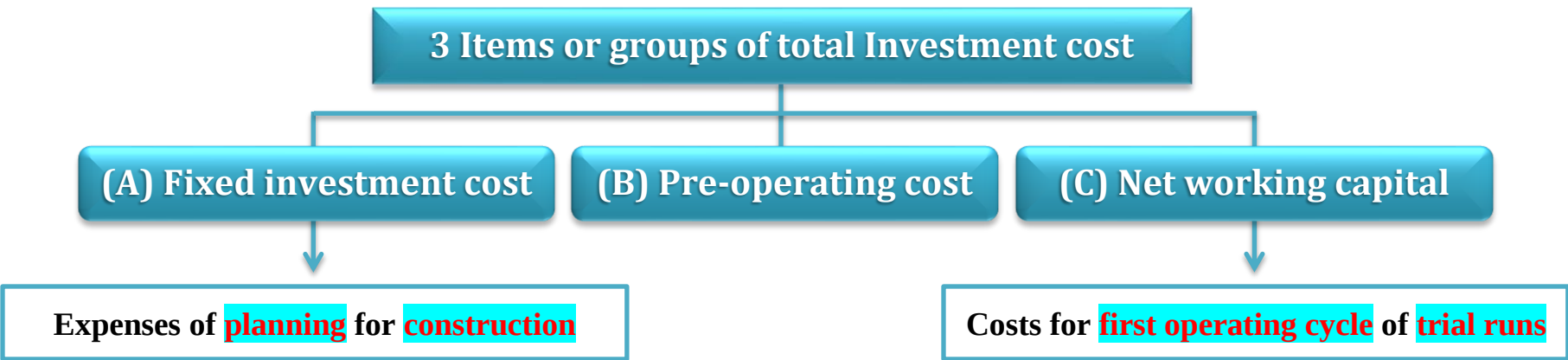
(1) Investment cost of project

- Financial analysis Focus on what we real paid (market price).
- We aren't talking about opportunity cost. We are talking about financial money not economic money.



Difference between investment cost and operation cost

(1) Investment cost	(2) Operating cost
- Cover expenses of planning and implementation phase and small part of operation phase which is (Startup – First cycle – Trial runs). - Are paid before operating phase. - Are covered by pocket of investor not revenues gain.	- Cover and paid during operation after first cycle (trial runs) up till this part revenues start. - Are covered from revenues. - Are paid yearly during life time of project. - Don't take price changing into consideration as we are calculating cost for revenue year by year.



(A) Fixed investment cost

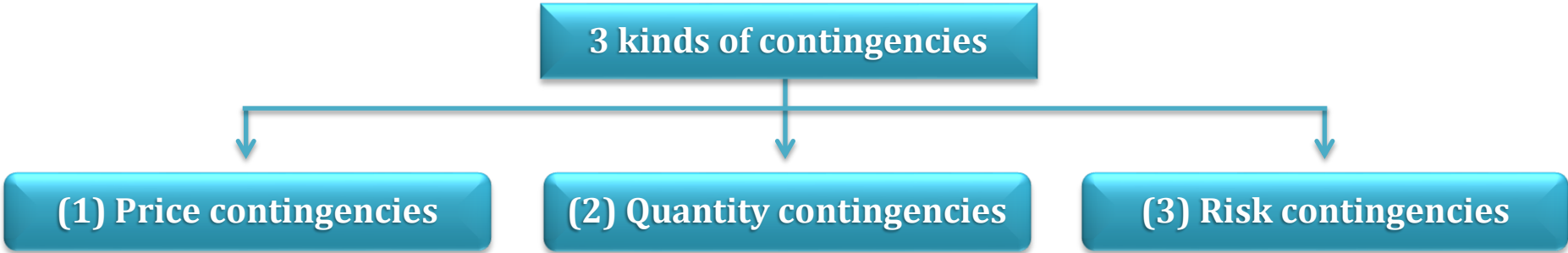
Fixed investment cost	
Phase	Expenditures related to planning (or) construction phase and not the trial runs .
Type of item	Cost of tangible items.
Examples of items	(Machines – Buildings – Communications facilities – Cars – Furniture – Telephones – TV – Faxes – Electricity wires).
Payer	Owners .
Cases	- If we purchase land (pay for it): it's fixed investment cost because we pay it once. - If we rent land to do small project: it's not fixed investment cost because it is daily paid. Rented (Cars – Buses – Land) aren't fixed investment cost.

(B) Pre-operation cost

Pre-operation cost	
Phase	Costs of intangible assets during planning and construction phases.
Type of assets	Cost of intangible assets.
Examples of assets	(Renting lands in constructions phase – Renting machines – Advertisement – License – Export fees – License fees – Electricity fees – Trademark).
Cases	If rent is paid before operation : it's pre-operating cost .
We should include	(1) Contingencies amount. (2) Interest in pre-operating cost if we get loans from bank before starting commercial operating phase.



Amount of money covering **extra unknown amount (or) inflation amount**.



3 Kinds of contingencies		
Contingency	Definition	Example
(1) Price contingencies	➤ Mistaking price. ➤ If during constructing period, there's different in prices.	➤ If during construction year cement price increase, so it will be covered by price contingencies.
(2) Quantity contingencies	➤ Mistaking quantities. ➤ Overcome mistake different in Quantities.	➤ I need two buses, but I found two isn't enough, so I go extra buses from quantity contingencies.
(3) Risk contingencies		➤ If we suggest that we will receive machines during 5 days. But there is delay for 10 days, so cost of that delay will be covered by risk contingencies.

(C) Net working capital



- Amount of money needed to cover expenses of **first production cycle (or) trial runs of startup**.
- ✚ **Net working capital = Current assets – Current liabilities**

Current assets	Current liabilities
➤ Cash in bank. ➤ Cash in hand. ➤ Inventories. ➤ Account receivable.	➤ Bank over draft. ➤ Accounts payable.