Human beings depend on the economy for sustenance. People require food, clothing, shelter, education, health, and nurturing. Additionally, people desire improvements and variety in these necessities, as well as products and activities beyond the essentials. The economy is the totality of the actions that produce goods and services to satisfy human needs and desires. Economics derives from the Greek oeconomicus, literally “estate management.”

A nation’s economy is, in effect, one gigantic estate, “managing” the production of the goods and services people need and desire. In judging economic policy we want to measure the success of an economy. That has proven extremely difficult.

How do we characterize the satisfaction level of a society where scarce medical resources are used to provide prenatal care for all pregnant women instead of long-term care for all stroke victims? Is the satisfaction of the family with a healthy newborn comparable to the satisfaction of the family that benefits from long-term care for a stroke victim? How can we compare the degree of the satisfaction?

How do we characterize the satisfaction level of a society where land is used to grow food instead of being developed into a shopping mall? How do we measure the satisfaction of a person eating in a soup kitchen? Or a middle-class family eating a Thanksgiving dinner? Or another family eating dehydrated food in an overseas refugee camp? How does that compare to the pleasure of numerous shoppers at the mall, and the benefits of their convenience because they can find many products at affordable prices with one trip as opposed to many separate trips? And what difference would it make if this were the only mall, or one of five in a twenty-mile radius?

Finally, how do we measure the satisfaction level of a community using scarce resources to refurbish a local public school, compared to the satisfaction level that would exist if this community were to save
the money and provide a tax incentive for a business to locate a plant in the same town? How do we measure the satisfaction of children in a freshly painted school that has intact windows and an adequate heating and cooling system as compared to the satisfaction of a family whose breadwinner has found a job at the new plant?

Each one of these alternatives produces different kinds of satisfaction and for different people. If we could reduce the measure to the same units, say, income measured in dollars, conceivably such comparisons would become easier. On the issue of medical resources, one could ask how much the two choices cost in dollars and then attempt to make a rough measure of the benefits to society from them. In the farmland-versus-shopping-mall question, one might say the answer is quite easy. If a farmer believes he/she can make out better by selling the land to the developer than by continuing to farm, the shopping mall becomes economically superior. The well-maintained school versus the abatement of business taxes is more complicated. While the benefit to the community from an increased number of jobs can be measured by the incomes of those hired, the benefits from the improvement in the school can only be estimated. Nevertheless, in principle, if we are willing to construct the measure of the satisfaction of needs and desires in units of dollar value, then we can approximate the successes and failures of economies.

**Gross Domestic Product**

The simplest and most widely used measure of the economic well-being of a society is the gross domestic product (GDP), the dollar value of all goods and services produced in a nation in a given year. GDP makes no distinction between the intensity of the wants or needs of individuals beyond what is indicated by the quantities and prices of items produced. The GDP as a measure of the well-being of society involves no judgment about how the goods and services ought to be distributed. In principle, a six-trillion-dollar GDP claimed by one individual is the same as a six-trillion-dollar GDP divided equally among all individuals. In reality, both extremes would create serious consequences for the future. In the first instance, the starving millions would precipitate drastic reductions in production, assuming they didn’t simply take everything from the one individual. In the second instance, most economists believe that an equal sharing of total production regardless of
the contributions people make to that production would significantly damage incentives, leading to reduced output. Between these extremes lies a wide range of income distributions that would not produce such dire consequences. Thus, when we measure success by the level of GDP, we usually ignore the role of income distribution as an independent element in measuring the well-being of the population.2

It is also true that when using GDP to measure the economic well-being of society, we make no distinction between a GDP that rises because more people are getting sick and spending money on hospital stays and a GDP that rises because more houses are being built and people are moving into them. In other words a rising GDP is assumed to improve the quantity of “economic well-being,” but it is possible that some specific goods and services produced are not improving well-being; in fact, increasing the production of such goods or services may be symptoms of declining well-being.

If we take GDP and divide it by the population we get GDP per person (per capita). This measure tells us what is potentially available to everybody in the economy to satisfy their wants and needs. Note the word potentially. It is possible for some growth in per capita GDP to involve absolute declines in the standard of living for a percentage of the population. However, with growing GDP per person, in principle it is possible for some people to improve their standard of living without reducing the goods and services available to anyone else.

When we speak of a growing GDP per person, we of course want to measure the actual availability of goods and services. Since we measure the GDP as the dollar value of those goods and services, when analyzing growth over time we speak in terms of real GDP, that is, GDP corrected for inflation. Otherwise, we would greatly overestimate any improvement in society’s ability to satisfy human needs and desires whenever prices in general rise.

In addition to the rate of growth of real per capita GDP, another important way to analyze the success or failure of an economy is to see how much of society’s potential GDP is actually produced. The potential GDP is the level of production that would occur if all resources were utilized fully, in other words, all capable people working, all factories functioning, and all potentially cultivatable land is utilized. Economists have come to realize that full utilization cannot involve every worker, every factory, and every acre of land, so conventions are usually established to identify the highest practicable level of production. In the 1960s, the Council of Economic Advisers identified the
potential GDP as that which would be produced if only 4 percent of the labor force were unemployed. The council estimated that such unemployment would result from one of two reasons. The first was because the worker was between jobs or was looking for a first job. The second was because some unemployed are, in fact, unemployable—their skills or geographic location do not match the requirements of the jobs available. This group is known as the structurally unemployed. In the early 1960s, the council believed that the 4 percent rate would constitute a minimally acceptable unemployment level comprising the structurally unemployed and the temporarily unemployed. Any unemployment over and above that 4 percent would be considered wasted human resources.

Another way of measuring the failure of the economy to achieve its potential production is to look at the capacity utilization rate. In principle, this involves measuring how much output could be produced by the existing buildings and machines owned by American businesses, and comparing this potential to the actual output. Periods of low unemployment should produce high capacity utilization. The gap between the output that would have been produced at the minimal level of unemployment with high levels of capacity utilization and the output that actually was produced represents a permanent loss of output to society. Thus, in addition to the rate of growth of the GDP per capita, the success of an economy is generally measured by how closely actual GDP approximates potential GDP, as indicated by the unemployment rate and the capacity utilization rate.

Economic Growth

What determines GDP and GDP growth? Human beings work with tools to transform natural resources into finished products. They also work to deliver services to one another. Economists divide the physical inputs used in producing goods and services into three factors of production: land (natural resources), labor (human effort, mental and physical), and capital (produced means of further production). The coordination of these efforts requires leadership, or entrepreneurship, often presented as a separate factor of production. In our society leadership is exercised either by owners of businesses or by individuals hired by owners.

Coordinating the work of human beings is not a simple process.
Even in the most tightly organized work process, human effort is to some extent voluntary. Consider a situation in which people are hired to work in a fast-food restaurant for a certain number of hours a day. The specific tasks of those employees (grilling hamburgers, taking orders at the register, cleaning the machines, etc.) may have been defined when they were hired, but the employees have control over how carefully and quickly they work, as well as how cooperatively they interact with others. Now these employees are not completely free to make these decisions. If someone consistently undercooks hamburgers and behaves in an unfriendly and unhelpful manner toward customers so that they complain, he or she will soon be out of work. However, a moment’s reflection will indicate that between messing up so completely that one will be fired and devoting oneself single-mindedly to perfection in cooking, serving, cleaning, and interacting there is a wide range of possible behaviors over which each employee has control.

Thus, even when owners or managers exercise leadership, work involves a significant voluntary element. This voluntary element helps us focus on the fact that labor, the human factor of production, often makes its contribution through cooperation. The fast-food worker who does a “good job” is cooperating with her or his fellow workers and with the manager or boss. An exception to this generalization is the individual who is totally self-employed. In the more usual process of production, human beings cooperate under the direction of leaders who are either hired by owners or are the owners themselves. The ability of owners and leaders to induce cooperation from workers is one of the keys to economic growth in a society such as the United States, where leadership is granted its power to direct by owners.

Economists in the radical tradition beginning with Marx divide the human element in production between owners and those who work for them. Owners must expend a tremendous amount of energy inducing enough cooperation from their workforce to achieve a sufficient level of production. The growth of the modern profession of management is the result of proliferating theories and analyses of how to induce more diligent, intense cooperation among the various members of working “teams” in the real world of business. Marxists believe that owners have historically induced hard work through the exercise of power over their employees, predictably producing resistance by workers. Thus, Marxists argue that conflict inevitably arises between owners and workers over the pace and difficulty of work and the remuneration for it. Modern management theory, on the other hand, begins...
with the premise that all members of an organization have a stake in its success and that the job of a good manager is to create the right atmosphere to instill a cooperative spirit. Both approaches agree, however, that an emphasis on cooperation, much of which ends up being voluntary, is essential in the delivery of the services of the factor of production labor.5

Economic growth takes place whenever any or all of the factors of production increase in either quantity or capability. A capability increase occurs when a factor of production achieves a higher productivity. If an acre of land is planted more closely, weeded more thoroughly, and defended more successfully from blight, pests, and foraging animals, then the amount of food grown on that acre will increase. Similarly, if one hundred workers in a field are given better tools to work with, then the amount of food grown per worker will increase.

Even without better tools, individuals with more training or a better diet so that they are healthier and stronger can accomplish more work in the same period of time. Economists usually include such increased production as examples of a productivity increase by that individual, believing that training and education are among the most crucial causes of a society’s successful economic growth. Further increase in output might occur if a group of workers develop greater esprit de corps, leading them to increase their effort so that their “team” can produce more. This is an example of a voluntary increase of effort. These workers might rest less, work faster, and work more diligently, might help each other in their tasks, and might rotate their tasks to alleviate boredom. There are many ways one might imagine this happening, but the end result would be more output from the same number of people.

Such increased efforts could also result from less benign causes. These workers might be captives of war put to work under duress. The intensity with which they work would be regulated by how hard their overseers drive them and how closely they are supervised. Whether from voluntary enthusiasm or coercion, both examples of increased intensity of work effort are counted as improvements in productivity, though we might just as accurately identify these changes as increases in the quantity of human effort expended. Economists, unable to agree on how to measure such a quantity, continue to identify quantitative increases in the factor of production labor as hours worked and numbers of people working. All other output increases are lumped together as increases in productivity.
In addition to improvements in the productivity of particular factors of production that increase output per acre or output per person (or even output per machine) advances in knowledge can raise the productivity of all factors of production. These advances in knowledge are often called technological progress or new technology. The substitution of word processing and storage of information on microchips for typing and storage of paper increases the productivity of a building (using space more efficiently), of people (no retyping, no layering of sheets with carbon paper to make copies), and of equipment (keys are struck much less frequently to create the same final written product). Examples abound: contour plowing in agriculture, the development of electricity, the frontiers of bioengineering. Technological progress involves discovery, development, and ultimately application to the process of production. The impact on economic growth occurs with the application, but it could never occur without the prior discoveries. The systematic search for knowledge is considered an important cause of the economic successes of the modern era. Before the Industrial Revolution, economic growth occurred in waves. Great civilizations arose, reached great heights, and then declined, leaving no permanent change in the standard of living of the vast majority of people on the planet. With the systematic search for and application of new knowledge, the post–Industrial Revolution economy has embarked on a trajectory of continuous (if very uneven) economic growth.6

Beginning with Adam Smith’s *An Inquiry into the Nature and Causes of the Wealth of Nations*, economists have focused on analyzing economic growth. It is not possible or necessary to summarize the various analyses of the causes of economic growth. The important thing to note is that most approaches to economics agree that the crucial dynamic of both long- and short-term economic growth is the amount of productive investment that occurs in society. In the simplest formulation, productive investment involves the creation of a tool, but it can be as complicated as building a high-speed computer, a laser microscope, or a numerically controlled machine tool. Such investment has for the most part been engaged in by private investors seeking to make a profit by producing and selling goods and/or services at a cost lower than the price.

Along with productive investment in physical capital, long-term improvement in the quality of the labor force as a result of widespread education and training has been crucial in making the new investments possible. Productive investment also can involve training a doctor,
engineer, systems analyst, teacher, or sales clerk. In other words, without the constant increase in the capability of the labor force, the new physical capital investments cannot be successfully utilized. In the course of the introduction of these new investments, newly discovered knowledge gets applied. The discoveries and inventions are added to the process of production, sometimes creating entirely new products. New technology spreads through the system of production. Finally, new forms of organization, some of which have reduced the leeway workers have to determine the amount of effort they expend on the job, have been extremely important. The assembly line introduced by the Ford Motor Company in 1913 increased the intensity with which workers had to work. They were no longer in control of their time. Initially workers resisted, and turnover at the plant was high. Ford responded by doubling the traditional pay to five dollars a day. This had the effect of solidifying the commitment of the workers to the job, and turnover virtually disappeared. For the next sixty years, the assembly line, with ever-increasing intensity of work coupled with rising productivity from improvements in the machinery, was the centerpiece of American manufacturing success.

So increased production occurs through growth in the size of the labor force, growth in the availability of natural resources (clearing of land, discovery of raw-material reserves), and the increase in the physical capital stock of the nation via new investment. All of these involve quantitative increases in the factors of production. Growth also occurs as a result of increased productivity of the land, labor (including increased effort), and/or capital in society. Private investment decisions have been and continue to be the major method by which more factors of production are utilized and productivity is increased. Investment actually creates more capital. When private investment grows dramatically, economies have demonstrated explosive, at times erratic, growth. It is also true, however, that some elements supporting economic growth, for example, education and basic scientific research, have been appropriately provided by governments. Thus, from the earliest days of the Industrial Revolution, governments have played a crucial role in helping the process along. However, even in the twentieth century, when the role of government in industrial economies has expanded dramatically, it is still true that the main instrument for expansion has remained private investment.7

The proper role of government appears to have been a major source of controversy between the Clinton administration and the
Republican congressional majority. Both groups agree that there are important roles for government. They differ on where to draw the line. The Clinton administration has proposed careful consideration of how best to make government more efficient in its delivery of necessary services—education, basic scientific research, a physical infrastructure of roads and bridges and so on. The Republicans may agree in principle that this is essential, but they also argue that Congress has historically been incapable of restricting government activity to its appropriate roles and constantly overspends in response to “special interests.” Their solution to this wasteful spending was to try and impose a constitutionally mandated balanced budget on congressional decision-making.

**Deficits and the National Debt**

This is a very important point to make, all the more so because it is rarely admitted. We often read and hear rhetoric such as the following.

> Just as every American sits at the kitchen table and balances his or her budget, just as every small business must balance its budget, Congress must begin balancing our nation’s budget—now.\(^8\)

This statement is from the Republican *Contract with America*, but nowhere in that document do the authors bother to explain *why* it is necessary for government to balance its budget.\(^9\) They don’t explain why because there is no serious economic argument—aside from an argument that government borrowing will reduce private investment by crowding out private borrowers, an argument we will explore in depth in future chapters—to support the assertions of politicians and journalists that government deficit spending is always bad for the economy.\(^10\) However, there is no question that many economists and business leaders believe that government spends too much money on unnecessary projects and/or undeserving people.\(^11\) Seen in this light, balancing the government budget is a *means to an end*. The end is not to stop running deficits, but to reduce government spending.\(^12\) The economist Milton Friedman, who is a strong critic of government intervention in the economy,\(^13\) stated this point explicitly.

> I would rather have a federal government expenditure of $400 billion with a $100 billion deficit than a federal government expenditure of $700 billion completely balanced.\(^14\)
However, he is a strong supporter of a balanced-budget amendment to the Constitution because he believes that is the only way to control government spending.15

Every year that a governmental entity spends more money than it receives in revenues, it must borrow the difference.16 That borrowing is called a deficit. Each year that the federal government borrows to finance a deficit, the amount borrowed becomes part of the national debt. Each year’s deficit is added to the sum of all previous deficits to increase the national debt. The only way that national debt can be reduced is to actually run a surplus, to spend less than the revenue coming in.17

What damage do deficits and debt do? Let us go back to the rhetoric of the Contract with America. “Just as every American . . . balances his or her budget . . .”18 When people try to contemplate the issue of budget deficits there is an immediate parallel drawn with a family going into debt or a business going into debt. But let’s really examine that parallel. First of all, lots of families and businesses go into debt. The important issue is what one buys when one goes into debt. Borrowing to attend college is considered completely responsible. Borrowing to buy a house is considered completely responsible. When the federal government borrows money and uses it to build or repair a highway, or build a post office, or dredge a river, those actions are an investment for the benefit of the people of the United States, just as the family who borrows to finance a college education or a new home is making an investment in its future. In all those cases the borrowing is completely appropriate, yet you would never guess from most of the political rhetoric that government ever borrows money for such a purpose.

The same thing holds true for a business. Businesses routinely borrow to make investments. Unfortunately, when the federal government spends money, there is no distinction drawn between investment in the future (such as education, construction, research) and spending for current services, like the salaries and expenses of members of Congress or spending that merely redistributes income, such as Social Security payments. Economist Robert Eisner puts it this way:

If United Airlines buys a new plane, that is investment. If Chicago builds a new runway for that plane to land on, that outlay is considered “government expenditure” and is counted, implicitly if not explicitly, as consumption. Similarly, a new truck purchased by business is investment. The highway that is constructed for it to ride on—
unless a rare private toll road—is not. If the Internal Revenue Service spends $100,000,000 for new computers to process tax returns, that is not investment. . . . If business firms buy new computers . . . that is investment.\(^9\)

Since Eisner wrote, the Department of Commerce’s Bureau of Economic Analysis has begun dividing government expenditures into “current” and “investment” categories. If this distinction becomes part of the public’s consciousness about the causes of government borrowing, that would go a long way toward bringing rationality to future discussions. It is important that we recognize that much of the federal deficit is matched by the creation of valuable assets, just as individual households experience “deficits” when they take out a mortgage on a home, and businesses experience “deficits” when they borrow to make investments. We will explore the actual economic impacts of deficits, as opposed to the imagined disasters that routinely echo in the halls of Congress, when we examine various interpretations of the Reagan era and revisit the historical experience of the United States economy during that period. At this point, it is important to note that the true rationale behind the urge to balance the budget has nothing to do with the alleged damage done by budget deficits and everything to do with the alleged damage done by government spending per se. And even this emphasis on spending per se in only part of a more general concern with government intrusiveness in the economy in general.\(^20\)

**The Business Cycle**

While we recognize that government has a role to play in fostering economic growth, we must reiterate that most creation of new assets and introduction of new technology occurs through the medium of private investment. When potential investors lose confidence that they will achieve an acceptable income, they will refrain from investing. Because private investment is so important a part of the economy, their restraint causes a serious interruption in economic growth. These periodic interruptions became part of the regular pattern of economic activity as early as the eighteenth century in Britain and have been part of the U.S. economic experience since independence. Interruptions in economic growth, first called panics, then depressions, and now recessions, represent periods during which the potential GDP is not realized. In fact, the actual GDP declines.\(^21\) Even without an identified
recession, the growth of GDP can be insufficiently rapid with the gap between actual and potential GDP increasing.22

Since the publication of John Maynard Keynes’s *The General Theory of Employment, Interest, and Money* in 1935, the economics profession has come to blame the failure of GDP to reach its potential on insufficient aggregate demand. For the purpose of analysis, the measurement of aggregate demand is divided into private consumption, private investment, government purchases of goods and services, and net foreign purchases of domestic products. The reason for this division is that the four parts of aggregate demand are engaged in by different individuals and institutions with differing motivations. Private consumption involves the gratification of a want. Private investment involves the creation of a new asset with the purpose of productive usage in the future.23 All human beings engage in private consumption, though some consume without making market purchases. However, only some make private investment purchases, often as leaders of organizations—using the organization’s income. Governments purchase goods and services to deliver what citizens desire (though there is a great deal of debate as to whether citizens can adequately communicate their desires to government and whether government officials are responsive to citizens’ desires).24 In government the decision makers are clearly using the organization’s income, though government income mostly comes from taxes on individuals and businesses. Finally, the level of net foreign purchases of products depends on decisions of foreigners.

Note that in the analysis of both economic growth and aggregate demand, investment occurs. This is why most economists identify investment as the main cause of economic growth and prosperity in our society. Investment must be high and rising to achieve a close approximation of potential GDP. It also plays a major role in increasing potential GDP itself because it is the vehicle for discovering and applying new technologies, thereby increasing productivity. Though private consumption is a much larger percentage of GDP than investment, it usually responds to changes in income rather than causing such change. Investment plays a much more dynamic role. Since private individuals and corporations invest according to their incentives, the institutional framework of society in which those incentives are formed is crucial to the success of the economy.

Thus, when the economy performed unacceptably in the 1970s, some interpretations focused on the incentive structure of the society,
though analysts disagreed about how those incentives affected the economy. The Reagan-Bush economic policies of the 1980s were an experiment in applying a particular method of stimulating incentives in the hope of reversing the unacceptable trends from the 1970s. The debate about the Clinton administration’s brief, halting efforts to reverse some of the policies of the 1980s and the continuing debate about what combination of taxes and spending is desirable in the context of achieving a balanced budget hinge on what incentive structure is deemed most appropriate for our economic well-being.

The Reagan revolutionaries and the Republican majority in Congress after 1994 both focused on cutting taxes and reducing regulation. The Clinton administration sought to focus the tax cuts narrowly to subsidize certain kinds of activity, spending on higher education, for example, while streamlining regulation with their so-called reinventing government program. It is interesting to compare this “debate” to the strong arguments during the 1970s and 1980s, when the impetus to regulatory relief coming from the Reagan administration was significantly resisted by the Democratic majority in Congress.

**How Does One Use the Evidence?**

In delving into the effect of regulation and taxation on incentives to invest, we need to know how to measure successful stimulation of, or damage to, investment activity. If investment (corrected for inflation) rises from $831.6 billion in 1984 to $861.9 billion in 1989, is that success or failure?

If we are concerned about the impact of the federal deficit or the national debt, how do we measure that impact? If the federal deficit rises from $207.8 billion in 1983 to $221.2 billion in 1986, or if the national debt increases from $290.5 billion in 1960 to $365.8 billion in 1969, are these successes or failures?

Without more information, it is impossible to answer these questions. Why? Imagine running a business that at the end of the year clears a profit of $60,000. Would this be a success? Every owner of a business knows that more information is needed to decide. How much was invested? If the investment totaled $240,000, then the $60,000 profit reveals a rate of return of 25 percent. If taxes took 40 percent of that, the net return would be 15 percent, marking a reasonably successful venture. What else might one have done with the $240,000? Less
risky investments like government bonds or even corporate bonds would have yielded rates of return far below 15 percent. Thus, compared to any viable alternative this $60,000 of profit is a success. But suppose the $60,000 profit was on an investment of $600,000. The result then would be a 10 percent rate of return. With taxes taking 40 percent, the after-tax rate of return would be 6 percent. Would tax-free municipal bonds have yielded more? If so, a $60,000 profit on a $600,000 investment is a failure.

Investment levels and the absolute size of both the federal budget deficit and the national debt are misleading by themselves. We need to know the level of investment as a percentage of total output because we need to account for the contribution that investment makes to the economy. If investment rises more slowly than total output, its impact on the economy is declining, and that increased output is disappointingly low. The federal budget deficit can increase in total dollars but still shrink as a percentage of output. The same is true of the national debt. In the historical examples of increased investment, federal deficit, and national debt presented above, in each case absolute increases occurred while the relative sizes were shrinking.\(^\text{28}\)

Thus, when we turn to the unacceptable economic performance of the pre-Reagan period and analyze the Reagan Revolution, we have to carefully identify our standards of success or failure and constantly keep in mind the way we measure the impact of policies.