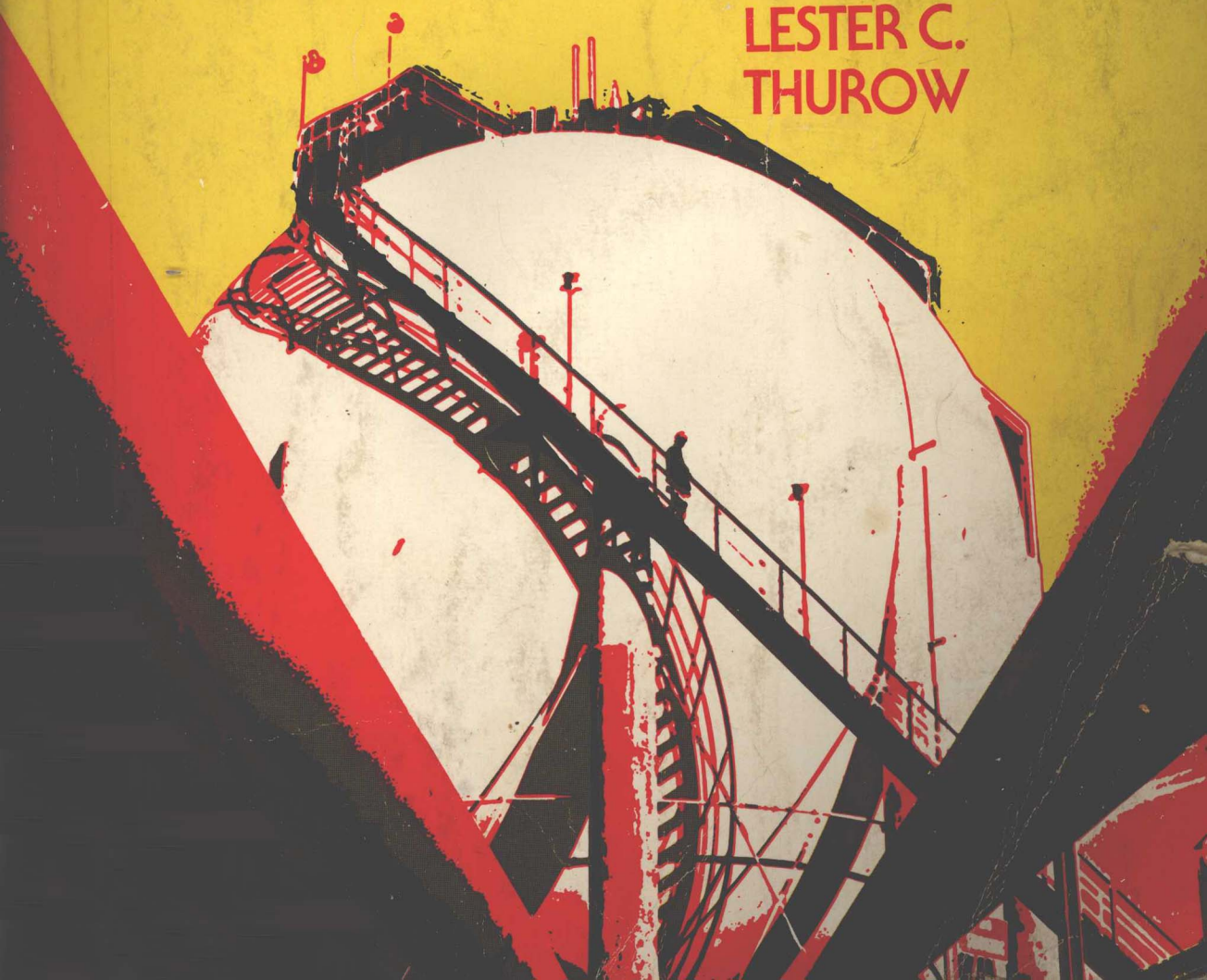
Understanding Microeconomics

FOURTH EDITION

ROBERT L. HEILBRONER
LESTER C. THUROW



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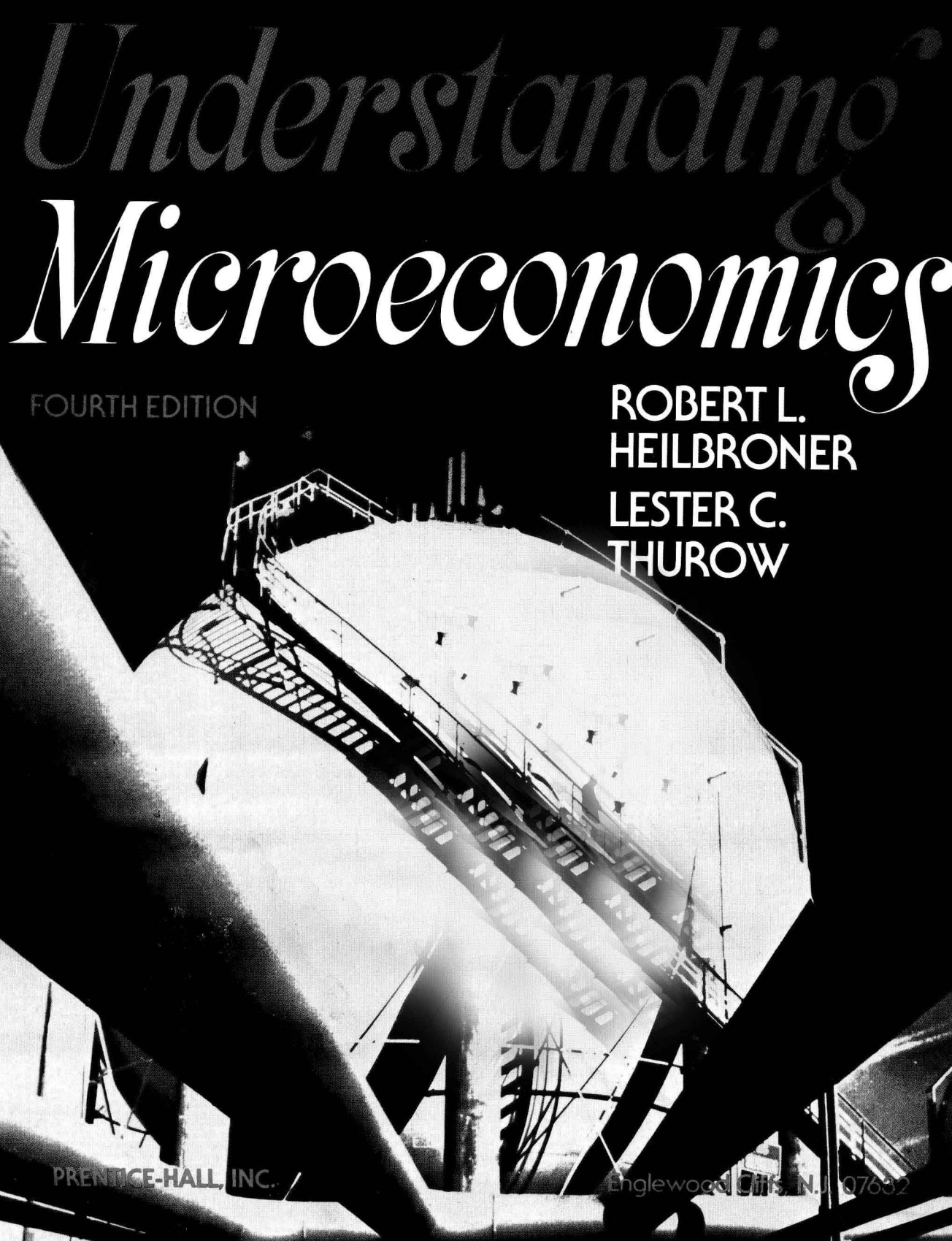

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The economy—A bird's eye view

How shall we begin the study of microeconomics? The best way is to learn something about the economy. But what is "the economy"? When we turn to the economics section of *Time* or *Newsweek* or pick up a business magazine, a jumble of things meets the eye: stock market ups and downs, reports on company fortunes and mishaps, accounts of incomprehensible "fluctuations in the exchange market," columns by business pundits, stories about unemployment or inflation.

How much of this is relevant? How are we to make our way through this barrage of reporting to something that we can identify as "the economy"?

The Market Mechanism

Let us try to gain a first impression of what we mean by imagining that we are flying over our nation, equipped with an extraordinary radarscope that enables us to scan the entire flux of activities we call economic. What we would see on our screen would be an activity that permeates every nook and cranny of our society—the activity of buying and selling. The

economy, as we observe it from afar, can be seen as *a web of transactions*, a web that touches virtually everyone in society. This web we call the market society.

The flow of productive activity

We are familiar with this web of transactions, in which all of us have participated as buyers and most of us as sellers (of our own working capacities). What we are not used to thinking about is the market as a *mechanism*. Yet, in fact, the continuous transacting of business does not take place in a random, unstructured way. On the contrary, if we look at it from a sufficient distance, the flux of transactions can be seen to "flow" in a regular direction.

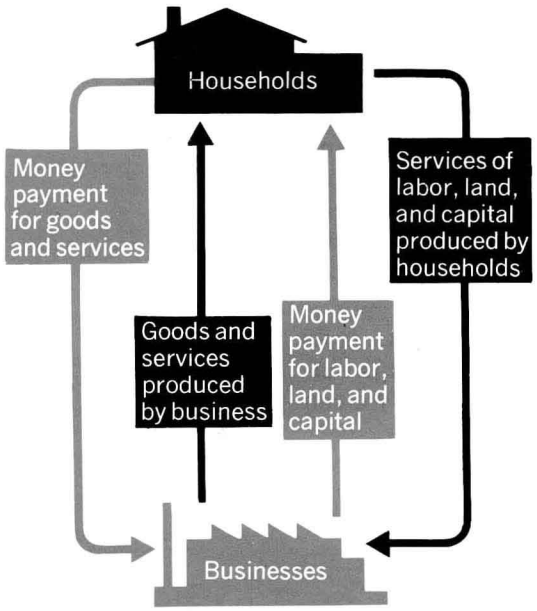

FIG. 1 • 1 The basic market mechanism

Figure 1-1 shows us this flow in schematic form. Let us first look at the black arrows that go clockwise from households to business, and then from business to households. These arrows represent the movement of actual services or products from one place to another. Starting from households, these services consist of the skills and energies of labor (and the physical services of capital goods or land) that householders produce and make available to business. Thereafter, as the black arrows show, the products that business has made from these services of labor and resources move back to the households, where they will be consumed.

Thus we can see that the market mechanism organizes the indispensable economic activity of production. The market mechanism is a great circular motion of economic activity converting labor, land, and capital into commodities that will renew and sustain the owners of these resources.

Factors of production

This is probably a good place to learn a necessary term of economic vocabulary. We call the services of labor, land, and capital the *factors of production*.

The term is usually employed to designate the actual physical outputs of labor services or the services of machines or land. Note, however, that the payment for these services goes to the owner of the labor, land, or capital. Thus, workers (including management) are paid wages (or salaries) for their work; landlords are paid rent for their land; and capitalists are paid interest for the use of their capital. Thus the words *factors of production* have historical and social as well as purely technical significance. A factor or production is not just a productive service; it is a productive service *offered for sale*. One can, perhaps, speak of "factors of production" in China or the USSR, but these words have a meaning different from their meaning in a capitalist system.

Distribution

We have seen how the market mechanism moves real services and goods "clockwise" around the economy. But we have yet to take note of another circular flow going in the opposite direction. This is the flow of money payments, also an intrinsic part of the transaction web. With every individual market transaction, goods or services move in one direction, and money moves in the other.

Our red arrows in Fig. 1-1 show us this second circular flow of payments going opposite to the flow of real activity. With every household purchase of a business product, money moves from the hands of householders to the hands of business. And with every purchase of the services of the factors of production, money moves from business into the owners of these factors—wages and salaries going to labor, rent to landowners, profit or interest to owners of capital resources. *Thus we can see that in addition to organizing production, the market mechanism also organizes the distribution or sharing-out of incomes.*

Complexity of the market

Of course, Fig. 1-1 does not depict the entire market mechanism. It has omitted a vital flow of goods and services from one business to another, matched by a return flow of payments from business to business. No less vital, government has been left out, both as a buyer of goods and services and as a producer of outputs of its own, thereby linking the government with households and business. Figure 1-2 shows these complicated interlocks.

We will be returning many times to the market mechanism, for it plays a major role in the workings of a capitalist system. We should note here, however, that the mechanism is far from simple. By no means all of the economic world is knit together by buying and selling. Parts of production and parts of distribution are organized along the lines of custom and

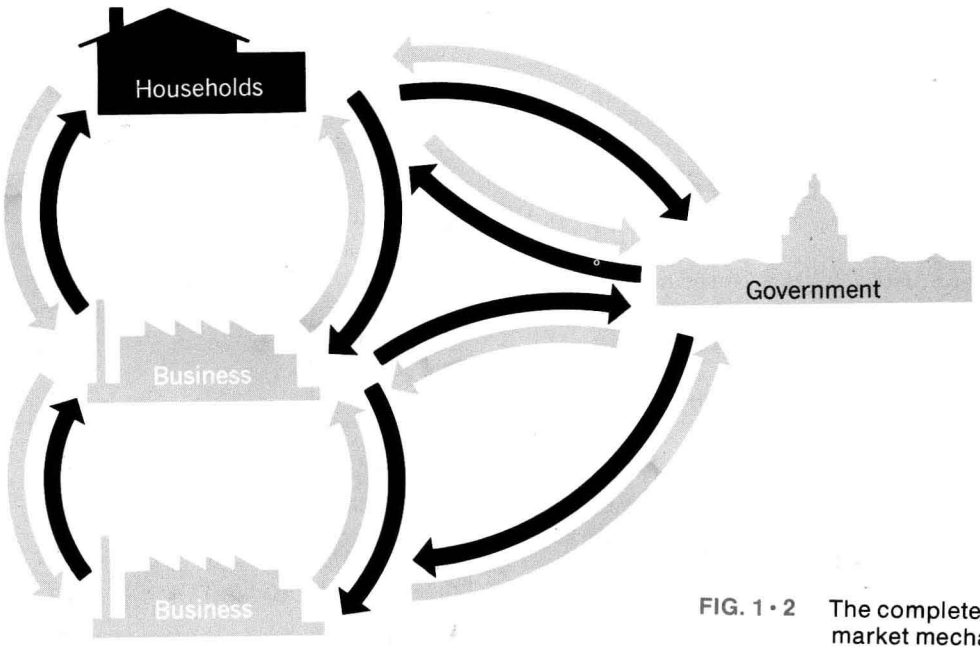

FIG. 1 • 2 The complete market mechanism

tradition or command. Think, for example, of how religious or military activity is carried out, or how household income is divided up among the members of the family.

Moreover, the kinds of buying and selling that we find in the economy vary greatly. The arrows that depict the sale of a factor of production represent very different realities if they represent a migrant farm worker selling his labor to a packing company, or a Wall Street lawyer selling his services to a client. So, too, the nature of the buying and selling that establishes interactions of steel companies and automobile firms is obviously not like that which governs the trading among sidewalk hucksters and their suppliers.

All these problems of market structure will assume their rightful places as we get deeper into the study of microeconomics. Nonetheless, in this first view of the economy as a whole, we are eager to put the market mechanism in the center of the picture, for it is certainly the most important organizing force in our economic life. That is why many economists speak of capitalism itself as a market system.

Structural Elements

Our view of the market system has done more than give us an initial sense of what we mean by The Economy. It has also begun to identify the main structural elements that we find in the economic system, elements comparable to Congress or the Executive Branch in our political system. In this first fly-over of the economy we next want to gain a better impression of these dominant institutional features.

Business

Of course we know where to start. Business enterprise is the very heart of an economic system of private property and market relationships. Let us begin, then, by a look at the world in business.

The first thing we notice is the enormous number of business enterprises—about 13 million in all. If we divide them into proprietorships (businesses owned by a single person), partnerships, and corporations, the world of business is classified in Table 1 • 1.

Small business

Just looking at Table 1 • 1 makes one conclusion immediately clear: *there are at least two worlds of business.* One of them is the world of small business. It embraces nearly all proprietorships and partnerships as well as a very large percentage of corporations. Here are the vast bulk of the firms we find in the yellow pages of the phone book, the great preponderance of the country's farms, myriad mom-and-pop stores, restaurants, motels, movie houses, dry cleaners, druggists, retailers—in short, perhaps 95 percent of all the business firms in the nation.

Table 1 • 1 Dimensions of business, 1972

	Total number of firms (000s omitted)	*Total sales* (billions)	*Average sale per firm*
Proprietorships	10,173	$ 276	$ 27,131
Partnerships	992	104	104,839
Corporations	1,812	2,007	1,107,616

SECTORS

Economists are always talking about sectors. Sometimes, as is frequently the case in this book, they mean a part of the economy in which motivations are similar. For example, we talk of the business sector, the household sector, the government sector.

Sometimes, however, economists mean a "functional" division of the economy's activities. Then they typically speak of three sectors: (1) an agricultural sector that grows and harvests natural products, (2) an industrial sector that extracts and alters and assembles raw materials, and (3) a service sector that performs a miscellany of tasks: providing power and transportation, performing the tasks of storage and selling, and furnishing the thousand ministrations of personal service—legal services, maids' services, doctors' services.

There are many problems associated with this functional grouping. But because it is commonly used, we should have a general idea of the way in which employment and output is distributed among the three main functional sectors:

THREE MAIN SECTORS, 1976

	Employment	GNP
Agriculture	4%	3%
Goods	28	51
Services	68	46

Notice that roughly two-thirds of all employment and output takes place in the service sector. This does *not* mean that industry and agriculture are therefore less vital. Try to imagine the consequences of a six-months' shutdown in our smallest sector, farming!

Small business is the part of the business world with which we are all most familiar. We understand how a hardware store operates, whereas we have only vague ideas about how General Motors operates. But the world of small business warrants our attentions for two other reasons.

First, small business is the employer of a substantial fraction—about a third—of the nation's labor force. Second, the world of small business is the source of much "middle-class" opinion. Of the 13 million small businesses in the country, three quarters have sales (not profits) of less than $50,000 a year. These are tiny enterprises, but they certainly give a small business point of view to at least 10 million households, one out of every seven households.

We should know something about what life is like in this world, and indeed, a considerable amount of economics is concerned with the problems of operating a small business. Later, in Chapters 10 and 11, we shall study how small business fits into the economic picture.

Big business

We have already glimpsed another business world, mainly to be found in the corporate enterprises of the nation. Compare the average size of the sales of corporations (Table 1 • 1) with those of proprietorships and partnerships. But even these figures hide the extraordinary difference between very big business and small business. Within the world of corporations, for example, 89 percent do less than $1 million worth of business a year. But the 11 percent that do more than $1 million worth of sales a year take in 87 percent of the receipts of all corporations.

Thus, counterposed to a world of very numerous small businesses, there is the world of much less numerous big businesses. How large a world is it? Suppose we count as a big business any corporation with assets worth more than $250 million. There are roughly 1,000 such businesses in America. Half of them are in finance, mainly insurance and banking. A quarter are in manufacturing. The rest are to be found in transportation, utilities, communication, trade. Just to get an idea of scale, the largest enterprise in the nation is AT&T, with assets of $80 billion and sales of $29 billion in 1975. The largest *industrial* firm was Exxon, with assets of $33 billion and sales of $45 billion. These two firms together probably commanded as much wealth (assets) as all the 10 million proprietorships of the nation.

The industrial sector

Big business is to be found in all sectors; but its special place is the industrial sector, in which manufacturing plays the predominant role.

Table 1 • 2 Industrial sector, 1975

	$ billion
Total sales of all 436,000 industrial firms	$1083
Total sales of the 500 biggest industrial corporations	865

The figures in Table 1 • 2 show once again the twofold division of the business world. If we subtract the 500 biggest industrial corporations and their sales from the total of all manufacturing firms and their sales, we see that 435,500 industrial firms sold $218 billion worth of output—about a fifth of the total. The top 500 firms—one-tenth of one percent of the total number—accounted for almost 80 percent of all sales. *Indeed, if we take only the biggest 100 firms, we find that they are the source of almost half the sales of the entire industrial sector.*

Big employers

Big business obviously dominates many areas of the marketplace. Is big business also a big employer? That varies from one field to another. In manufacturing, the top 500 firms employ about 75 percent of all persons in manufacturing. In transportation and public utilities, about half the work force is hired by a giant utility or airline or railway (most of the rest work for small trucking firms). In finance, insurance, and real estate, the top 150 companies employ about 30 percent of the persons working in that area. In retail trade, the top 50 companies hire about 21 percent of the total.

In all, about a third of the nation's work force is employed by a firm that we would call a "big business."* To put it differently, 800 leading firms in manufacturing, transportation, utilities, finance, and retailing employ roughly as many persons as the remaining 13 million proprietorships, partnerships and smaller corporations.

*There is no official designation of a "big" business. We have used the *Fortune* magazine list of the top 500 industrial firms plus their list of the top 50 firms in banking, insurance, finance, transportation, utilities, and retailing.

A PARADE OF BUSINESS FIRMS

We shall have a good deal to investigate in later chapters about the world of big business. But it might be useful to end this initial survey with a dramatization of the problem. Suppose that we lined up our roughly 13 million businesses in order of size, starting with the smallest, along an imaginary road from San Francisco to New York. There will be 4,000 businesses to the mile, or a little less than one per foot. Suppose further that we planted a flag for each business. The height of the flagpole represents the volume of sales: each $10,000 in sales is shown by one foot of pole.

The line of flagpoles is a very interesting sight. From San Francisco to about Reno, Nevada, it is almost unnoticeable, a row of poles about a foot high. From Reno eastward the poles increase in height until, near Columbus, Ohio—about four-fifths of the way across the nation—flags fly about 10 feet in the air, symbolizing $100,000 in sales. Looking backward from Columbus, we can see that 10 million out of 12 million firms have sales of less than that amount.

But as we approach the eastern terminus, the poles suddenly begin to mount. There are about 300,000 firms in the country with sales over $500,000. These corporations occupy the last 75 miles of the 3,000-mile road. There are 200,000 firms with sales of over $1 million. They occupy the last 50 miles of the road, with poles at least 100 feet high. Then there are 1,000 firms with sales of $50,000,000 or more. They take up the last quarter-mile before the city limits, flags flying at skyscraper heights, 500 feet up.

But this is still not the climax. At the very gates of New York, on the last 100 feet of the last mile, we find the 100 largest industrial firms. They have sales of at least $1.5 billion, so that their flags are literally miles high, in the clouds. Along the last 10 feet of the road, there are the ten largest companies. Their sales are roughly $10 billion and up: their flags fly 120 miles in the air, literally in the stratosphere.

Households

Business is not the only institutional feature we need to inspect in this introduction to the economy. In our look at the market mechanism, we caught a glimpse of another focus of economic activity: the households that constitute factors of production. These households also receive incomes paid to them as factors of production. To size them up quickly, look at Table 1 • 3.

Table 1 • 3 Household characteristics, 1976

	Millions
Total population	215
Number of households	72
Families	56
One-person households	16
Individuals in work force	99

The work force Our table shows us an interesting fact about the household "sector." **There are more individual workers than there are households.** This means that a "typical" household must have more than one member in the labor market.

But what is a "typical" household? The answer is not easy to give because there are many kinds of households: young or elderly households with only one individual in them; young married households without children; families with young children; families with offspring who are no longer young.

Economists look at the relation between households and work in terms of a *participation rate*, showing the percentage of various groups who are working or looking for work. In the formal language of the statistician, they are "in the labor market." Table 1 • 4 shows how considerable is the variation of these rates.

Table 1 • 4 Participation rates, 1976

	Percent of group in labor market
Males, 20 years and older	81
Females, 20 years and older	47
Both sexes, 16–19	55
Males, 65 and older	22
Females, 65 and older	8

Participation The table shows us some unexpected things about our work force. It is still made up mainly of men. Thus *sex is still a decisive element in determining the characteristics of the labor force*, although this has changed significantly and will probably change still further in the years to come. *Age is also a powerful determinant of participation.*

Occupations What sort of work does our labor force perform? Table 1 • 5 gives us a quick answer.

Table 1 • 5 Occupational distribution of the labor force, 1976

	Percent
Professional	15
Managerial	11
Sales	6
Clerical	18
Craftsmen	13
Operatives	15
Nonfarm laborers	5
Service workers	14
Farm workers	3

UNIONS

How many members of the labor force offer their services through labor unions? In 1974 there were 22.8 million. That was 24.5 percent of the labor force. The figures do not convey the power of labor unions, because they do not point out the strength of unions in the industrial sector. The next table shows more accurately how labor unions fit into the overall work picture.

Like corporations, unions show great disparity of size and strength. In 1975 there were some 49,000 local unions. Many of these small unions had memberships of 50 persons or fewer and were confined to a single enterprise. At the other end of the scale we find 210 large "national" unions, including such giants as the Teamsters (1.9 million members in 1972) or the United Auto Workers (1.4 million members in the same year). In fact, the 10 biggest unions in the country account for almost 50 percent of all union membership. Thus unions, like corporations, divide into a world of small and large operations, although the contrast in the unions is not quite so dramatic as in the corporations.

LABOR UNIONS IN THE MAIN SECTORS, 1974

Sector	Employment (millions)	Unionized
Agriculture	3.4	1%
Industry (mfg. and mining)	22	45
Services and other	59.5	9

Later we will be looking more carefully into problems of occupations. Here we might note in passing that "white-collar" jobs—professional, managerial, sales, and clerical—include almost half the working force. Here is another strong root of the American "middle-class" mentality.

Incomes

Households interest us not only because they are the source of our labor power, but also because they are the focus of our income and our wealth. Much of the buying that powers the economic machine is cycled through the household, where purchasing power is collected as wages, salaries, dividends, interest, and rents, to be pumped out again as a flow of spending for consumers' goods. Consumer buying, for example, is a strong force in the momentum of our economy, although we should emphasize right away that household buying is not the only force. Business and government are also buyers in their own right and strong influences in maintaining the flow of purchasing power.

Distribution of income

If we focus on households at this stage of our inquiry, it is because their function as buyers leads us naturally to inquire into the distribution of purchasing power among families. This is a subject about which many people are very sensitive. A persistent stress on *political* equality leads us to ignore or play down the facts of economic inequality. We even lack adequate statistics about wealth, largely because of an unwillingness to pay official recognition to this aspect of our economic realities.

There are many ways of describing income distribution. We will use a method that will divide the country into five equal layers, like a great cake. The layers will help us give dollars-and-cents definitions of what we usually have in mind when we speak of the poor, the working class, the middle class, and so on. As we will see, the amounts are not at all what most of us imagine.

The poor

We begin with the bottom layer, the poor. By our definition, this will include all the households in the bottom 20 percent of the nation. From data gathered by the Census Bureau, we know that the highest income of a family in this bottom slice of the five-layered cake was $6,500 in 1974. By coincidence, this corresponds almost exactly to the income computed by