Fun and Games with Inflation

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Last summer news reports regularly asserted that Kevin Costner's clunker, Waterworld, was the most expensive movie ever made. In fact, that dubious distinction belongs to Cleopatra, made way back in 1963. Similarly, we read again and again that the highest-grossing movie ever is 1982's E.T. No way. The correct answer is 1939's Gone With the Wind, whose gross revenues make E.T.'s look puny.

How could responsible reporters get it so wrong? Simple: In comparing costs and revenues over time, they typically leave out something that matters just as much as the raw revenues or costs of a movie. They leave out inflation. The plain fact is that a 1939 dollar bought a lot more than a 1963 dollar, which bought more than a 1982 dollar, which . you get the point. In the 56 years since 1939, inflation has averaged 4.4% a year. Although that sounds small, even moderate inflation adds up over time. Actually, it doesn't add up. It multiplies up. Inflation, like interest, compounds. Net result: Since 1939, prices have increased by 998%.

If you fail to account for inflation when you compare dollar amounts in different years, your numbers are gibberish. To compare accurately, you must convert all dollar amounts into same-year dollars. Adjusted for inflation, then, Cleopatra cost 219 million 1995 dollars, a solid 25% more than the reported high-end estimate of $175 million for Waterworld. E.T.'s gross revenues were 632 million 1995 dollars, vs. $2.11 billion for Gone With the Wind. In other words, GWTW outgrossed E.T. by more than 3 to 1.

Inflation has pervasive--often perverse--effects on other aspects of the economy. Consider taxes. In the 1960s and 1970s, high inflation put people at all income levels into higher tax brackets (between 1973 and 1981, inflation averaged 9.4% a year). So-called bracket creep raised marginal tax rates on median-income families from 17% in 1965 to 24% in 1980. At higher income levels, bracket creep was more like bracket gallop. A family with twice the median income in 1965 and in 1980 saw its marginal tax rate nearly double, from 22% to 43%. (Twice the 1980 median family income in 1995 dollars is about $78,000.)

Ronald Reagan took care of bracket creep in 1981 with a tax cut provision that indexed brackets for inflation beginning in 1985. But still lurking in the individual income tax law are two provisions that, together with high inflation, create perverse incentives. One is the tax on capital gains; the other is the tax on interest.

Say you bought a stock in 1970 for $40 that's worth $200 today. If the stock had simply kept pace with inflation, it would be worth $157. So your real capital gain is only $43. At a tax rate of 28%, you ought to pay a capital gains tax of about $12 when you sell the stock, leaving you with a net gain of $31. But that's not how the government sees it. You pay federal income tax on the whole $160 'gain,' including the $117 adjustment for inflation. Your capital gains tax is 28% of $160, or $45. So your real after-tax capital gain is minus $2. You lost money! Inflation and the tax system hit you with a double whammy for investing your money instead of spending it on a vacation, booze, or some other pleasure. Capital gains taxes combined with inflation are, in short, a vicious disincentive to invest.

Something similar happens with the way interest is taxed. When inflation is expected to be high, lenders demand--and borrowers are willing to pay--high interest rates that compensate lenders for the lower expected value of the future dollars used to pay principal and interest on the loan. If the real interest rate is 4%, and both borrower and lender expect 8% inflation, they will agree on an interest rate of 12%. But if you're the lender, you don't pay taxes on just the 4% you earn; you pay on the 8% as well, even though it's simply an adjustment for inflation. In a 28% bracket, your after-tax return is a measly 0.64%. Had inflation been zero, you would have earned 2.88% after taxes. Eight percent inflation and the tax system reduced your return by 78%. The more inflation, the bigger the hit.

Inflation also combines with corporate income taxes to penalize investment. If a company pays $100,000 for a piece of equipment that it depreciates over five years, it deducts $20,000 a year from taxable income for each of those years. But an annual inflation rate of just 5% reduces the inflation-adjusted depreciation allowance by $1,000 the first year, more than $2,000 the second year, and so on, up to $5,526 for the fifth year. The net result is a substantial increase in the cost of capital. President Reagan's Council of Economic Advisers, which worried about this issue when inflation was higher, estimated that if inflation increased from 3% a year to 8% a year, the cost of capital would go up by as much as 5.1%

Because inflation is almost always with us (the only two inflation-free years since 1939 were 1949 and 1955), we tend to think that all prices have risen. That's almost true. It's also uninformative. It doesn't tell us whether the prices of particular goods have risen or fallen relative to prices in general. Are eggs cheaper than they were 40 years ago? Is gasoline more expensive than it was before OPEC drove up oil prices in 1973? Because of persistent inflation, most of us don't make good guesses. Estimating correctly requires using the consumer price index, something few of us carry around or commit to memory. I'm one of those few. As a result, when my family and I watch an old movie or a current show about a different era, we play a game. Whenever we hear a price or salary quoted, my wife and daughter ask, 'How much is that in today's dollars?'

The reality is that inflation has hidden dramatic changes in relative prices over the years. In 1955 a dozen eggs cost almost $3.50 in 1995 dollars, more than three times their price today. That same year an average new car cost just over $14,000 in 1995 dollars, vs. almost $20,000 today. Adjusted for quality, though, I bet it costs less today than 40 years ago. Today's cars require fewer repairs, are more durable and safer to drive, pollute less (although this benefits society, not the car buyer), and get much better gas mileage.

Speaking of gas, the inflation-adjusted price of crude oil is higher than it was in 1972, before OPEC's price increase, but it's not as high as you might think. In 1972 a barrel of oil cost about $13 in 1995 dollars, vs. $18.44 today. That's a 42% increase over nearly 25 years. And gasoline prices have fallen. In 1972 the price of a gallon of regular gas was $1.31 in 1995 dollars. Today the price of regular unleaded gasoline is about $1.15 a gallon. The higher real price of crude, combined with the lower real price of gasoline, must mean that petroleum refining is much more efficient than it was 23 years ago.

Because inflation is so important to our economy, the recent news about it is encouraging. After peaking at 13.5% in 1980, inflation has been in the low single digits every year since 1982 and will fall, I predict, to about 2% this year. Inflation simply won't be much of a factor in our tax code and won't damage investment incentives nearly as much as it used to. Include the fact that the CPI overstates inflation by anywhere from 0.7% to 2% a year, according to the U.S. Senate's Advisory Commission to Study the Consumer Price Index, and we could be living very soon in a virtually inflation-free country!

There’s more good news. Inflation has moderated everywhere in the industrial world. In Britain it fell from an average of 14.6% a year between 1973 and 1982 to 5.7% a year between 1982 and 1990, and has averaged just 3.4% in the 1990s. Even Italy, Europe's chronically sick puppy, has made a stunning turnaround. Between 1973 and 1985 inflation averaged 15.9% a year. It began dropping in the late 1980s, and has averaged just 5% in the 1990s.

In 1985, Milton Friedman and co-author Anna Schwartz wrote that three factors had reduced the Federal Reserve Board's incentive to print money and cause inflation. First, they said, the Fed's direct gain from printing money had fallen as a percent of national income; they estimated that if the Fed increased currency plus reserves by 10%, the government would get additional revenues of just 0.7% of national income. Second, indexing individual tax brackets prevents the government from using inflation to put people in higher tax brackets. Third and most important, inflation would no longer let the government reduce the real value of its debt by stealth. The reason: Bondholders had caught on and were demanding higher interest rates that reflected this inflation threat. Friedman and Schwartz seem to have been right.