DEPARTMENT OF COMMERCE AND FINANCIAL STUDIES
BHARATHIDASAN UNIVERSITY, TIRUCHIRAPPALLI – 620024
MBA (Financial Management)

Course Code and Name: FMFC1 / 24 – CORPORATE FINANCE

Unit – V/ Topic : CAPITAL STRUCTURE

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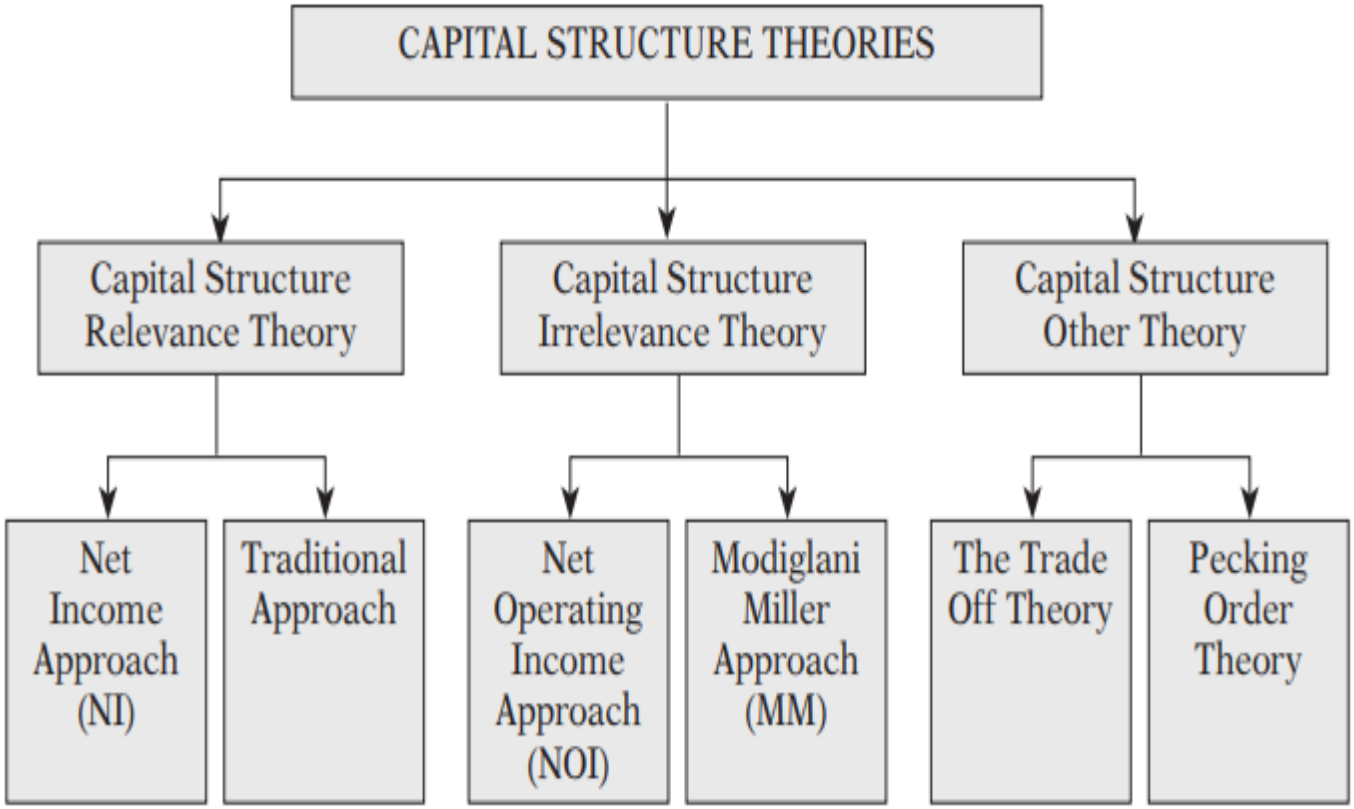
Scheme of Presentation
UNIT-V

- Introduction
- Factors Affecting Capital Structure.
- Capital Structure Theories
- Net Income Approach
- Net Operating Income Approach
- MM Approaches I & II
- Traditional Approach
- Optimal Capital Structure
- The Hamada
- Equation and Capital Structure Decisions.

Introduction

According to Gerestenberg, “Capital structure of a company refers to the composition or make - up of its capitalization and it includes all long - term sources, viz, loans, bonds, shares and –reserves”. Thus, the capital structure is made - up of debt and equity securities and refers to permanent financing of a firm. In financial management, capital structure theory refers to a systematic approach to financing business activities through a combination of equities and liabilities.

CAPITAL STRUCTURES THEORIES



NET INCOME APPROACH

The net income approach was developed by David Durand, which says capital structure has relevance, and a firm can increase the value of the firm and minimize the cost of capital by employing debt in its capital structure. According to this theory, greater the debt capital employed lower will be the overall cost of capital and more shall be the value of the firm.

Assumptions:

- The cost of debt is less than the cost of equity.

NET INCOME APPROACH

- The risk perception of investors is not affected by the use of debt, as a result, the equity capitalization rate () and the debt – capitalization rate (kd) don't change with leverage.
- There are no corporate taxes.

As per the above assumptions, cost of debt is cheaper than the cost of equity and they remain constant irrespective of the degree of leverage. If more debt capital is used because of its relative cheapens, the overall cost of capital declines and the value of the firm increases.

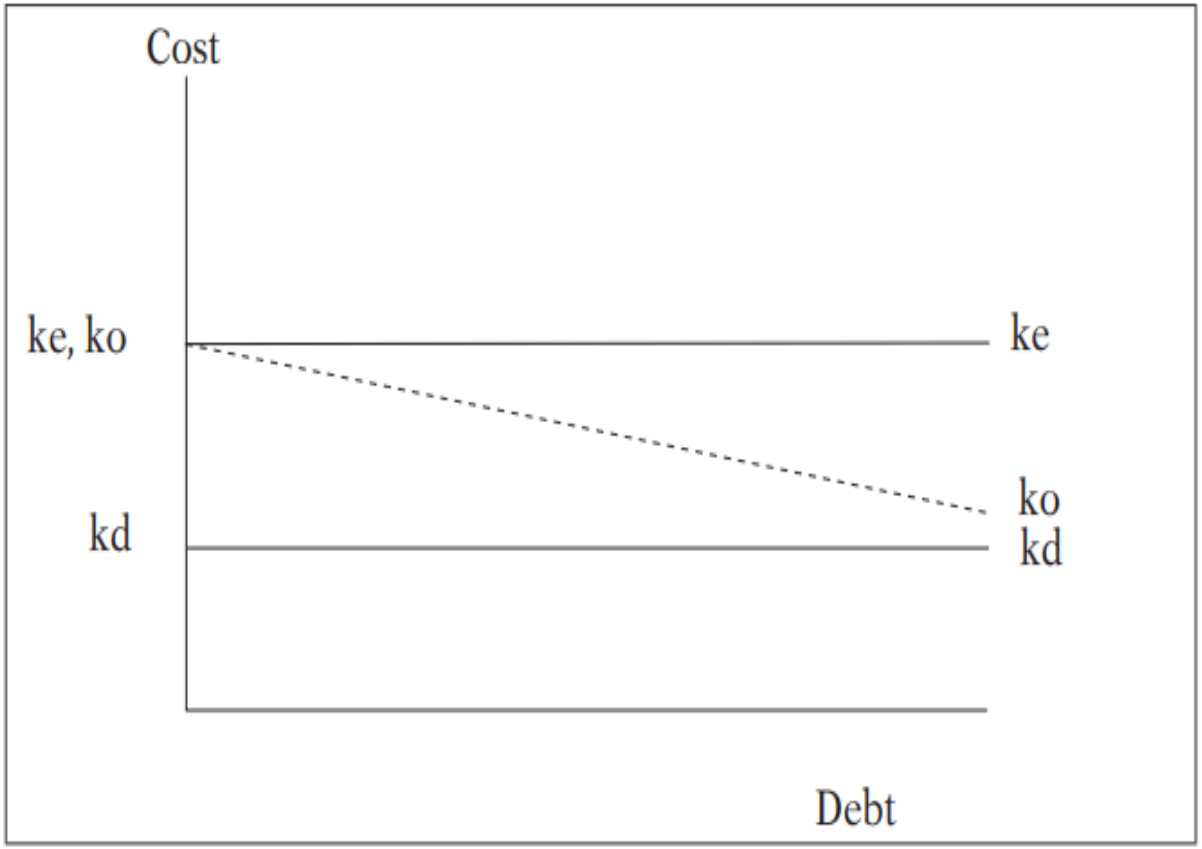
NET INCOME APPROACH

According to this approach: V=S+D

$$S = \text{market value of equity} = \frac{NI}{Ke}$$

$$Ko = \text{Overall Cost of Capital} = \frac{EBIT}{V}$$

NET INCOME APPROACH



NET OPERATING INCOME APPROACH

The net operating income (NO I) approach is also suggested by David Durand, which is another extreme view on the capital structure and value of the firm. As per this approach the capital structure of the firm does not influence cost of capital and value of the firm.

The value of the firm (V) is determined as follows:

$$V = S + D = \frac{NOI}{Ko}$$

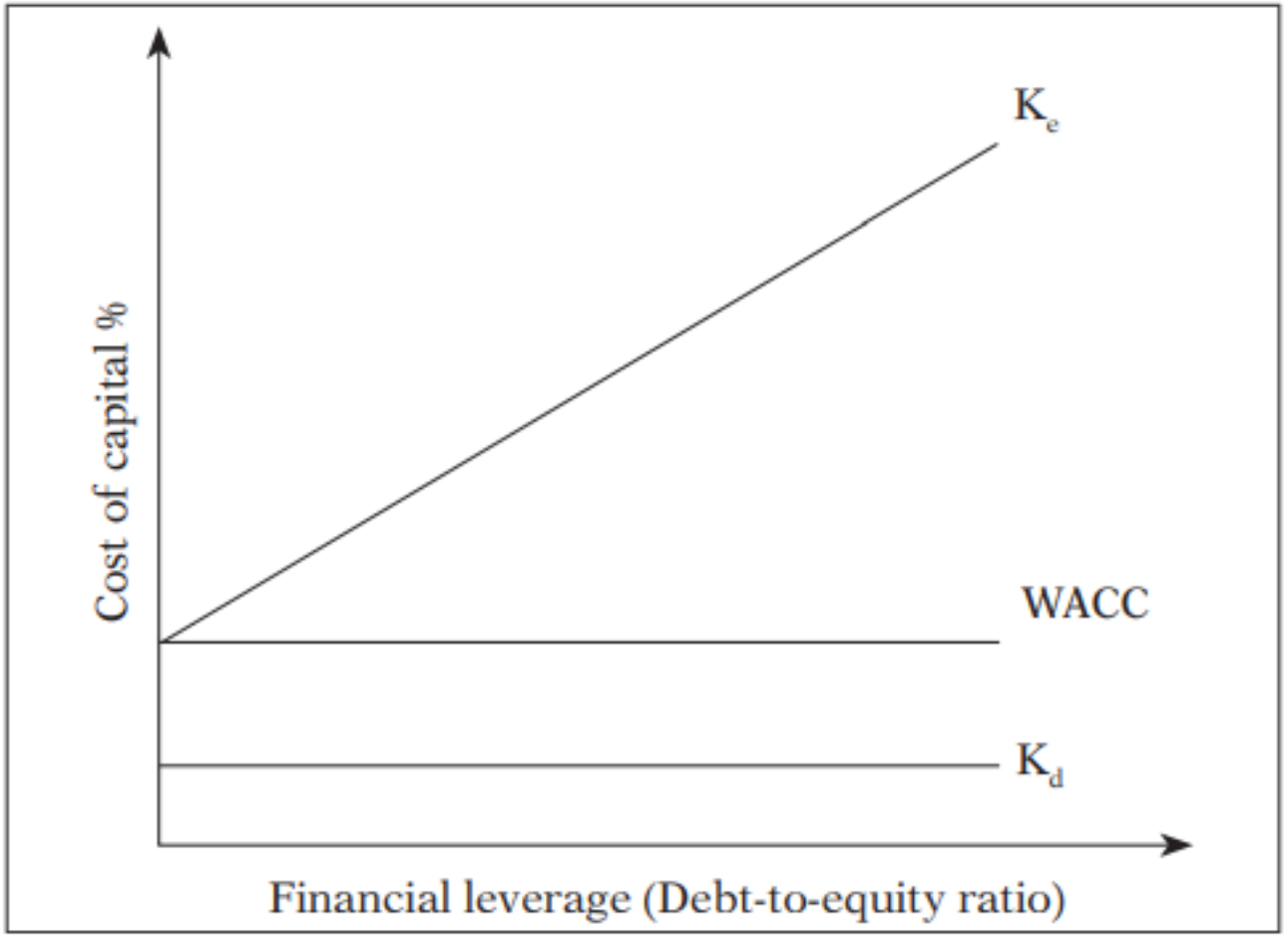
NET OPERATING INCOME APPROACH

Ko is the overall cost of capital and depends on the business risk of the firm, which is not affected by the capital mix.

Assumptions:

- The market capitalizes the value of the firm as a whole and the split between debt and equity is not important.
- The business risk remains constant at every level of debt - equity mix.
- There are no corporate taxes.
- The debt capitalization rate (Kd) is constant

NET OPERATING INCOME APPROACH



MM Results: Zero Taxes

- Assumptions of MM Theory
- (1) no transactions costs (2) no restrictions or costs to short sales and (3) individuals can borrow at the same rate as corporations.
- MM prove that if the total CF to investors of Firm U and Firm L are equal, then arbitrage is possible unless the total values of Firm U and Firm L are equal:
  - $V_L = V_U$.
- Because FCF and values of firms L and U are equal, their WACCs are equal.
- Therefore, capital structure is irrelevant.

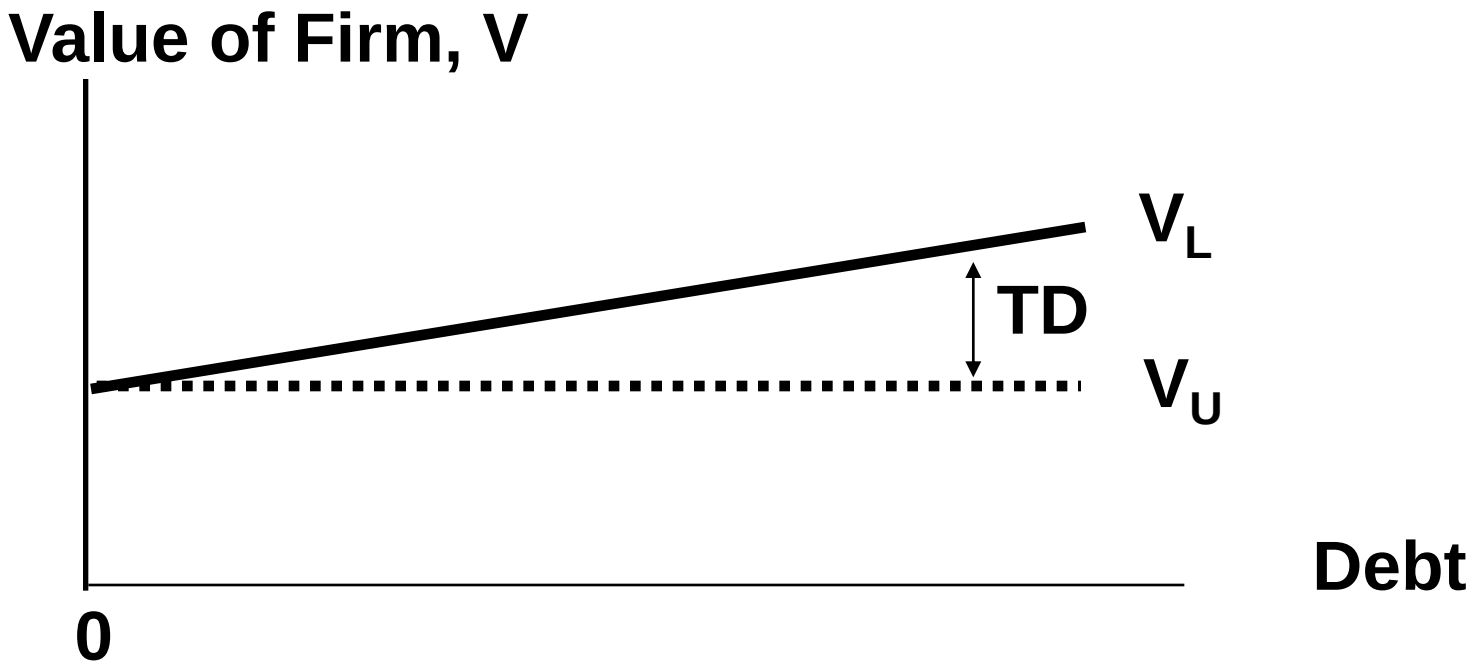
MM Theory: Corporate Taxes

- Corporate tax laws allow interest to be deducted, which reduces taxes paid by levered firms.
- Therefore, more CF goes to investors and less to taxes when leverage is used.
- In other words, the debt “shields” some of the firm’s CF from taxes.

MM Result: Corporate Taxes

- MM show that the total CF to Firm L's investors is equal to the total CF to Firm U's investor plus an additional amount due to interest deductibility:
  - $CF_L = CF_U + r_d DT$.

MM relationship between value and debt when corporate taxes are considered.



Under MM with corporate taxes, the firm's value increases continuously as more and more debt is used.

Miller's Theory: Corporate and Personal Taxes

- Personal taxes the advantage of corporate debt:
  - Corporate taxes favor debt financing since corporations can deduct interest expenses.
  - Personal taxes favor equity financing, since no gain is reported until stock is sold, and long-term gains are taxed at a lower rate.

Miller's Model with Corporate and Personal Taxes

$$V_L = V_U + \left(1 - \frac{(1 - T_c)(1 - T_s)}{(1 - T_d)}\right) D$$

T_c = corporate tax rate.
T_d = personal tax rate on debt income.
T_s = personal tax rate on stock income.

$T_c = 40\%$, $T_d = 30\%$, and $T_s = 12\%$.

$$V_L = V_U + \left(1 - \frac{(1 - 0.40)(1 - 0.12)}{(1 - 0.30)}\right)D$$

$$= V_U + (1 - 0.75)D$$

$$= V_U + 0.25D.$$

Value rises with debt; each \$1 increase in debt raises L's value by \$0.25.

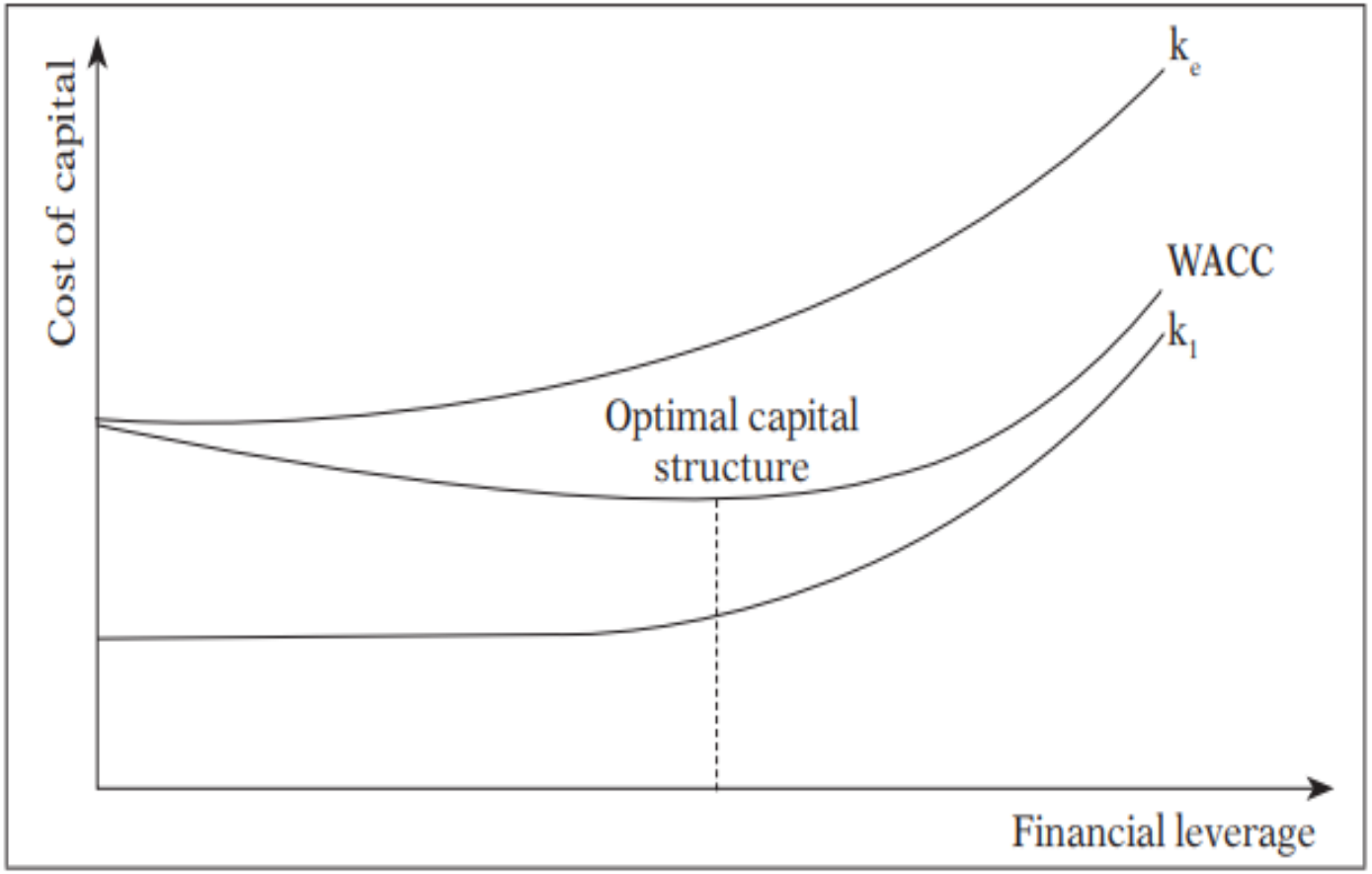
TRADITIONAL APPROACH

This approach favours that as a result of financial leverage up to some point, cost of capital comes down and value of firm increases. However, beyond that point, reverse trends emerge.

As per Traditional Approach:

- $K_{d,}$ K_e, K_o and MV of Equity and MV of Firm are variable
- Company has to select capital structure with lowest K_o or highest MV of Firm

TRADITIONAL APPROACH



Meaning

The traditional approach refers to a conventional or established method of doing something, often based on long-standing practices, customs, or beliefs. It involves following a well-trodden path or adhering to a familiar way of thinking or behaving.

Characteristics of Traditional approach

1. Established methods : Relies on tried-and-true methods and techniques.
2. Rule-based : Follows established rules, guidelines, and protocols.
3. Linear thinking : Involves a step-by-step, sequential approach to problem-solving.
4. Focus on efficiency : Prioritizes efficiency, productivity, and cost-effectiveness.
5. Resistance to change : Can be slow to adapt to new ideas, technologies, or innovations.

Examples of Traditional Approach

1. Business management: Hierarchical organizational structures, traditional leadership styles, and established business processes.
2. Education: Lecture-based teaching methods, standardized testing, and traditional grading systems.
3. Healthcare: Conventional medical treatments, pharmaceutical-based approaches, and hospital-centric care.
4. Manufacturing : Mass production, assembly-line manufacturing, and traditional supply chain management.

Advantages of Traditional apporach

1. Established and Proven: Traditional approaches are often based on established and proven methods, reducing the risk of errors or failures.

2. Efficient and Productive: Traditional approaches can be efficient and productive, as they often involve streamlined processes and optimized resource utilization.

3. Cost-Effective: Traditional approaches can be cost-effective, as they often have low overhead costs and can take advantage of economies of scale.

4. Accountable and Controllable: Traditional approaches often have clear roles and responsibilities, ensuring accountability and control.

5. Risk Management: Traditional approaches often have established risk management processes in place, reducing the risk of errors or failures.

6. Easy to Implement: Traditional approaches often involve well-established processes and procedures, making them easy to implement.

7. Wide Acceptance: Traditional approaches are often widely accepted within industries, making it easier to communicate and collaborate with others.

8. Regulatory Compliance: Traditional approaches often ensure regulatory compliance, reducing the risk of non-compliance.

9. Predictable Outcomes ：Traditional approaches provide predictable outcomes and results.

10. Stability and Consistency: Traditional approaches provide stability and consistency, which can be beneficial in certain industries or situations.

Disadvantages of Traditional Approach

Inflexibility:

1. Resistance to change: Traditional approaches can be inflexible and resistant to change.
2. Difficulty in adapting to new technologies : Traditional approaches may struggle to adapt to new technologies or innovations.

Limited Innovation:

1. Lack of creativity: Traditional approaches may stifle creativity and innovation.
2. Limited experimentation: Traditional approaches may not encourage experimentation or trying new things.

Inefficient Use of Resource :

1. _Inefficient use of resources_: Traditional approaches may not optimize resource utilization, leading to waste and inefficiency.

2. _Duplication of efforts_: Traditional approaches may involve duplication of efforts, leading to wasted time and resources.

Poor Communication:

1. _Hierarchical communication_: Traditional approaches may involve hierarchical communication, which can lead to poor communication and decision-making.

2. _Limited feedback_: Traditional approaches may not encourage feedback or open communication.

Lack of Employee Engagement:

1. _Limited employee autonomy_: Traditional approaches may not provide employees with autonomy or ownership of their work.

2. _Low employee motivation_: Traditional approaches may not motivate employees or provide them with a sense of purpose.

Investment decision rule of Traditional approach

Investment Decision Rules

1. Payback Period:

The traditional approach uses the payback period to evaluate investment opportunities. The payback period is the time it takes for an investment to generate cash flows that equal its initial cost.

2. Accounting Rate of Return:

The traditional approach also uses the accounting rate of return (ARR) to evaluate investment opportunities. The ARR is calculated by dividing the average annual profit by the initial investment.

3. Net Present Value (NPV):

While not always used in traditional approaches, NPV is a widely accepted method for evaluating investment opportunities. NPV calculates the present value of future cash flows and subtracts the initial investment.

4. Internal Rate of Return (IRR):

. The traditional approach may also use IRR to evaluate investment opportunities. IRR calculates the rate of return of an investment based on the initial investment and future cash flows.

Decision Rules

1. Accept if Payback Period is less than a certain threshold:

If the payback period is less than a certain threshold (e.g., 3 years), the investment is accepted.

2. Accept if ARR is greater than a certain threshold:

If the ARR is greater than a certain threshold (e.g., 15%), the investment is accepted.

3. Accept if NPV is positive:

If the NPV is positive, the investment is accepted.

4. Accept if IRR is greater than the cost of capital:

If the IRR is greater than the cost of capital, the investment is accepted.

Limitations -

1. Ignores risk and uncertainty: Traditional approaches often ignore risk and uncertainty associated with investment opportunities.
2. Fails to consider qualitative factors: Traditional approaches often fail to consider qualitative factors, such as strategic alignment and competitive advantage.
3. May lead to suboptimal decisions: Traditional approaches may lead to suboptimal decisions, as they often rely on simplistic decision rules.

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