

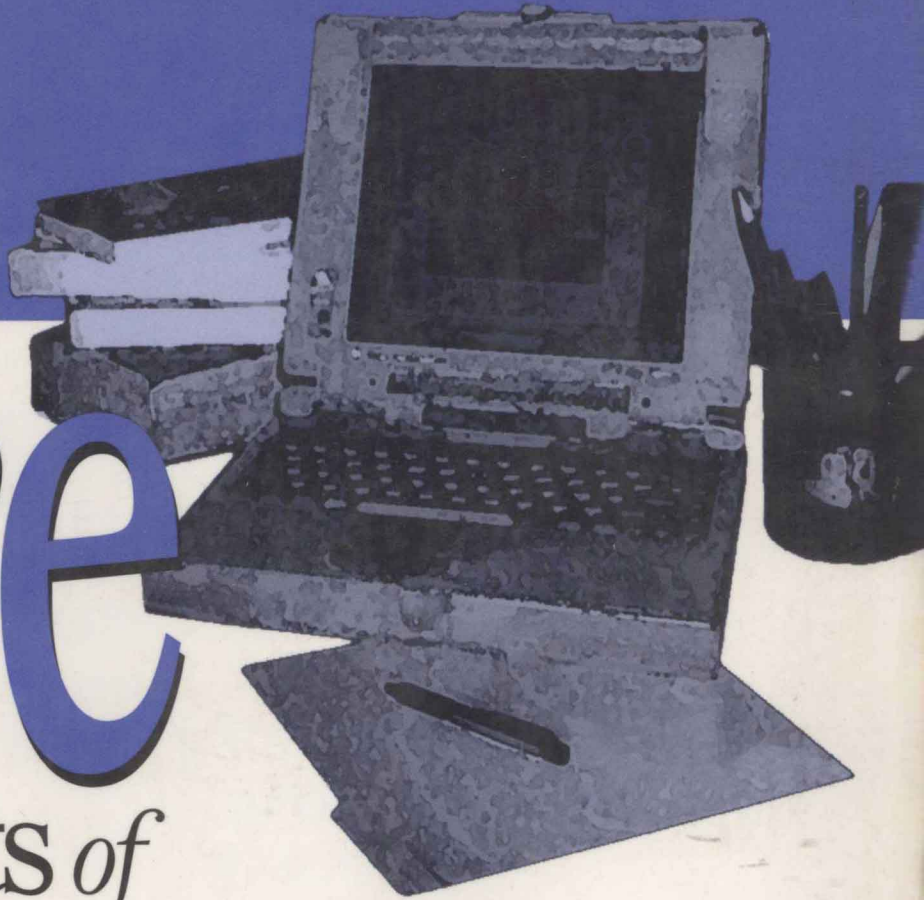
Core

Concepts of

ACCOUNTING

INFORMATION

Karen V. Pincus



*1997/1998
Edition*

Theme III

**Accounting Issues
Involving Economic
Resources**

Core



Concepts of ACCOUNTING

INFORMATION | *Theme III*
1997/1998 Edition

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University of Arkansas

**Accounting Issues
Involving Economic
Resources**

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Theme III, Accounting Issues Involving Economic Resources**

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Theme III: Accounting Issues Involving Economic Resources

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Core Concepts of Accounting Information
Theme III: Accounting Issues Involving Economic Resources

FEEDBACK ON COURSE MATERIALS

Comments, corrections, and suggestions for future topics and assignments are greatly appreciated. Address any feedback to:

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CORE CONCEPTS OF ACCOUNTING INFORMATION

**THEME III: Accounting Issues Involving
Economic Resources**

Karen V. Pincus

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MODULE I: INTRODUCTION

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MODULE I: INTRODUCTION

Estimated Time Budget

<u>Task</u>	<u>Time Estimate</u>
Reading PART A: THE NATURE OF ECONOMIC RESOURCES	75 - 120 minutes
Assignments for Part A	
Assignment III-1A-1	60 - 120 minutes
Assignment III-1A-2	60 - 120 minutes
Assignment III-1A-3	60 - 120 minutes
Assignment III-1A-4	10 - 20 minutes
Reading PART B: THE NATURE OF ACCOUNTING INFORMATION ABOUT ECONOMIC RESOURCES	45 - 60 minutes
Assignments for Part B	
Assignment III-1B-1	45 - 60 minutes
Assignment III-1B-2	45 - 60 minutes
Assignment III-1B-3	45 - 60 minutes
Assignment III-1B-4	50 - 60 minutes
Assignment III-1B-5	30 - 45 minutes
Assignment III-1B-6	60 - 90 minutes
Assignment III-1B-7	50 - 75 minutes
Assignment III-1B-8	60 - 90 minutes

Note: These time estimates, like all the time budgets for this course, should be adjusted to suit your own learning style. Time estimates for assignments assume that readings were completed before attempting the assignments.

MODULE I: INTRODUCTION

PART A: THE NATURE OF ECONOMIC RESOURCES

*Nos numerus sumus et fruges consumere nati. (We are just statistics,
born to consume resources.)*

-- Horace (65-8 B. C.), *Epistles*, I,ii27

All organizations possess a bundle of economic resources they intend to apply to their particular purpose. Automobile manufacturers have stockpiles of metal to use in making cars. Department stores have counters on which to display their goods and cash registers on which to record their sales. A hospital has supplies of drugs and medical equipment to put to use treating patients. A government has cash to be used for public service programs and stocks of weapons to be used for national defense. These economic resources, and many others, are expected to provide benefits to the organizations in the future--in a sense, they *are* the organizations' future.

Many groups--including management, investors and creditors, government, employees or their labor unions, and others--use accounting information about economic resources to help them make decisions. In this module, we'll look at the nature of economic resources (Part A) and at the nature of accounting information about economic resources (Part B).

GETTING STARTED: LOOKING AT INDUSTRIES

*Today's big industries were small within our lifetime, many of today's
small industries will become big before our lifetime ends.*

-- W. J. Cameron

The mix of economic resources an organization needs in order to succeed will differ between industries. Hospitals need a different mix of economic resources than department stores. Department stores need a different mix of economic resources than government agencies, and so on. Thus, to understand the accounting information about an organization's economic resources, it helps to know something about the industry in which the organization operates.

Throughout the world, information about industry groups is accumulated by various government agencies and private organizations. Industry information is monitored by many decision-makers--including managers, financial analysts,

stockholders, creditors, labor unions, and consumer groups. Suppose you wanted to find out information about a particular industry. How would you go about finding it?

Information about different industries is available on many electronic databases and in many printed reference sources. For example, Dun and Bradstreet publishes books of industry norms, including the typical composition of assets for companies in each industry and financial ratios for firms in different size categories (quartiles) within the industry. Or, Disclosure, Inc. provides financial statement data and ratios for U.S. and international public companies in a CD-ROM database known as "Worldscope." This type of database can be searched to find information about many companies in a given industry. Accounting and tax rules that affect particular industries are also accessible through either printed reference materials or electronic databases.

Whether industry information is available in print or electronic media, access to the information is often organized by means of a coding system that assigns each industry group a unique code number. In the United States, there is a federally-designed standard numbering system, known as the **Standard Industrial Classification (SIC) System**, that identifies companies by industry. To find industry information, you begin by looking up the industry's SIC code in a library reference book or on an electronic database. SIC codes have many uses. For example, governments use SIC codes to gather and publish industry economic and tax data. Investors and creditors use SIC code information to find the names of companies in a particular industry and information about industry average performance. Managers use SIC codes to investigate possible sources of supply for a particular raw material, product or service and to compare their own organization to their competitors. Researchers use SIC codes to investigate the impact of changes in accounting standards or tax policy on different industries.

How An SIC Code System Works

An SIC code consists of four digits that identify a company by its principal product or service. In an SIC code, the first two digits identify the broad industry group and the last two digits provide a more specific identification of the company's product or service. The two digits that define the broad industrial groups are broken down into 10 divisions with the following ranges:

- 01 - 09 Agriculture, forestry and fishing
- 10 - 14 Mining
- 15 - 17 Construction
- 20 - 39 Manufacturing
- 40 - 49 Transportation, communication, electric, gas and sanitary services
- 50 - 59 Wholesale and retail trade
- 60 - 67 Finance, insurance and real estate services
- 70 - 89 Services (other than those named above)
- 90 - 97 Government
- 99 Nonclassifiable establishments

Exploring Industry Data

Suppose you are in the reference section of a library or hooked up to an electronic database. In either instance, if you want to find an industry's SIC code, you can look it up in an alphabetical index of SIC codes. Then, you can search a database of company information to find companies in the industry. Or, if you know the SIC code for a particular company, you can determine the principal industry in which it operates by using a numerical index of SIC codes.

Figure III-1-1, on the following page, illustrates the decoding of SIC code information for a particular company with an SIC code of 3574. The first two digits, 35, fall within the range for manufacturing, so you would know immediately that the company was a manufacturer. If you look up the 4-digit SIC code, you would find that 3574 stands for a company that manufactures calculating and accounting machines, other than electronic computing equipment.

What about companies operating in several different industries, such as Sara Lee Corporation, an industry leader in products as diverse as frozen baked goods bearing the Sara Lee name; underwear manufactured under brand names such as Hanes and Playtex; leather goods such as Coach handbags; and household products such as shoe polish (Kiwi), toilet bowl cleaner (Bloo); and so on? Companies operating in several industries are classified by two levels of SIC codes:

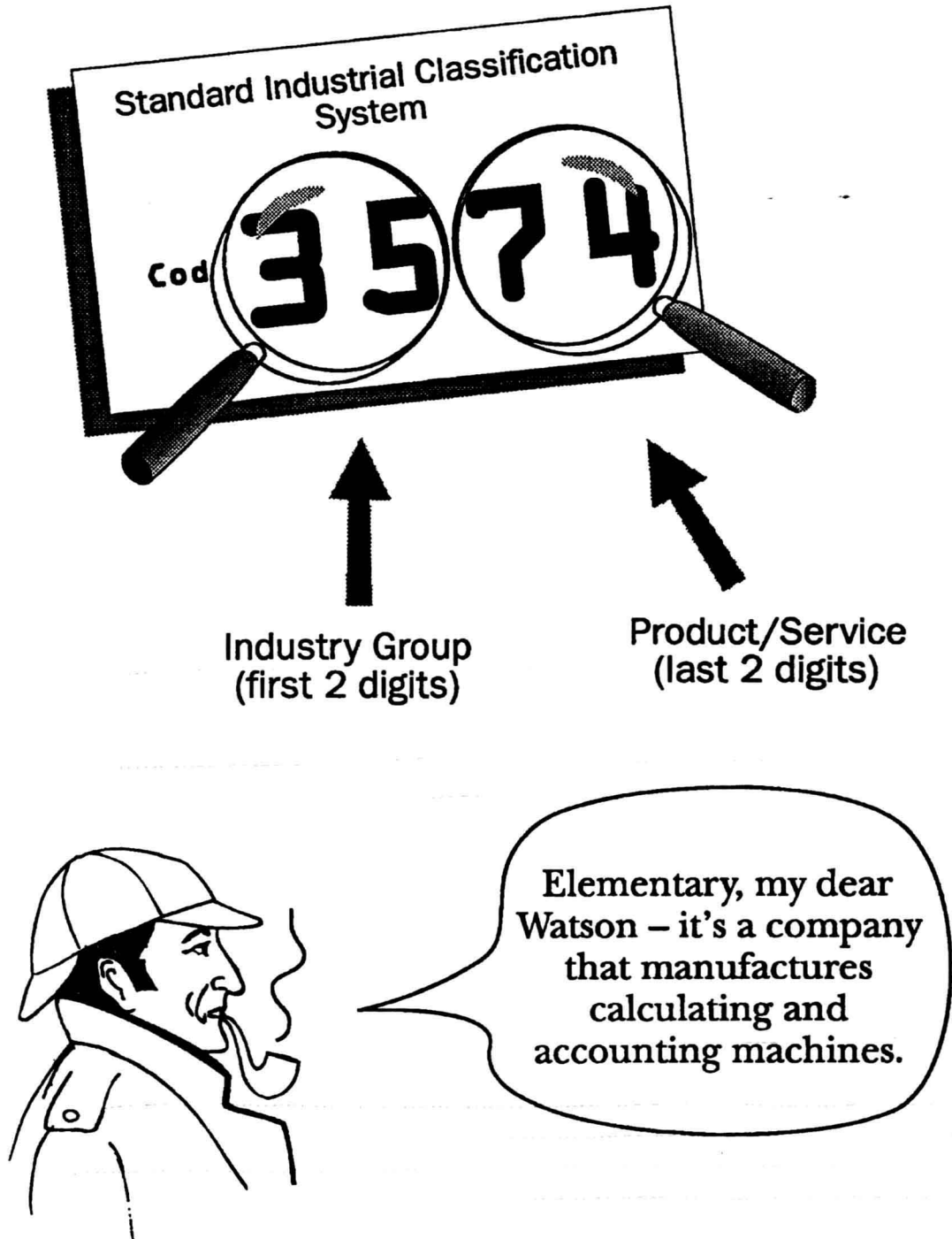
- ◆ a primary SIC code describing the industry which accounts for the largest portion of the organization's operations, and
- ◆ one or more secondary SIC codes, describing the other industries within which the organization operates.

The Evolution of Economies

The SIC code system is not universal, but most nations keep economic data on different industry groups. In fact, one of the ways countries' economies are distinguished is by looking at the proportion of the labor force employed in various industry groups. Some countries--such as Ethiopia, China, and India--have agricultural economies, with the majority of their labor forces employed in agriculture. Other countries--for example, the United Arab Emirates--have industrial economies, with the majority of their work force employed in manufacturing, mining and construction. Still other countries--such as the United Kingdom and the United States--have the majority of their work forces employed in services and government.

Generally, the world's most developed nations began as agricultural economies and later became industrial economies. Often, the movement from an agricultural

Figure III-1-1
Breaking Down an SIC Code



economy to an industrial economy was not the end of the evolutionary process. In many developed nations, economies are now becoming increasingly dependent on information technology, leading to "**information economies**" that are expected to be the hallmark of the early 21st century. For example, as Figure III-1-2 (on the following page) illustrates, the U.S. work force over the past 40 years has decreased substantially in manufacturing and increased substantially in services, many of which are now information-based.

This movement--from agricultural to industrial to service to information economies--is the natural evolution resulting from several factors, including increasing productivity and competitiveness in agricultural and manufacturing industries; an increasing standard of living that will support more services; globalization of world trade; and progress in information technology. But movements like these also change the lives of large numbers of people in ways that do not always seem evolutionary to those affected. For instance, after more than a century of movement away from agricultural economies, many developed nations today are still struggling to cope with the problems of family farms. The movement from industrial to service economies also creates social challenges. "Down-sizing" in industry--layoffs, plant shutdowns, and so on--is part of the evolutionary process that currently presents particular challenges to many organizations and nations.

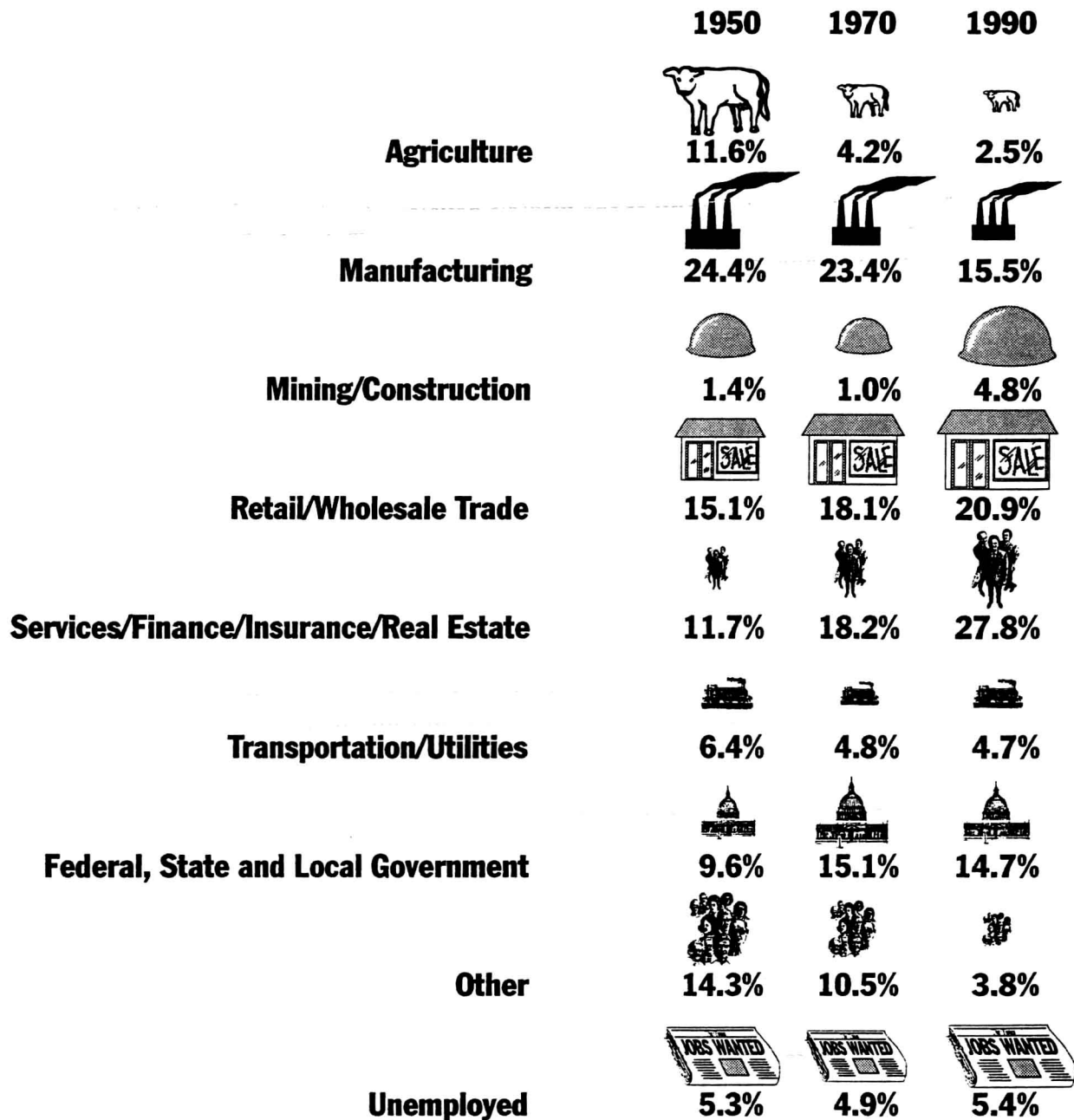
The evolution of economies also has an enormous impact on the mix of economic resources used by organizations and the kinds of accounting information needed for decision-making. Across a variety of industries, many modern organizations are finding that if they wish to maintain or improve their competitiveness, they must carefully manage their economic resources and utilize vastly more sophisticated accounting information systems than they currently possess.

In the sections below, we'll examine some of the similarities and differences in the economic resources used in a number of industries:

- ◆ agriculture,
- ◆ manufacturing, mining and construction,
- ◆ merchandising, and
- ◆ service organizations.

We'll consider the impact of advanced technology and globalization on these industries and we'll discuss some of the problems business, non-profit and government organizations face in making decisions about economic resources, as well as some of the accounting information that can help decision-makers.

Figure III-1-2
Where U.S. Workers Were Employed
1950—1990



Source: Bureau of Labor Statistics

AGRICULTURE

Two centuries ago 85% of the world's people were needed just to produce enough food. Now, in America, fewer than 4% are producing food, yet they produce such a surplus that they don't know what to do with it.

*-- John Tempelton, investment counselor and market analyst,
Forbes, January 25, 1988*

When you hear the term "industrial revolution," what do you think of? Most people think immediately of the major impact that technology has had on manufacturing firms. In many of the world's developed nations, along with the industrial revolution came the agricultural revolution. Take the United States as an example. In 1830, 70.5% of the U.S. labor force was employed in farm occupations. In those days, one farmer was needed to support every four people in the population. Then came the agricultural revolution. In the late 19th and early 20th centuries, scientific advances in farming (such as new theories about seed control and fertilization practices) and the mechanization of farm equipment led to significant increases in productivity. By the mid-1980s, after 150 years of scientific and technological improvements, agricultural yields had increased to the point where a single farmer could produce enough to support 78 people.

As you would expect, the concentration of the U.S. labor force in farm occupations has dropped dramatically since 1830. By 1900, only 37.5% of the U.S. labor force was employed in farm occupations. By 1930, agricultural occupations had further declined to about 21.4% of the U.S. labor force; and by 1980, less than 3% of U.S. workers were employed in agriculture. Similar patterns occurred in other developed nations. By 1990, for example, only 1.7% of the work force in the U. K., 4% of the work force in Canada and 6% of the work force in Australia were employed in agriculture.

Modern Agriculture and Agribusiness

As productivity gains in agriculture swelled, the structure of the industry also changed. In 1830, agricultural production took place primarily on family-owned farms. But with the advances in the science and mechanization of agriculture, large "agri-businesses" came to dominate the industry. By 1992, 2% of U.S. farms accounted for almost half of all U.S. agricultural production. The Office of Technology Assessment has predicted that by the year 2000, less than 5% of U.S. farms will account for three-quarters of the nation's total agricultural output.

Agribusinesses are large-scale commercial ventures that produce food and non-food farm commodities and products. Tyson Foods, Inc., for example, is a large U.S. poultry producer, slaughtering millions of chickens a week. To get an idea of the "big business" aspect of agriculture, consider the following description of Tyson's poultry business excerpted from the company's 1996 Form 10-K annual report filing with the U.S. Securities and Exchange Commission: