Definizioni Economics

Financial accounting: is concerned with reporting financial information to external parties, such as stockholders, creditors, and regulators.

Managerial accounting: is concerned with providing information to managers within an organization so that they can formulate plans, control operations, and make decisions.

Direct costs: Costs that can be easily and conveniently traced to a unit of product or other cost object (Examples -> direct material and direct labor).

Indirect costs: Costs that cannot be easily and conveniently traced to a unit of product or other cost object. Example: manufacturing overhead.

Common costs: Indirect costs incurred to support a number of cost objects. These costs cannot be traced to any individual cost object.

Direct materials: are raw materials that become an integral part of the product and that can be conveniently traced directly to it.

Direct Labor: costs are those labor costs that can be easily traced to individual units of product.

Manufacturing overhead: includes all manufacturing costs except direct material and direct labor. These costs cannot be readily traced to finished products.

Selling costs: Costs necessary to secure the order and deliver the product. Selling costs can be either direct or indirect costs.

Administrative Costs: all executive, organizational, and clerical costs. Administrative costs can be either direct or indirect costs.

Product costs: include all costs that are involved in acquiring or making a product.

For **manufacturing companies**, product costs include:

- Raw materials: includes any materials that go into the final product.
- Work in process: consists of units of product that are only partially complete and will require further work before they are ready for sale to the customer.
- Finished goods costs: consists of completed units of product that have not yet been sold to customers.

Cost behavior refers to how a cost will react to changes in the level of activity. The most common classifications are:

• Variable costs: a cost that varies, in total, in direct proportion to changes in the level of activity;

• Fixed costs: A cost that remains constant, in total, regardless of changes in the level of the activity;

• Mixed costs: contains both variable and fixed elements.

Cost classification for decision making

- **Differential costs:** are the difference in cost between any two alternatives;
- **Sunk costs:** costs have already been incurred and cannot be changed now or in the future. These costs should be ignored when making decisions;
- **Opportunity costs:** the potential benefit that is given up when one alternative is selected over another.

Quality of conformance: Costs incurred to prevent defects or that result from defects in products are known as quality costs.

Quality Costs

Prevention costs: Support activities whose purpose purpose is to reduce the number of defects (ex. Quality training).

Appraisal costs: incurred to identify defective products are shipped to customers (ex. Final product testing).

Internal Failure Costs: Incurred as a result of identifying defects before they are shipped (ex. Rework).

External Failure Costs: Incurred as result of defective products being delivered to customers (ex. Lost sales).

Capital Budgeting Decisions

- **Screening decisions.** Does a proposed project meet some preset standard of acceptance?
- **Preference decisions.** Selecting from among several competing courses of action

Time value of the money: The capital budgeting techniques that best recognize the time value of money are those that involve discounted cash flows.

The payback method: focuses on the payback period, which is the length of time that it takes for a project to recoup its initial cost out of the cash receipts that it generates. Is equal to: Investment required/ Annual net cash inflow.

The net present value method: compares the present value of a project's cash inflows with the present value of its cash outflows. The difference between these two streams of cash flows is called the net present value.

The internal rate of return is the rate of return promised by an investment project over its useful life. It is computed by finding the discount rate that will cause the net present value of a project to be zero.

Present Value of a Series of Cash Flows: an investment that involves a series of identical cash flows at the end of each year is called an annuity.

Master budgeting

A **budget** is a detailed quantitative plan for acquiring and using financial and other resources over a specified forthcoming time period.

1. The act of preparing a budget is called budgeting.

2. The use of budgets to control an organization's activities is known as budgetary control.

Difference between planning and control:

Planning involves developing objectives and preparing various budgets to achieve those objectives.

Control involves the steps taken by management to increase the likelihood that the objectives set down while planning are attained and that all parts of the organization are working together toward that goal.

A self-imposed budget or participative budget is a budget that is prepared with the full cooperation and participation of managers at all levels. The advantages are:

1. Individuals at all levels of the organization are viewed as members of the team whose judgments are valued by top management.
2. Budget estimates prepared by front-line managers are often more accurate than estimates prepared by top managers.
3. Motivation is generally higher when individuals participate in setting their own goals than when the goals are imposed from above.
4. A manager who is not able to meet a budget imposed from above can claim that it was unrealistic. Self-imposed budgets eliminate this excuse.

Human Factors in budgeting

1. Top management must be enthusiastic and committed to the budget process.
2. Must to use the budget to pressure employees or blame them when something goes wrong.
3. Highly achievable budget targets are usually preferred when managers are rewarded based on meeting budget targets.

MANAGEMENT OF TECHNOLOGICAL INNOVATION

Strategic Management of Technological Innovation

1. The foundations of technological Innovation (Sources of innovation, Types and patterns of innovation, Standards battles and design dominance, Timing of Entry);
2. Formulating Technological Innovation Strategy (Defining the organization's strategic direction, choosing innovation projects, Collaboration strategies, Protecting innovation);
3. Implementing Technological Innovation Strategy (Organizing for innovation, Managing the new product development process, Managing new product development teams, Crafting a deployment strategy).

Source of innovation

Product innovation: Refers to a change in the product. For example improvements in the perform or in the features of a product.

Process innovation: involves improvements in the process of producing a product. It includes changes all the value chain activities.

Basics Research: aims at increasing understanding of a topic or field to meet a specific need.

Development: refers to activities that apply knowledge to produce useful devices, materials or processes.

Science push: innovation was seen to begin with scientific discovery, passing through invention, engineering and manufacturing activities and ending with the marketing of a new product or process.

Demand pull: innovation was seen to begin with costumers suggestion, passing though invention, and ending with manufacturing.

Technology cluster: are regional clusters of firms that have a connection to a common technology.

Technological spillovers: occur when the benefits from the research activities of one entity spill over to other entities.

Knowledge brokers: are individuals or firms that transfer information from one domain to another in which it can be usefully applied. Example: By serving as a bridge between two separate groups of firms, brokers can find unique combinations of knowledge processed by the two groups.

Technology S-Curve: Technology improves slowly at first because it is poorly understood. Then accelerates as understanding increases. Then tapers off as approaches limits. The main phases of an S-curve are:

- Adoption is initially slow because the technology is unfamiliar.
- It accelerates as technology becomes better understood.
- Eventually market is saturated and rate of new adoptions declines.
- Technology diffusion tends to take far longer than information diffusion.

Timing of entry

Being a first mover can confer the advantages of:

- Brand loyalty and technological leadership;
- Preemption of scarce assets;
- Exploiting buyer switching costs;
- Reaping increasing returns advantages.

However, first movers often bear disadvantages also:

- High research and development expenses;
- Undeveloped supply and distribution channels;
- Immature enabling technologies and complements;
- Uncertainty of customer requirements.

Collaboration strategies

Collaborating can offer the following advantages:

- Obtaining needed skills or resources more quickly
- Reducing asset commitment and increase flexibility
- Learning from partner
- Sharing costs and risks
- Can build cooperation around a common standard

There are numerous types of collaborative arrangements, each with its own advantages or costs.

1. **Strategic Alliances:** formal or informal agreements between two or more organizations (or other entities) to cooperate in some way.
2. **Joint Ventures**: A particular type of strategic alliance that entails significant equity investment and often establishes a new separate legal entity.

3. **Licensing:** a contractual arrangement that gives an organization (or individual) the rights to use another's intellectual property, typically in exchange for royalties.
4. **Outsourcing:** When an organization (or individual) procures services or products from another rather than producing them in-house.
5. **Collective Research Organizations:** Organizations formed to facilitate collaboration among a group of firms.

Protecting Innovation

Appropriability: The degree to which a firm is able to capture the rents from its innovation. Appropriability is determined by how easily or quickly competitors can copy the innovation.

Patents, trademarks and copyrights each protect different things.

- **Patents**: rights granted by the government that excludes others from producing, using, or selling an invention.
- **Trademarks and Service Marks**: a word, phrase, symbol, design, or other indicator that is used to distinguish the source of goods form one party from goods of another (e.g., Nike "swoosh" symbol).
- **Copyright:** a form of protection granted to works of authorship.

OTHER DEFINITION

Radicalness of an innovation: is the degree to which it is the new and different from previously existing products and processes.

Incremental innovation: May involve only a minor change from existing practise.

Competence-enchanging: innovations build on the firm existing knowledge base

Competence-destroying: innovations renders a firm's existing competencies obsolete

Component innovation: entails changes to one or more components of a product system without significantly affecting the overall design

Architectural invention: entails changing the overall design of the system or the way component interact

Fluid phase: where there is considerable uncertainly about the technology and its market; firms experiment with different product designs in this phase

Specific phase: after a dominant design emerges. It begins when firms focus on incremental improvement to the design and manufacturing efficiency.

Standalone value: is the value of a company in its present condition. This includes the assets owned, personnel, business relationships and other variables. This value determines the company valutation in relation to other companies in the same industry.

Network externality value: has been defined as a change in the benefit, or surplus, that an agent derives from a good when the number of the other agents consuming the same kind of good changes.

First mover: are the first entrants to sell in a new product or service category.

Early followers: are early to market but not first.

Peter's five-force model

1. **Degree of existing rivalry:** determined by number of firms, relative size, degree of differentiation between firms demand conditions exit barriers
2. **Threat of potential entrants:** determined by attractiveness of industry height of entry barriers
3. **Bargaining power of suppliers:** determined by number of suppliers and their degree of differentiation, the portion of a firm's input obtained from a particular supplier, the portion of a suppliers sales sold to a particular firm, switching cost and potential for vertical integration.
4. **Bargaining power of buyers:** determined by number of buyers and their degree of differentiation, the portion of a firm's input obtained from a particular supplier, the portion of a suppliers sales sold to a particular firm, switching cost and potential for vertical integration.
5. **Threat of substitute:** determined by number of potential substitutes, their closeness in function and a relative price.

Modern Project Management

• Project Defined (according to PMI)

–A temporary attempt undertaken to create a unique product, service, or result

• Major Characteristics of a Project

–Has an established objective

–Has a defined life span with a beginning and an end

–Requires across-the-organizational participation

–Involves doing something never been done before

–Has specific time, cost, and performance requirements

· **Project**: completion of a required course in project management.

· **Program**: completion of all courses required for a business major.

Organization Strategy and Project Selection

Characteristics of objectives

- **S Specific** Be specific in targeting an objective
- **M Measurable** Establish a measurable indicator(s) of progress
- **A Assignable** Make the objective assignable to one person for completion
- **R Realistic** State what can realistically be done with available resources
- **T Time related** State when the objective can be achieved, that is, duration

Design of a project portfolio system:

– Classification of a project

– Selection criteria depending upon classification

– Sources of proposals

– Evaluating proposals

– Managing the portfolio of projects.

Selection Criteria

– **Financial models**: payback, net present value (NPV)

– **Non-financial models**: projects of strategic importance to the firm

Multi-Criteria Selection Models

· Checklist Model

– Uses a list of questions to review potential projects and to determine their acceptance or rejection.

– Fails to answer the relative importance or value of a potential project and doesn't to allow for comparison with other potential projects.

· Multi-Weighted Scoring Model

– Uses several weighted qualitative and/or quantitative selection criteria to evaluate project proposals.

– Allows for comparison of projects with other potential projects.

Organization: Structure and Culture

Project Management Structures

· **Challenges to Organizing Projects**: the uniqueness and short duration of projects relative to ongoing longer-term organizational activities. The multidisciplinary and cross-functional nature of projects creates authority and responsibility dilemmas.

· **Choosing an Appropriate Project Management Structure**: a good system balances the needs of the project with the needs of the organization.

Different Matrix Forms

· **Weak Form**

– The authority of the functional manager predominates and the project manager has indirect authority.

· **Balanced Form**

– The project manager sets the overall plan and the functional manager determines how work to be done.

· **Strong Form**

– The project manager has broader control and functional departments act as subcontractors to the project.

Defining the Project

1. **Defining the Project Scope**: A definition of the end result or mission of the project a product or service for the client/customer.
2. **Establishing Project Priorities**: Budget–Cost, Schedule–Time, Performance–Scope
3. **Creating the Work Breakdown Structure**: Work Breakdown Structure (**WBS**), a hierarchical outline (map) that identifies the products and work elements involved in a project. Defines the relationship of the final deliverable (the project) to its subdeliverables, and in turn, their relationships to work packages. Best suited for design and build projects that have tangible outcomes rather than process-oriented projects.
4. **Integrating the WBS with the Organization:** Organizational Breakdown Structure (OBS), depicts how the firm is organized to discharge its work responsibility for a project.
5. **Coding the WBS for the Information System**: defines
   • Levels and elements of the WBS
   • Organization elements
   • Work packages
   • Budget and cost information

Estimating Project Times and Costs

· **Estimating**

– The process of forecasting or approximating the time and cost of completing project deliverables

– The task of balancing expectations of stakeholders and need for control while the project is implemented

· **Types of Estimates**

– Top-down (macro) estimates: analogy, group consensus, or mathematical relationships

– Bottom-up (micro) estimates: estimates of elements of the work breakdown structure

Types of Costs

· **Direct Costs:** Costs that are clearly chargeable to a specific work package (Labor, materials, equipment, and other)

· **Direct (Project) Overhead Costs:** Costs incurred that are directly tied to project deliverables or work packages (Salary, rents, supplies, specialized machinery)

· **General and Administrative Overhead Costs:** Organization costs indirectly linked to a specific package that are apportioned to the project.

Managing Risk

· **Risk:** Uncertain or chance events that planning cannot overcome or control

· **Risk Management:** An attempt to recognize and manage potential and unforeseen trouble spots that may occur when the project is implemented

1. **Risk Identification**

   – Generate a list of possible risks through brainstorming, problem identification and risk profiling

   – Use risk breakdown structure (RBS) in conjunction with work breakdown structure (WBS) to identify and analyze risks

2. **Risk Assessment**

   – Scenario analysis for event probability and impact

   – Risk assessment form

   – Risk severity matrix

   – Probability analysis

3. **Risk Response Development**

   – Mitigating Risk

      · Reducing the likelihood an adverse event will occur

      · Reducing the impact of an adverse event

   – Avoiding Risk

      · Changing the project plan to eliminate the risk or condition

   – Transferring Risk

      · Paying a premium to pass the risk to another party

      · Requiring Build-Own-Operate-Transfer (BOOT) provisions

– Accepting Risk

• Making a conscious decision to accept the risk

4. **Risk Response Control**

– Risk control: Execution of the risk response strategy, monitoring of triggering events…

– Establishing a Change Management System: Monitoring, tracking, and reporting risk

Scheduling Resources and Costs

Types of Project Constraints

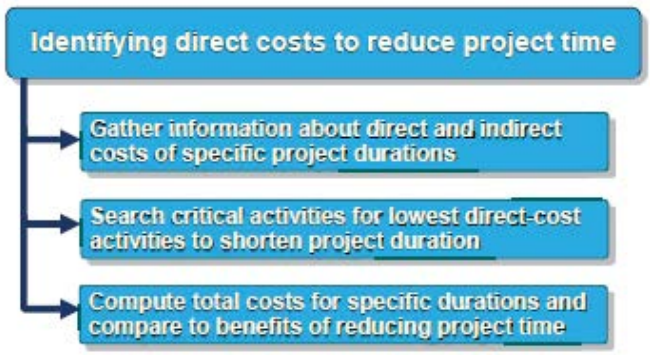
• **Technical or Logic Constraints**: Constraints related to the networked sequence in which project activities must occur

• **Physical Constraints**: Activities that cannot occur in parallel or are affected by contractual or environmental conditions

• **Resource Constraints**: The absence, shortage, or unique interrelationship and interaction characteristics of resources that require a particular sequencing of project activities

Splitting: A scheduling technique for creating a better project schedule and/or increase resource utilization.

Reducing Project Duration



Being an Effective Project Manager

Management by Wandering Around (MBWA)

– Involves managers spending the majority of their time in face-to-face interactions with employees building cooperative relationships.

Characteristics of Effective Project Managers

– Initiate contact with key stakeholders

– Anticipate potential problems

– Provide encouragement

– Reinforce the objectives and vision of the project

– Intervene to resolve conflicts and prevent stalemates

Outsourcing: Managing Interorganizational Relations

Outsourcing: The process of transferring of business functions or processes (e.g., customer support, IT, accounting) to other companies

Best Practices in Outsourcing Project Work

• Well-defined requirements and procedures

• Extensive training and team-building activities

• Well-established conflict management processes in place

• Frequent review and status updates

• Co-location when needed

• Fair and incentive-laden contracts

• Long-term outsourcing relationships

Contract Management

Types of Contracts

• **Fixed-Price (FP) Contract or Lump-sum Agreement:** The contractor with the lowest bid agrees to perform all work specified in the contract at a fixed price. The disadvantage for owners is that it is more difficult and more costly to prepare.

• **Cost-Plus Contracts:** The contractor is reimbursed for all direct allowable costs (materials, labor, travel) plus an additional priornegotiated fee (set as a percentage of the total costs) to cover overhead and profit. Risk to client is in relying on the contractor's best efforts to contain costs.

Project Closure

Types of Project Closure

– Normal: The common condition of project closure is when the project is completed as planned. This is when the project objectives are achieved, the client accepts the project and normal project closure commences.

– Premature: Many projects do not achieve all their deliverables or are not given the opportunity to so. Instead, they are closed prematurely by eliminating elements of the project originally identified in the project scope. This could be for the reason of costs, where the client reduces funds on the project or the project has already consumed the budget. Premature closure also

occurs when the project is of strategic importance and must be delivered earlier than expected, such as a new product launch.

– Perpetual: Conversely, some projects never seem to end. These are projects that have had numerous delays, set backs and problems. The problem with these types of projects is that they never achieve their goals or objectives, due to the changes and consistent scope screep. This becomes highly frustrating for the project manager and the project team. It will also be highly frustrating for the client as they do not see the objectives of the project being achieved, despite the consistent request for changes. At some point the project manager needs to fix the scope and plan for closure. Redefining the project scope so project closure is forced, limiting budget or resources, or setting a time limit can do this.

– Failed Project: Far too often projects close because they have failed. There are a number of causes for project failure. It is not uncommon for the client to run out of funds, thus permanently killing the project.

– Changed Priority

The Project Audit Process

1. Initiating and Staffing

- Depends primarily on organization and project size

- The outcome must represent an independent, outside view of the project.

2. Data Collection and Analysis

Gather information and data to answer questions from:

- Organization view

- Project team view

3. Reporting

- The report attempts to capture needed changes and lessons learned from a current or finished project.

Retrospectives: Denote specific efforts at identifying lessons learned on projects.

An Independent Facilitator: Guides the project team through the analysis project activities.