



University of Miskolc
Institute of Finance and Accounting

Department of Accountancy

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#### **DEFINITION**

 An accounting information system (AIS) is a system of collecting, storing and processing financial and accounting data that is used by decision makers. An accounting information system is generally a computer-based method for tracking accounting activity in conjunction with information technology resources.  An accounting information system combines traditional accounting practices, such as the Generally Accepted Accounting Principles (GAAP), with modern information technology resources.



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## What are Accounting Information Systems?

An information system is a formal process for

- 1. collecting data,
- 2. processing the data into information, and
- 3. **distributing** that information to users.

The purpose of an accounting information system (AIS) is to

- collect,
- store, and
- process

financial and accounting data and

 produce informational reports that managers or other interested parties can use to make business decisions.

# Functions of an Accounting Information System

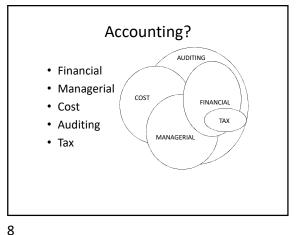
- Efficient and effective collection and storage of data concerning an organization's financial activities, including
  - getting the transaction data from source documents,
  - recording the transactions in journals, and
  - posting data from journals to ledgers.
- 2. Supply information useful for making decisions, including producing managerial reports and financial statements.
- 3. Make sure **controls** are in place to accurately record and process data.

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## Parts of an Accounting Information System

- 1. People who use the system, including
  - accountants,
  - managers, and
  - business analysts
- 2. Procedure and instructions are the ways that data are collected, stored, retrieved, and processed
- 3. Data including all the information that goes into an AIS
- Software consists of computer programs used for processing data
- 5. Information technology infrastructure includes all the hardware used to operate the AIS
- 6. Internal controls are the security measures used to protect data



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## The Reliability of Accounting Information Systems

Because an AIS stores and provides such valuable business information, reliability is vitally important. These are five basic principles important to AIS reliability:

- Security Access to the system and its data is controlled and limited only to those authorized.
- Confidentiality The protection of sensitive information from unauthorized disclosure.
- Privacy The collection, use, and disclosure of personal information about customers is done in an appropriate manner.
- Processing integrity The accurate, complete, and timely processing
  of data done with proper authorization.
- Availability The system is available to meet operational and contractual obligations.

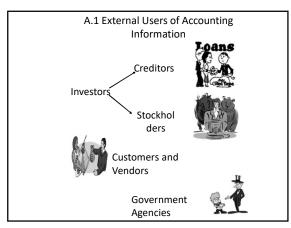
The Role of Accounting Internal Managers Planning Measure Inputs and Outputs Directing **Timeliness** Controlling Identify Responsibility Forward-Looking Shareholders Verifiable Financial Investment Creditors Credit Measure Organizational Value Other External Measure Risk of Organization Consistent with IFRS Users Taxing Authorities Tax Liability Measure Past Income

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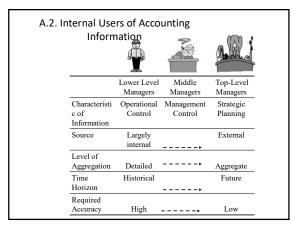
The Users of Accounting Information



- A. External vs. Internal Users of Accounting Information
- B. Mandatory vs. Discretionary Information



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B. Mandatory vs. Discretionary Information

#### **Mandatory Information**

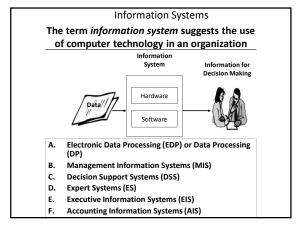
Certain types of information must be generated regardless of the cost:

- ❖ Government reports
- ❖ Payroll
- Basic bookkeeping

#### **Evaluation Criteria**

- For mandatory information, the primary concern is minimization of cost.
- In contrast, discretionary information should provide greater benefits than the cost of generating it.

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A. Electronic Data Processing (EDP) or Data Processing (DP)



Use of computer technology to perform an organization's transaction-oriented data processing.

P systems serve routine, recurring, general information needs.

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## B. Management Information Systems (MIS)

Use of computer technology to provide managers with decision-oriented information beyond what a normal DP system provides.

Subsystems include:

- Marketing information system
   Manufacturing information
- Manufacturing information systemHuman resource information
- system

Financial information system

Functional MIS subsystems provide a logical rather than physical way of implementing the MIS concept in organizations.



C. Decision Support Systems (DSS)

Processes data into a decision making format for end users.

Decision support systems (DSS's) process nonroutine information requests on an ad hoc basis.

Requires the use of decision models and specialized databases beyond what is in a DP system.

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#### D. Expert Systems (ES)

Emulates an experts decision making process to provide a decision. Different from DSS which only provides information for making a decision.

- Two components of the ES are as follows:
- Knowledge base special knowledge that an expert possesses in the decision area.
- Inference engine process by which expert makes the decision.



## E. Executive Information System (EIS)

- Executive information systems tailor information to the strategic needs of top-level management.
- Much of the information used by top-level management comes from sources outside the organizations information system. (i.e., meetings, memos, television, periodicals, and social activities).

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## F. Accounting Information Systems (AIS)



- A computer-based system designed to transform accounting data into information.
- Can also include transactions processing cycles, the use of information technology, and the development of information systems.

#### **Transaction Processing Cycles**

The transaction processing cycles provide a means of viewing the activities of a business.



- A. Revenue Cycle
- B. Expenditure Cycle
- C. Production Cycle
- D. Finance Cycle
- E. Financial Reporting Cycle

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#### A. Revenue Cycle

Events related to the distribution of goods and services to other entities and the collection of related payments



#### B. Expenditure Cycle



Events related to the acquisition of goods and services from other entities and the settlement of related obligations.

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#### C. Production Cycle

Events related to the transformation of resources into goods and services.



#### D. Finance Cycle



Events related to the acquisition and management of capital funds, including cash.

The treasurer is responsible for the finances of the business.

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#### E. Financial Reporting Cycle

- Not an operating cycle
- This cycle obtains accounting and operating data from other cycles and processes this data so that financial reports can be prepared.



Types of accounting information

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### Comparison of Financial and Managerial

Accounting			
Financial Accounting	Managerial Accounting		
Externally focused  - Public information  - For all stakeholders: Investors, creditors, customers, suppliers, government agencies, and labor unions	Internally focused - Private information - Only for management		
Objective financial information: must follow externally imposed rules - Strong regulation - Standard documents - Reporting period: financial year	Financial and nonfinancial information; subjective information possible: No mandatory rules Weak regulation Non-standard documents Reporting period (?)		
Historical orientation: Investment decisions, stewardship evaluation, monitoring activity, and regulatory measures	Emphasis on the future		
Information about the firm as a whole All operations: exchange between entity and its	Internal evaluation and decisions based on very detailed information Operations and other events: focus on		

Comparison of financial and management accounting I.

Tinancial Accounts Management Accounts

Financial Accounts	Management Accounts		
	Are used to help management record, plan and control the activities of a business and to assist in the decision-making process.		
	They can be prepared <b>for any period</b> (for example, many retailers prepare daily management information on sales, margins and stock levels).		
	There is <b>no legal requirement</b> to prepare management accounts, although few (if any) well-run businesses can survive without them.		
	There is <b>no pre-determined format for management accounts.</b> They can be as detailed or brief as management wish.		

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Comparison of financial and management accounting II.		
Financial Accounts	Management Accounts	
	Can focus on specific areas of a business' activities. For example, they can provide insights into performance of:	
For example, sales are aggregated to provide a figure for total sales rather than publish a detailed analysis of sales by product, market etc.	Products     Separate business locations (e.g. shops)	• Financia • reportin
	Usually include a wide variety of non- financial information, for example, analysis of:	
	Employees (number, costs, productivity)     Sales volumes (units sold etc.)     Customer transactions (e.g. number of	• Bookkee
By definition, financial accounts present a historic perspective on the financial	calls received into a call centre)  Largely focus on analysing historical	Docume
performance of the business	However, they also usually include some forward-looking elements - e.g. a sales	

# Structure of accounting Financial accounting Financial (external) reporting • Managerial accounting reporting • Managerial (internal) reporting • Bookkeeping • Bookkeeping, planning, budgeting, analyzing

· Documenting

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#### **Differences and Similarities**

- Both deal with the same accounting data
- Both managerial and financial accounting deal with economic events of a business
- Both require that economic events be quantified and communicated to interested parties
  - Financial external
  - Managerial- internal

## Managerial or Management Accounting

- Industrial Revolution more complex production process
  - Cost became important
  - Cost accounting (forerunner of managerial accounting)
    - Cost of an object product, segment, division
       First book 1897 Garcke and Fell Factory Accounting
  - 20<sup>th</sup> century multinationals, and large companies
    - Performance evaluation
    - Budgeting
- Management accounting term used after Second World War
- Assist managerial decisions
  - Provide timely and accurate information to control costs and to measure and improve productivity; and devise improved production process
- Accurate costs important for
- Pricing decisions
- New product

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Response to rival products

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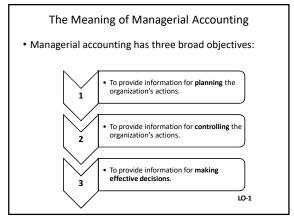
# Managerial Accounting Objectives

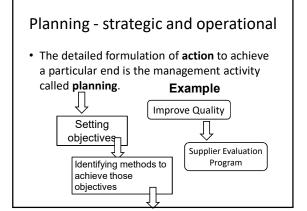
- Provide information for planning and decision making be a part of it
- Assist managers in daily control of operations
- Motivate the managers and other employees towards the company goals-goal congruence
- Performance measurement of managers
- Strategic planning determine competitive position and long-run success of the company

#### Managerial Accounting Characteristics

- Internal manager oriented
- Future looking planning
- Involves estimates
- · More timely and relevant data necessary
- Adaptive to changing business environment
- Cross-functional brings together production, marketing, managerial accountants and other key personnel

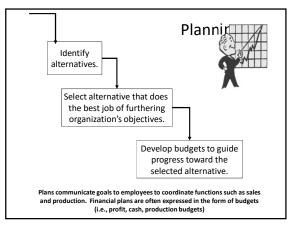
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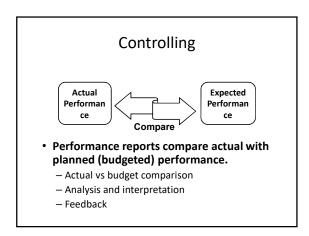




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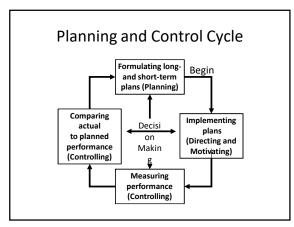
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Decision Making - Generate, analyze and report relevant information

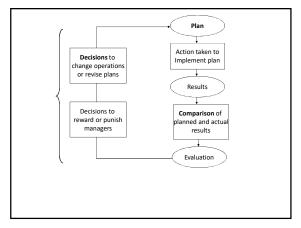
• The process of choosing among competing alternatives is called decision making.

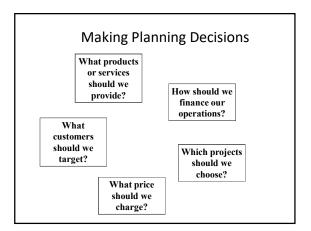
Competing Alternative #1

Competing Alternative #2



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Thank you for your attention!

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