Capital gains taxation

A capital gain in a period is the change in the market value of an asset over that period. Capital gains are the form of return for investments in art and housing. They are also the main source of return for many investments in businesses or stocks. Capital gains are a kind of income, they are taxed under the individual income tax. Taxes paid on capital gains depend on how much other income you have. However, they get favorable tax treatment compared to other forms of income.

Unlike interest on assets (bank accounts or government bonds), which is taxed on accrual (taxes are paid in each period on interest earned that period), capital gains are taxed on realization. They are only taxed when the asset is sold. Some assets yield only interest (some bonds have no capital gains - they are bought back at a specified time at face value, the same price that was paid for them). Some assets yield both interest and capital gains (bonds that can appreciate or depreciate in value). Stocks yield both dividends and capital gains.

Taxation upon realization instead of upon accrual generally reduces the asset holder’s tax obligations. This is just like the argument for the tax-subsidized retirement savings accounts. By paying taxes upon sale instead of upon accrual, the holder can earn interest on what would have been his tax obligation.

Suppose you buy a painting for $100, it increases in value by 10% a year and after seven years you sell it for $100 \times (1.1)^7 = 195$. When you sell it you pay a tax on the $95 difference between sale price and purchase price. If the capital gains tax rate is 20%, you pay $19$ in taxes and keep $76$. If instead you had invested the $100 in a bank account earning 10% per year, with a 20% tax rate on interest earnings you would earn only 8% per year in interest. After 7 years you would get $100 \times (1.08)^7 = 171$, so your interest earnings would be only $71$. This is because the government collects taxes on interest on accrual, so they collect those taxes earlier and the investor does not get to earn interest on the taxed money. Thus, there is a tax preference for savings in the form of assets that produce capital gains.

To eliminate this tax preference for capital gains without creating other distortions, the government could tax retroactively on accrual - making an estimate of each annual capital gain during the holding period and taxing away the interest payments gotten from not paying taxes on accrual. For stocks and houses, the estimate that can be made of accrued capital gains for each year is quite good - for houses use the Case-Shiller index and for stocks, use the stock markets. But it still may be difficult to keep track of all the changes in stock or house values. For many other assets, such as art objects, some land and other goods that are not traded so often, it is difficult to estimate the capital gain on accrual. Taxing stocks or houses on accrual and these other assets on realization could
create another distortion favoring holding the latter assets rather than stocks or houses.

Why are these distortions generally undesirable? In an economy without asymmetric information or externalities, competitive equilibrium results in efficient allocation, equating marginal social benefit to marginal social cost. The distortions make agents choose how much to trade for reasons other than prices so that marginal social benefit of saving in a certain form may be different from its marginal social cost.

Stock prices are often volatile, moving up and down in short periods. A tax on accrual would be similarly volatile, and since actual income has not changed for a person who holds on to a stock for a while, their income will be relatively volatile due to such a tax. This would create a problem, since in general people don’t like to have volatile incomes, preferring them to be smooth over time. Taxing on realization reduces this problem of volatile incomes due to a tax.

Another reason for taxing on realization is that individuals might not be able to finance the required tax payment if they were taxed on accrual. If someone owns a very volatile stock and the stock doubles in value, they may have to sell the stock to finance the tax payment. Or if they own some land and the land’s value increases by a lot, they will have to make a much larger tax payment, forcing them to sell the land. It would be inefficient to force people to sell assets just to finance tax payments. The tax on accrual shifts demand for the asset lower because of the need for liquidity even though the social marginal benefit remains where it was. The asset price is reduced and there is deadweight loss from the reduction in quantity traded. On the other hand, when the tax is on realization, the person has already sold the asset when they are taxed, so this is not a problem. This is no distortion. This is not a counterargument to retroactive taxation though. Under retroactive taxation, the owner has sold the asset before the tax must be paid.

There is also a concern that some capital gains may be overtaxed. Some capital gains are due to inflation, not due to real changes in value. Right now, only the nominal capital gain is taxed; inflation is not accounted for. So some capital gains are overtaxed if there is high inflation in the market for those assets.

In addition to the preference for capital gains through taxation on realization, the US tax code has two other preferences for capital gains:

1. The capital gains tax on an asset sold by heirs after the purchaser has died is based on the sale price minus the price of the asset at the time of death, rather than the original purchase price. Suppose Betty buys a painting for $100 when she is 20. At the time of her death at 75 it is worth $10,000. If she sells it the day before she dies, she pays capital gains taxes on $9900. If her children sell it the day after she dies, they pay no capital gains tax.

2. For many years there was an exclusion that allowed individuals not to pay
capital gains on home sales if they used those capital gains to buy a new house. In 1997 the exclusion was changed to a $500,000 exemption from capital gains for sales of a principal residence.

Arguments for tax preferences for capital gains

1. Protection against inflation

Consider the painting that rises in value by 95% over seven years. Suppose that also the price level has risen by 95% over these seven years. Then the painting is no more valuable in real terms than it was before; the owner is not wealthier in real terms. But the tax is based on nominal gains. The owner still must pay $19 in capital gains tax. Then the taxation on realization policy offsets the effect of inflation on tax payments.

But inflation has the same effect on other forms of savings. Inflation leads to excessive taxation of interest earnings in the same way - taxes are levied on nominal interest earnings.

This is from chapter 22.1: Suppose that Robin is going to save $100 at a nominal 10% interest rate and spends all her money on Skittles, at $1 per bag. Initially there is no tax on interest earnings. She earns $10 in interest, and her after-tax resources are $110, enabling her to buy 110 bags. Then a capital income tax of 50% is introduced, so her after-tax resources are $105 - she buys 105 bags. Now suppose there is inflation of 10%. A bag of Skittles costs $1.10 in the second year. With $110 in resources, she can only buy 100 bags of Skittles. With a tax rate of 50% on capital income, she is still taxed on the $10 of nominal interest income she made, leaving her with $105, but she can only get 95.5 bags of Skittles.

However, inflation also causes the nominal interest rate to rise. In general banks and corporations raise nominal interest rates to keep real rates the same. The relationship between the real interest rate (r), the nominal interest rate (i) and the inflation rate (π) is

\[ r = \frac{1 + i}{1 + \pi} - 1. \]

If inflation is 10%, banks will pay a nominal interest rate of 21% to give the same 10% real return as before the inflation (121/1.1 = 110 bags of Skittles, so the real return is the same). But taxes are still on nominal interest earnings. If she gets a nominal return of $21 in interest, she must pay $10.5 of that as tax. This leaves her with $110.5, with which she can only get 95.5 bags of Skittles - less than before the inflation.

So the argument of inflation is not enough to justify favoring capital gains over other forms of savings. Also, the appropriate reaction to inflation would be to index the tax system to inflation for capital income, as the government does for non-capital income. India does this.

2. Improved efficiency of capital transactions
A benefit of lower capital gains taxation is that it reduces the lock-in effect. Lock-in effect: People can delay selling capital assets to reduce their PDV of tax payment, as capital gains are taxed only on realization (but isn’t this an argument against taxing on realization? As long as you tax just on realization, there is a lock-in effect, but how strong it is depends on the rate of taxation). This lock-in effect can cause some loss of productivity. Much of the success of capital markets is based on putting assets to their most productive use. To do this, assets need to change hands whenever a more productive use for them can be found. Retroactive taxation on accrual reduces or eliminates the lock-in effect because the interest that would have been made under taxation on realization is taxed away. Thus it does not matter for tax purposes when the asset is sold. The tax does not create an incentive to change the holding period.

Due to a higher capital gains tax, people can want to hold on to stocks for a longer time, even if the company isn’t doing so well (profit divided by capital - a measure of rate of return on capital - is low). This will cause stock prices for the company to be higher, although the money would be more productive somewhere else (like in a growing firm). Suppose a person owns stock in an old and stagnant company. The person could sell the stock and invest in a younger, more dynamic company. But the lock-in effect gives them an incentive to hold the stock in the old company longer in order to avoid paying capital gains tax when the stock is sold. This is a distortion that can lead to inefficient allocation of capital since the money invested in the more dynamic company could lead to more innovation and faster economic growth.

3. Encouraging entrepreneurial activity

Most of entrepreneurs’ wealth in the beginning stages of a business comes from increases in the value of the business asset (like the business’s stock), rather than from income to the business. The important tax rate to entrepreneurs is thus the capital gains tax rate, not the corporate income tax rate. Their main return will come from selling assets when they become valuable. A higher capital gains tax reduces the expected after-tax return to entrepreneurial investment.

There is debate about the extent to which a higher capital gains tax reduces entrepreneurship.

1. There is no good evidence about whether capital gains taxes increase or decrease risk taking. Taxes partially insure against risk by reducing the variance of after-tax income. The asset holder pays more tax when gains are high and pays less when gains are low. Many entrepreneurs have more than one source of business income. Capital losses (negative capital gains) can be subtracted from other capital gains to reduce the amount of tax due. This might make taxes increase risk-taking, even if the expected gains are lower due to taxes.

2. Only a small fraction of capital gains go to entrepreneurs. Poterba (1989b) estimated that less than 1% of capital gains in the mid 1980s were realized by venture capitalists financing entrepreneurial ventures. A more recent estimate
of this in 2001 is 5.5%. Venture capitalists are important at the start-up stage of a company (although there is entrepreneurship that is not financed by venture capitalists). Many stocks are owned instead by pension funds and by other companies.

3. Capital gains tax reductions also reward investors for having taken risks in the past. This tax reduction for risks taken in the past does not encourage future or current risk-taking. (Of course to have a policy that rewards risk-taking in the future, it is necessary also to reward past risk-taking).

Marginal and inframarginal effects of tax incentives: Marginal effect is the new behavior encouraged by a tax incentive. Inframarginal effect is behavior that would have taken place anyway but is rewarded by the tax incentives. With tax-preferred capital gains, the government both subsidizes investments that would have been made anyway and encourages new investment today. But there is another inframarginal effect: The government subsidizes investments that were made in the past. This has a large revenue cost to the government.

Evidence on taxation and capital gains

The two main arguments for lowering capital gains taxation are unlocking past gains and encouraging entrepreneurship. But lowering the rate on all capital gains including those on past investments is a costly (to the government) way to encourage entrepreneurship, compared to cutting the rate only on investments from today on. So the main argument for cutting the tax rate on both previously earned and future capital gains is that the lower tax leads to more asset sales when they are productive.

If there is a large unlocking effect, so that a lower capital gains tax causes people to sell assets when it is productive to do so, rather than waiting for the PDV of tax payments to fall, than a reduction in the capital gains tax could raise revenues. A smaller tax rate would be applied to a larger tax base. In that case, the government might be on the wrong side of the Laffer curve for capital gains taxes. But if reductions on capital gains don’t affect asset sales or only their timing from one year to the next, then a reduction in capital gains tax could cause the government to lose revenue.

Evidence: capital gains realizations over time. Spikes in realization in 1986 and 2000. A large relative increase in capital gains taxation was announced for 1987; the announcement was made in 1986. So people sold their assets before the tax increase took place. By 1987, realizations had returned to their pre-1986 level. The peak in 200 was due to a stock-market boom.

Burman and Randolph (1994) estimate that almost all responses of capital gains realizations to taxation are transitory - a lower tax rate does not lead to much of an increase in the rate of capital gains realizations. The long-run elasticity of capital gains with respect to tax rate is only -0.18. This implies that we are on correct side of Laffer curve for capital gains taxation.
Some of the additional revenue raised from lower capital gains taxes only replaces other revenue that could be obtained. Many high-income workers can choose whether to be paid in cash wages or stock. When capital gains taxes are lower, they tend to choose more stock. This reduces cash wages, which can be taxed at an effectively higher rate.

Arguments against tax preferences for capital gains
1. Capital income goes primarily to richest taxpayers in US. In 2000, 90% of capital gains went to richest 15% of income tax filers. Reductions in capital gains taxes mainly benefit the richest taxpayers.

2. Lower tax rates on capital gains violates Haig-Simons principle. Taxation shouldn’t favor one economic choice over another unless there is an equity or efficiency reason for doing so.

Taxing capital gains at a lower rate than interest earned tend to make people invest in more stocks and less bonds. But investment is more efficient when investments are chosen based on their value to the investor not because of a tax wedge.

Section 23.3
Transfer taxation
Transfer tax is on assets passed from one individual to another (usually parent to children). Two forms: A gift tax, paid when a gift worth more than $12,000 in a single year is given. The tax is due the year the gift is made. The gifts given are added up over a lifetime. Tax is actually paid at death. When a person dies, assets passed on to heirs are taxed by the estate tax.

Gift and estate tax fall under the same tax schedule. Total estate consists of assets left behind plus total of gifts given over lifetime.

For 2006 through 2008 the estate tax exempted the first $2 million of gifts and estate from taxation. For amounts above that rates range from 15 to 45%. Estate tax is scheduled to disappear in 2010, reappear in 2011.

In other countries
26 of 30 OECD countries had some kind of transfer taxation in 2001. Thirteen OECD nations collect a wealth tax each year on holdings of assets. The US doesn’t have this. Average OECD nation raises 0.89% of revenues from wealth and transfer taxes; US raises 1.01% revenue from transfer taxes.

Arguments for the estate tax
1. It is a progressive way to raise revenue. In 2006 only wealthiest 0.27 percent of estates estimated to pay the estate tax. In 2003 average effective tax rate was only 19% among those paying the tax. Yet in 2004, $21.5 billion in revenue raised by estate tax. Also as heirs tend to have similar income and assets to parents, this is not affected by considering the burden to be on the heir (Gale
and Slemrod 2001a).

2. Taxes on wealth needed to avoid too much concentration of wealth and thus power, among wealthy families. Piketty and Saez (2006) found that in nations with progressive tax systems for both capital income and wealth, there is a reduction in share of incomes controlled by very top income earners.

3. Beneficial to children of the rich to have to work more and not inherit as much.

Arguments against estate tax

1. Double taxation - taxed on income when it is earned and as wealth when it is inherited. Efficiency argument - being taxed heavily on estate may reduce incentives to save for children.

Problems with this argument: double taxation is a feature of the tax system. For example, we are taxed on income and then taxed again when we buy something with that income.

Double taxation doesn’t necessarily reduce savings. The substitution effect would cause one to save less if the returns to saving are less. But one could choose to save more if one cares about what is left behind to children.

Capital gains income may be taxed only once, through the estate tax. If a person leaves their capital assets to their children there is no tax on the accrued capital gains because the basis of the asset is stepped up when it is transferred. Without the estate tax income from capital gains might not be taxed at all.

2. To afford the tax an heir may be forced to sell the asset.

3. Taxpayers can avoid paying the tax. Parents set up trusts for their children. A parent gives a trustee control of assets on the condition that they be used to benefit the children. The funds in the trust are never taxed.