# capital (kap´-et-l) *n.* 1: the equipment, tools, structures, machinery, vehicles, materials and skills devoted to the production of other goods and services. 2: the funds made available to invest in capital goods.

Capital expands the production of society or an individual beyond the levels that could be attained without it and plays a large part in improving productivity and standards of living. The key to understanding capital is recognizing the value of goods and services that are used as resources to produce other goods and services. Buildings and machines, tools and materials, and knowledge, training and abilities are all elements of capital. They are ultimately valuable not as goods and services in and of themselves but because they are the ingredients that enable people to consume more and better goods and services. But while capital provides for consumption, capital requires saving. Only through increased saving can capital investments be made so societies and individuals can increase consumption.

## What Is Capital?

Capital revolves around two aspects of life most of us are quite familiar with — production and consumption. Broadly defined, capital is anything that brings our ideas and abilities to fruition and enables us to produce goods and services more efficiently. For example, computers, lasers, robotics, trucks and cranes are all capital goods. A person's education and training, in the sense that they improve productivity, are capital investments. And funds that are made available for a business improvement or expansion are considered capital in a financial sense.

Capital is valuable because it enables people to consume more and better goods and services than would otherwise be possible. Anything that has enhanced the way we do things — listening to a CD instead of a record, for example — has involved capital. But ironically, for people to consume more and better goods via capital, from time to time they must make decisions to forego consumption and save. For it is only through saving that a society can invest in capital goods and thus lay the foundation for increased and improved consumption in the future.

# The Consumption – Investment Trade-off

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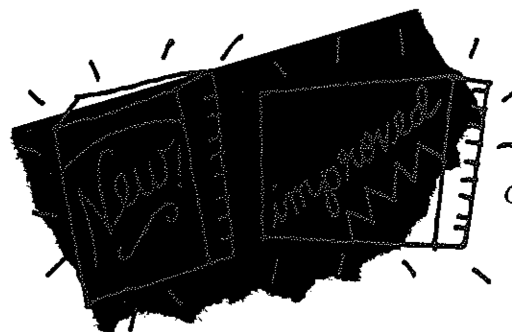
Let's say you head out to a remote cabin in Montana for a week to do a little fly-fishing. You bring just the bare essentials for food because, after all, you're here to catch your supper every night. For the first three days, you manage to reel in only one fish per day worth keeping. But you're a really big eater; putting down three fish each meal is more your style. Fortunately, the next morning, while perusing the latest issue of *Fly-Fishing Digest*, you come across an article that shows how you can tie a fly virtually guaranteed to attract loads of fish. You study the how-to diagrams and figure you could tie a couple of surefire flies in just one day. You now have a decision to make: should you give up eating fish today to improve your ability to catch fish tomorrow? You decide to go for it, and in doing so, you have made a capital investment — giving up the consumption of current goods (your fish for the day) to produce capital goods (your surefire flies).

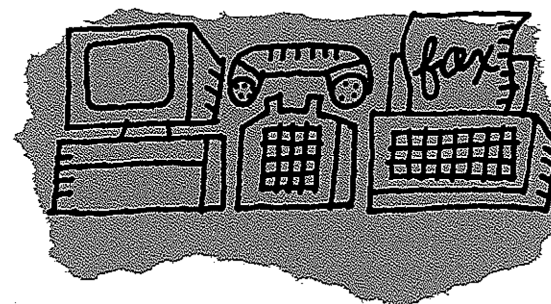
In the same sense, there is a trade-off in society between using resources to consume products today and investing those resources to produce capital goods that will help create more and better products tomorrow. But unlike the fly-fishing scenario, those who forego consumption for saving are not necessarily those who produce capital goods by investing. In a free market economy, savers and investors are brought together in financial, or capital, markets.



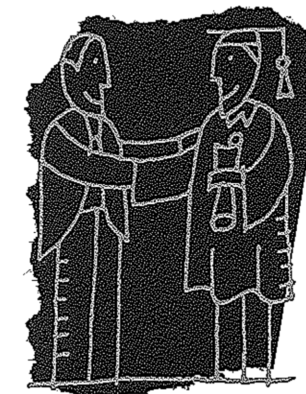

*Capital enables us to create new and better products that work more efficiently.*



When you put your savings in a bank account or mutual fund, for example, a lot of that money is loaned to businesses to finance the purchase or production of capital goods such as plants and machinery and new equipment. But when you save money, it isn't just for a rainy day; it's to earn more money in the form of interest. The interest you earn when you save comes from the cost that businesses pay when they borrow to invest in capital goods.




*Increases in the accumulation of capital goods and investments in human capital*



*are the driving forces behind higher standards of living.*

# Capital and Productivity

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The more productive a society is, the higher its standard of living. Two of the major forces behind increases in productivity are increases in the accumulation of capital goods and increases in the quality of human capital.

When workers have more capital goods to use in their jobs, their productivity will generally increase. The more capital goods per worker, the more output per worker. For example, suppose you and a couple of friends own a small advertising agency, complete with three desks and three chairs, a telephone, a computer, and you and your two friends. One of you creates the illustrations, one handles the design and layout, and you write the ad copy. Because the three of you have to share the computer, the agency can only produce ad campaigns for two clients at a time. Then one day, you come across a great deal on a computer

at a going-out-of-business sale. You buy the new computer, plug it in, boot it up, tell your designer friend and your illustrator friend to use the other computer, and the agency is able to offer its services to four clients at a time. Because of an increase in capital goods (the additional computer), your productivity increases (ad campaigns for two more clients), and your standard of living, thanks to an increase in income, goes up as well.

But while output per worker generally rises as capital goods per worker increase, there is a point at which each successive increase in capital goods begins to have less of an impact on output. That point is when the concept known as the law of diminishing returns comes into play. While adding a computer so ad copy could be produced apart from designs and illustrations allowed your agency to take on two more clients, adding another computer so illustrations can be produced apart from designs may only allow your firm to take on one more client.

*Increases in capital goods often lead to increases in output per worker. The more capital goods workers have, the better their productivity.*

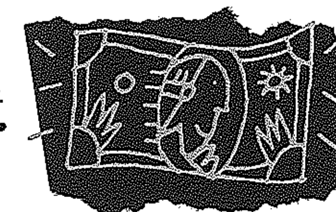
When the law of diminishing returns takes effect, further increases in productivity must be obtained somewhere else. This brings increases in the quality of human capital into the picture. Investments in individuals, or investments in human capital, play an important role in advancing a society's productivity and living standards. An economy that incorporates new ideas and technologies to advance its standard of living requires workers who can implement and manage those new ideas and technologies. That's what makes education and training — investments in human capital — a valuable part of the productivity mix.



## Capital Markets and the Economy

An economy is considered healthy when it has high employment, stable prices and sustained growth. While capital markets may not directly impact all these objectives, they do exercise a powerful influence. The availability and cost of funds in capital markets have a big effect on the ability and willingness of businesses to invest. For the economy as a whole, the amount of investment in capital goods is a significant portion of all spending on goods and services, so any changes in the availability and cost of funds in capital markets affect the overall economy.

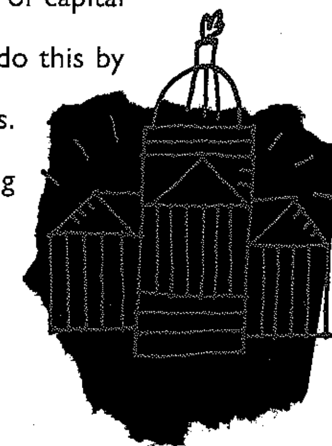
*The availability and cost of funds in capital markets greatly determine businesses' level of investment.*



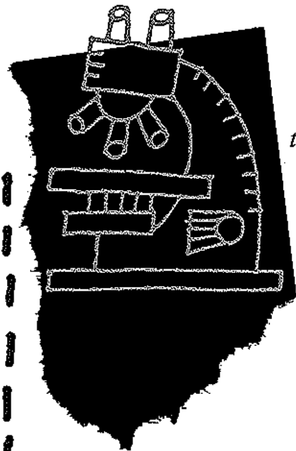
*Government policies and regulations can also affect capital investment levels.*

Capital markets — specifically, the availability and cost of funds in capital markets — are influenced by the Federal Reserve. In fact, the Fed's only direct link to the economy is via capital markets. But economic research shows that the Fed can only influence the supply of money (what people use to *buy* goods and services), not the long-term supply of capital (what businesses use — whether physical, human or financial — to *produce* goods and services). Still, the Fed can help the economy through capital markets by setting monetary policy to ensure that there is an appropriate supply of money and credit to maintain growth with stable prices.

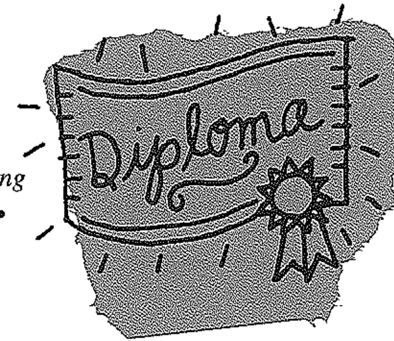
Without price stability, there is less certainty in capital markets about the future value of funds — what today's dollar will be worth tomorrow. This uncertainty creates a riskier investment climate and prompts providers of capital to hedge their bets, so to speak, by increasing the cost of funds. They do this by raising the interest rates businesses have to pay to invest in capital goods. When businesses face higher costs, they typically respond by investing less, and the economy could suffer as a result.



In addition to the Fed's monetary policy, other factors influence capital investment. Government regulations can require businesses to invest in ways that seek to promote job safety or the environment, for example, rather than more efficient production. Local building code requirements can direct investments away from actual construction and toward efforts to make sure plans are approved by the proper authorities. Tax policies also affect the level of investment, as well as its allocation. But the results are not always positive. Sometimes, changes in tax laws that boost a particular sector of the economy wind up hurting the productivity of the overall economy because capital resources are diverted to industries in which the economy isn't getting the most bang for the buck. In the early 1980s, for example, tax laws provided favorable treatment for investments in commercial real estate. The result was a glut of office space that has taken years to absorb. The laws were changed in the mid-1980s, but the damage had been done. A lot of money had been invested to develop commercial real estate that wasn't needed.



*An economy that incorporates new ideas and technologies to improve its standard of living requires workers who can implement and manage those new ideas and technologies. That's why education and training*




*are important elements in improving productivity.*

## Capital and Free Markets: A Final Thought

One of the major concerns economists and policymakers have about the United States is that, compared with other industrialized countries, it is not a nation of big savers. And since investment can only be as large as available savings, that means the amount of domestic funds available in capital markets is probably not as great as the amount of investment that needs funding. Moreover, the U.S. government, by consistently operating at a deficit, competes with the private



sector to borrow from the pool of savings. This crowds out private sector borrowing and further increases the difficulty of obtaining financial capital domestically.

Fortunately, the U.S. economy largely embraces the concept of free markets, including its financial markets, which means people in other countries can invest their savings in the United States. U.S. businesses can then borrow those savings to finance capital investments. Thanks to the United States' open economy, we have been able to advance our standard of living more quickly than we would have otherwise.

But capital does not always flow as freely around the world as is needed to fill the gap between a country's available domestic savings and its demand for capital. For the United States, this poses a challenge. If we as a nation want to continue to have the highest standard of living in the world, we must continually examine our economy to make certain we have the best possible environment for saving and investment — from a domestic perspective as well as an international one.