



INSIDE THE VAULT | SPRING 1998

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Pinball Economics

Although most of us won't admit that we wasted our youth playing pinball rather than reading Shakespeare, the pinball machine is likely no stranger to any of us. The objective of the pinball game, of course, is to keep the ball in play as long as possible, while racking up a high score. The score is dependent on the interplay of the ball with the obstacles. The skill involved rests in the player's ability to use the flippers to keep the ball in play. Oddly enough, the basics of the pinball game have something in common with the fundamentals of maintaining a growing economy. To better understand just what these two diverse entities—the pinball machine and the economy—have in common, let's look at the basics of economic growth.

Keeping the Ball in Play

Economic growth is measured by how fast living standards rise over time, which is usually defined as per capita Gross Domestic Product (GDP). Per capita GDP refers to an economy's output per person and is, therefore, a better measure of standard of living than GDP, which does not take into account a country's population. After all, how much pizza I get for dinner doesn't just depend on the size of the pie, it also depends on how many people are sharing it.

A country's economic growth depends on factors that facilitate the production, distribution and sales of goods and services, which economists refer to as the economy's "infrastructure." In this context, infrastructure does not refer to roads, structures, dams, or other capital goods, but to the institutional factors listed below.

Form of government

- Does the government encourage private ownership and free enterprise?
- Are there laws to enforce private contracts and stamp out corruption?
- Is there protection of physical and intellectual property?

Monetary policy

- Does an independent central bank that is committed to achieving price stability exist?

International trade

- Is there support for exercising free trade?

Regulatory system

- Is there an effective balance of the costs and benefits of government intervention in the private sector?

These essential elements of the economic infrastructure help explain gaps among countries' per capita GDP. Per capita output in the United States, for example, is roughly seven times greater than that of Mexico, and

nearly 10 times that of China.

Racking Up a Score

A country's economic infrastructure goes a long way toward explaining why U.S. citizens are much wealthier than those of Mexico or China—or every other country for that matter—and also directly influences those factors that determine how fast an economy grows over time. Labor productivity—measured by total business output divided by total hours worked—is a critical factor in a nation's standard of living. It would be difficult to overstate the importance of labor productivity growth in determining future increases in living standards. Simply put, when economic resources (whether they're human beings, machines or land) are not very productive, the economy's potential to grow over time is severely constrained. To use a sports analogy, a running back who gains four yards per carry is much more productive than one who gains only two. Not surprisingly, the former is also paid much more than the latter. Thus, the more productive an economy's resources are, the more income the economy will produce and the higher the nation's standard of living will be. Labor productivity depends on both physical capital like plants and equipment and human capital, such as a skilled labor force. Not surprisingly, labor productivity can be influenced by those same institutional factors as GDP. Government, for example, can spur labor productivity with tax laws that encourage saving, investment, research and development and education. In addition, a central bank that achieves and maintains price stability contributes to an economy in which businesses can make long-term investment decisions and commitments, and workers can make savings decisions and retirement plans, without the worry of inflation. Free trade policies enable firms both to export their goods and services and import the needed factors of production, without becoming casualties in a trade war. A well-balanced regulatory system operates in a cost/benefit framework that encourages efficient production, while holding producers accountable for environmental issues.

No Simple Flip of the Wrist

Increasing physical and human capital is the force that keeps the ball of economic activity in play. Government policies that recognize the importance of the accumulation of capital and the creation of an environment conducive to a productive private sector are crucial in this regard. For example, sound monetary policies can encourage long-term investment by businesses and saving by workers—both of which are critical to a buildup of capital. Free trade policies can enable global markets to render the benefits of competition: greater variety, better quality and lower prices. A regulatory system can protect the public interest, without significantly reducing economic efficiency. Formulating policies within these parameters, however, is no simple flip of the wrist. Just as the pinball player must constantly focus on the ball, policymakers must constantly focus on their commitment to long-term economic growth.

This article was adapted from "A Brave New Economic World?" which was written by economist Kevin L. Kliesen and appeared in the January 1998 issue of The Regional Economist, a St. Louis Fed publication.



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Q & A

How can I use money to teach geography?

You can do so by using printed currency and minted coin. With currency, you can point out the name, number and corresponding alphabet letter of the individual Reserve Bank that is printed on the front of \$1, \$5, \$10 and \$20 notes. For example, a bill issued through the Federal Reserve Bank of St. Louis will have the letter H and the number 8 on it since that's how our District was designated when the Federal Reserve System was created in 1913 (see table above right for all 12 designations). Although the newly designed \$50 and \$100 notes bear a universal seal that represents the entire Federal Reserve System, a letter and number identifying the issuing Reserve Bank appear beneath the left serial number. Starting next year, you will be able to teach your students geography with coins, too. Beginning in 1999, each of the U.S. states will be honored with its own uniquely designed quarter. Five coins, each bearing the standard George Washington portrait on the front and a state-specific design on the reverse, will be issued each year for the next 10 years. The states will be commemorated in coin according to the order in which they ratified the U.S. Constitution, or were admitted to the Union.

- Boston 1 A
- New York 2 B
- Philadelphia 3 C
- Cleveland 4 D
- Richmond 5 E
- Atlanta 6 F
- Chicago 7 G
- St. Louis 8 H
- Minneapolis 9 I
- Kansas City 10 J
- Dallas 11 K
- San Francisco 12 L

Will a new dollar coin be minted?

The 1997 50 States Commemorative Coin Program Act calls for the creation of a new dollar coin—the first since the Susan B. Anthony, which was introduced in 1979. The new coin would likely have the same dimensions as the Susan B. Anthony, but would be gold in color and have a distinctive rim to keep it from being easily confused with the quarter. The new dollar coin would take an estimated 30 months to produce.

Are any other coins scheduled to be minted?

The Commemorative Coin Program Act also calls for the minting of a series of coins to honor Orville and Wilbur Wright's flight in Kitty Hawk, N.C., which took place on Dec. 17, 1903. To honor the Wright Brothers'

historic flight, \$10 gold coins, \$1 silver coins and half-dollar coins will be issued from Aug. 1, 2003, to July 31, 2004.



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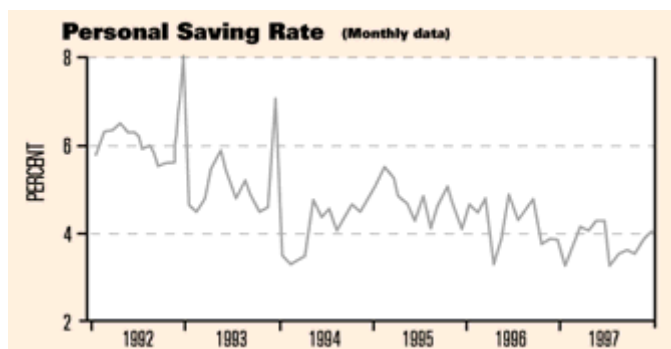
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Economic Snapshot

1st Quarter 1998

	Q2-97	Q3-97	Q4-97	Q1-98
Growth Rate—Real Gross Domestic Product	3.3%	3.1%	3.7%	NA
Inflation Rate—Consumer Price Index	1.3%	1.9%	2.1%	0.5%
Civilian Unemployment Rate	4.9%	4.9%	4.7%	4.7%



SOURCE: National Economic Trends, *Federal Reserve Bank of St. Louis, February 1998.*

What is personal saving?

Economists define personal saving as that part of after-tax income that is not consumed. Economists worry about low saving rates because saving is critical to the rate of capital accumulation, which, in turn, is related to economic growth, labor productivity and the standard of living. A low saving rate implies less capital, increased borrowing from other nations, or both.

Personal saving as a percent of disposable personal income has been falling steadily since the early 1980s. For example, the personal saving rate stood at roughly 8 percent in mid-1992, whereas recent estimates suggest that U.S. citizens saved less than 4 percent of their disposable income in 1997.