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## *CAPITAL GAINS TAXES, INNOVATION AND GROWTH*

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Updated July 14, 1999

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## Capital Gains Taxes, Innovation and Growth

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## **ABSTRACT**

This study addresses the role of capital gains tax reductions in stimulating new firm formation, innovation and growth through venture capital investments and tax-favored stock options. The historical relationship between venture capital investment and changes in the capital gains tax rate is examined. The target efficiency of general capital gains tax cuts as a method of stimulating investment in new and innovative firms is also considered, along with the desirability of reallocating investment to risky enterprises. Finally, the role of lower capital gains taxes in attracting talented individuals through executive stock options is discussed. This report will be updated as developments warrant.

# Capital Gains Taxes, Innovation and Growth

## Summary

The growth effect of cutting capital gains taxes on innovation, where lower capital gains taxes may encourage investment in new, “high-tech” firms, has been a subject of continued interest. A recent Congressional Budget Office study, while concluding a limited and uncertain effect on growth induced by capital gains tax cuts through normal savings and investment channels, noted a lack of evidence on the effect through new firm formation.

The belief on the part of many venture capital advocates that the capital gains tax plays an important role developed because the slump and recovery in the venture capital market in the seventies and early eighties was associated with a rise and fall in the capital gains tax. More recent evidence, however, indicates that there is no apparent relationship between venture capital investments and the capital gains tax.

There are several reasons why the effect of capital gains taxes on growth through investment in firms would be expected to be small. First, most capital gains accrue to mature firms and real estate; only a small share is associated with small and new firms. Most formal venture capital is provided by institutional investors not subject to the capital gains tax. Secondly, a capital gains tax cut will not specifically favor this type of investment, but will benefit a wide range of investment opportunities. Indeed, it could actually discourage such investment by reducing the present differential tax benefit for new stock issues. Nor is the capital gains tax likely to be an efficient mechanism to encourage acquisition of skilled executives through stock options, since these stock options are often not subject to the capital gains tax and since only a tiny fraction of gains is associated with stock options.

It might be possible to devise more targeted provisions, although such provisions tend to be complex and may, themselves, be relatively unsuccessful in stimulating investment. This report will be updated as developments warrant.

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# Capital Gains Taxes, Innovation and Growth

One issue often raised with respect to the growth effect of cutting capital gains taxes is the effect on innovation. This effect on innovation is often suggested as occurring through two mechanisms. The first, and most important one, is in encouraging venture capitalists to invest in new, “high-tech” firms. The second is through attracting talented individuals to new ventures through stock options.

There is little empirical evidence regarding the link between taxation and investment behavior. Most empirical evidence of aggregate savings suggests little relationship between savings rates and the rate of return, and economic theory suggests that increasing the rate of return can either increase or decrease savings.<sup>1</sup> It is very difficult to obtain clear evidence of the effects of capital gains taxes in reallocating investment into venture capital. Indeed, much of the capital made available to new firms is of an informal type, not easily identified or measured. Nor are there studies of the effects of capital gains taxes on stock options on the career choices of executives.

As a result of this paucity of direct information, the Congressional Budget Office in its study of the macroeconomic effects of cutting capital gains taxes concluded that, while the effects through savings were small and of uncertain direction, the effects through innovation were an open question.<sup>2</sup>

While uncertainties remain, there are some ways to develop a better understanding of the likely role of capital gains tax reductions on venture capital, by interpreting available evidence in the framework of economic theory. The next section outlines the basic venture capital process, and what types of investment are involved. The following sections discuss important empirical and theoretical issues relating to the effect of the capital gains tax on venture capital. In particular, three issues are discussed. First, the historical relationship between venture capital and changes in the capital gains tax is discussed. Secondly, the degree to which a capital gains tax cut is, or is not, targeted to venture capital is addressed. A third section incorporates this information into a general framework for predicting the likely effects on venture capital of a general cut in the capital gains tax. A targeted cut is also discussed. The final section of the paper discusses stock options.

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<sup>1</sup>A higher rate of return can decrease savings through the income effect. An individual can actually save less today and have it grow to a greater amount in the future when the rate of return rises.

<sup>2</sup>Congressional Budget Office, *An Analysis of the Potential Macroeconomic Effects of the Economic Growth Act of 1998*, August 1998.

## The Venture Capital Process

It is useful, prior to discussing the capital gains tax, to briefly describe the capital formation process for new firms.<sup>3</sup> Individual entrepreneurs may turn to many potential sources in raising capital for their enterprises.

Most entrepreneurs initially rely on their own savings, on bank loans and on friends and acquaintances. A survey by the National Federation of Independent Businesses indicated that 48 percent of financing came from savings, 29 percent from banks or other institutional lending, 13 percent from friends, 4 percent from individual investors, and less than one percent from venture capital firms.<sup>4</sup> Of course, the “high tech” firms that may be more associated with innovation typically need more capital and rely more heavily on equity capital from venture firms and other unrelated investors. (A successful firm eventually “goes public,” that is, issues stock for purchase by the general public, in most cases). Nevertheless, formal venture capital accounts for less than one percent of investment in the economy even in a strong year, and informal equity investments are estimated to be about twice the size of the formal investments.<sup>5</sup>

Many authors of studies on the venture capital process emphasize that the informal investors generally have ties to the business that are not purely financial; indeed, entrepreneurs are urged to seek out business investors who bring more to the firm than funds—investors with contacts or other types of business expertise who can be more active partners. Wealthy investors may choose to invest firms in areas where they have particular knowledge, often in their local community or region and in industries where they worked or owned businesses.

The role of various financial sources is important because these less passive sources of investment are probably less sensitive to taxes, and more influenced by the nature of the business opportunity. This issue is an important one to keep in mind, since most of our data are on the formal venture capital funds: if there is evidence that these firms are highly responsive to capital gains taxes, then the question of the response by more informal sources of funds is clearly left open. If, however, the evidence does not support a strong role for the capital gains tax in formal venture capital arrangements, then there may be little reason to expect that the tax will strongly influence these earlier stage investments.

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<sup>3</sup>There are a number of articles and books describing this process. See, for example, William D. Bygrave and Jeffrey A. Timmons, *Venture Capital at the Crossroads*, Boston: Harvard Business School Press, 1992; Karl Vesper, *New Venture Mechanics*, Engelwood Cliffs, N.J.: Prentice-Hall, 1993; Jeffrey A. Timmons, *New Venture Creation: Entrepreneurship for the 21<sup>st</sup> Century*, 4<sup>th</sup> Edition, Irwin, Burr Ridge Ill, 1994.

<sup>4</sup>Vesper, *Ibid.*, p. 141.

<sup>5</sup>Timmons, *New Venture Creation: Entrepreneurship for the 21<sup>st</sup> Century*, *op. cit.* At various points, the author suggests that there is \$50 to \$80 billion in informal venture capital for the \$35 billion of outstanding assets in venture capital firms.

## Venture Capital and Capital Gains Taxes: The Historical Record

For some time, a claim has been made that capital gains taxes have an important impact on venture capital. As Bygrave and Timmons indicate,<sup>6</sup> this view was formed in large part because of the slump in venture capital after the increase in the capital gains tax in 1969 and its surge in the period around the tax cuts in 1978 and 1981. The authors note, and this is confirmed in the data in table 1, that the rise in the capital gains tax rate, enacted in 1986 for 1987, 1988 and thereafter was not associated with a decline in venture capital (as a share of total investment), and that there is no statistically significant correlation between lower capital gains taxes and venture capital investment share over a time period that includes these later years.

The authors speculate on possible reasons for this lack of effect, and one of them is the increase in the share of venture capital provided by institutional investors who are not subject to tax. Most formal venture capital investment is not associated with the capital gains tax. In 1994, about 70 percent of venture capital was provided by pension funds, foundations, endowments, and foreign investors, all groups not subject to any U.S. income tax. Most of the remainder is supplied by insurance companies or other corporations not fully subject to tax or not subject to the individual income tax and thus to the individual capital gains tax. Overall, only about 12 percent of formal venture capital investments are provided by individuals subject to the individual capital gains tax.

However, the series in table 1 also examines venture capital provided by individuals. As in the case of total venture capital, the expected response to the 1986 act did not occur. Although it was clear that capital gains taxes were rising, venture capital investment shares rose in 1986 (the year of enactment) and in 1987.

Of course, there may have been offsetting economic factors. However, the same arguments can be made about the effects of the 1969 and 1978 changes. The principal influences on the level of venture capital as a fraction of total investment appear to be factors other than capital gains taxes. It is even less likely that these tax burdens affect informal investors or the entrepreneur himself (or his friends and relatives), where the business or product idea of the person behind the enterprise is an important motivating factor.

The lack of a visible relationship between the capital gains tax and venture capital in the aggregate data over time does not mean very much, because there are so many other factors that could cloud such a relationship. It is probably impossible to obtain any meaningful empirical evidence from the data. However, as discussed in the following section, the lack of such a relationship is also consistent with theoretical insights into the link between a general capital gains tax reduction and venture capital.

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<sup>6</sup>Bygrave and Timmons, *Venture Capital at the Crossroads*, op cit., pp. 262-265.



**Table 1: Formal Venture Capital as a Percent of Total Investment and the Capital Gains Tax Rate, 1978-1995**

Year	Venture Capital (% of Total)	Venture Capital of Individuals (% of Total)	Maximum Capital Gains Tax Rate	Capital Gains Rate as a % of Ordinary Rates
1978	0.050	0.016	35/28	50/40
1979	0.035	0.008	28	40
1980	0.142	0.022	28	40
1981	0.156	0.036	28	40
1982	0.284	0.057	28/20	40
1983	0.623	0.131	20	40
1984	0.445	0.065	20	40
1985	0.325	0.042	20	40
1986	0.461	0.054	20*	40*
1987	0.560	0.067	28	73
1988	0.381	0.032	33	100
1989	0.289	0.018	33	100
1990	0.231	0.026	28	90
1991	0.173	0.021	28	90
1992	0.322	0.035	28	90
1993	0.290	0.021	28	71
1994	0.374	0.044	28	71
1995	0.407	0.071	28	71

\*Note: The increased rates in 1987 and 1988 were enacted in the Tax Reform Act of 1986, so that investors were aware of these future tax increases in 1986. The Conference report was adopted in September but the shape of the tax revision was reasonably clear several months earlier.

Source: National Science Foundation, Science and Engineering Indicators, 1998, Appendix Table 6-20.

A recent study by Gompers and Lerner examined the determinants of aggregate venture capital over the period 1972 to 1994 and found a negative relationship between capital gains tax rates and venture capital investment; however, they found this effect was statistically significant only for (and most powerful for) investments made by pension funds — the investors that are not affected by the tax rate.<sup>7</sup>

The authors suggest that this tax relationship may derive from the demand side — individual entrepreneurs altered their investment due to capital gains taxes and demanded more financing. This argument is not very persuasive from a theoretical standpoint, because, as discussed above, an entrepreneur has the least substitutable alternatives and should be much less sensitive to taxes than passive investors.<sup>8</sup>

A more likely explanation is that there is some other factor driving this result. One problem with the study was the tax rate used. As noted above, when the capital gains tax was raised prospectively in 1986, venture capital commitments went up. The authors do not use the expected capital gains tax rate, but the current (lower) tax rate, which would have contributed to the negative relationship they found. In addition, in 1994, the capital gains tax was reduced for small business investments held for five years (in this case, the authors used prospective rates), and this tax rate decrease coincided with a rise in venture capital. But there are many limits on the application of this tax rate. It does not apply to shares in limited partnerships, the common form of venture capital investments, but only to corporate stock. And for entrepreneurs (the demand side), there are a number of restrictions, including limits on the amount of gain relative to basis that can be eligible for relief, that make the provision less important. Because of the small number of observations and the importance of these particular years, using different capital gains tax rates might have significantly altered their results.

## **How Targeted Is the Capital Gains Tax to Venture Capital?**

The lack of relationship between venture capital as a percent of investment and the capital gains tax rate should not be surprising given that the capital gains tax applies to a broad array of investments. The vast majority of the capital gains tax arises from gains on assets that are not associated with venture capital. Thus, cutting the capital gains tax is not a well-targeted approach and should not be expected to have much of an effect in increasing the share of investment going to venture capital. Not does it seem likely that venture capital increases because total savings increases, given the lack of theoretical or empirical evidence for such an aggregate effect.<sup>9</sup>

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<sup>7</sup>Paul A. Gompers and Josh Lerner. “What Drives Venture Capital Fundraising?” Brookings Papers, Macroeconomics, 1998, pp. 149-192.

<sup>8</sup> One of the discussants of their study, Thomas Hellman, also questioned the notion that entrepreneurs are sensitive to capital gains taxes.

<sup>9</sup> See Eric Eigen, Jane Gravelle and Kent Scepters, Dynamic Tax Models: Why They Do the Things They Do, *National Tax Journal*, Vol. 50, September 1997, pp. 657-682 for a brief (continued...)

Much of the capital gains tax arises from real estate or from gains on the sale of stock of mature firms. Table 2 shows the basic allocation of capital gains across asset types.

**Table 2: Share of Net Capital Gains by Asset Type, 1993**

Asset Type	Percentage Share of Total Net Gain
Corporate Stock	31.5
Mutual Funds	9.4
Other Financial Assets	2.2
Residential Structures	2.1
Partnerships, S Corporations, Fiduciaries	17.3
Land, Buildings, Physical Assets	23.3
Other	14.3

Source: Congressional Budget Office, Perspectives on the Ownership of Capital Assets and the Realization of Capital Gains, May 1997. The category other includes livestock, timber, collectibles, installment sales, and items not classified.

As this table indicates, only 31.5 percent of capital gains accrued to direct ownership of corporate stock, and 17.3 percent accrued in partnership and S corporations, that are also organizational forms for small firms or venture capital companies. Out of those shares very little would likely accrue to small new entrepreneurial firms. While we do not have data on gains according to asset size, data on assets are suggestive. According to the Internal Revenue Service Statistics of Income *Corporate Source Book*, 1996, 84% of the assets of nonfinancial corporations were in firms with assets over \$250 million; 88% were in firms with over \$100 million of assets; 91% were in firms with over \$50 million. For corporations with less than \$50 million in assets, 13% of assets were in real estate, and 32% were in trade. In total, 59% of the assets of firms with less than \$50 million were in these industries along with construction, agriculture, and trucking — industries that are unlikely to be involved in significant amounts of innovation. Since much of the remaining activity is also in areas not considered “high-tech” (such as services), only a small proportion of capital gains on corporate stock is likely to be associated with profit from newer, high-tech firms that are more likely to be associated with innovation. Firms with assets of less than \$50 million that are not in the industries of

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<sup>9</sup>(...continued)  
survey of this evidence.

real estate, trade, construction, agriculture and trucking constitute only 5% of the total assets in the corporate sector.

Partnership activities are even more concentrated in these more traditional industries. According to Statistics of Income Data, 1995,<sup>10</sup> 64% of partnership assets are in real estate; three quarters are in agriculture, construction, trade, real estate and legal services, and 89% are in agriculture, construction, trade, real estate, and all services. Subchapter S corporations (organized as corporations, but taxed as partnerships), for which separate data on industry classification are not available, account for 20 percent of the total of Subchapter S and partnership assets. The distribution of Subchapter S corporate activities is likely similar to that of small corporations and partnerships.

These data suggest that only a small fraction of investment and a small fraction of capital gains are associated with investment in new innovative firms. Most capital gains taxes are associated with real estate, mature corporate firms, or new businesses that are unlikely to be associated with innovation.

Of course, some small firms will grow to be large ones. However, the small role played by venture capital in general, as documented in table 1 and from other sources also indicates that only a small share of capital gains are associated with this purpose. In 1997, formal venture capital was responsible for \$11.5 billion of investment according to the Moneytree Survey Report which tends to report slightly higher amounts of venture capital than the source used for the series in table 1 and thus is an upper bound investment.<sup>11</sup> Since total investment was \$1173.0 billion, venture capital is only 1 percent of total investment.

Moreover, as noted in the previous section, only a small share (12 percent) of this formal venture capital investment comes from individuals. Of course, there is also more informal venture capital, which, as suggested earlier, may be about twice the size of formal venture capital, suggesting an investment share of slightly over two percent for individuals subject to the capital gains tax. While it is impossible to pinpoint the exact share of the capital gains tax derived from venture capital or investment in new enterprises, it is clear that the share is very small.

The fact that capital gains taxes cover a wide range of investments other than venture capital has important implications. Even if the capital gains tax plays a role in increasing the amount of venture capital, this approach is relatively inefficient. For every dollar of capital gains tax reduction, less than five cents is likely to be associated with venture capital.

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<sup>10</sup>SO Bulletin, Internal Revenue Service, Fall 1997.

<sup>11</sup>PricewaterhouseCoopers, [<http://204.198.129.80/>]. Investment was \$14.5 billion in 1998, still approximately one percent of investment. The numbers from this survey tend to be larger than those reported by the Venture Capital Annual Review, which covers commitments to formal venture capital funds by limited partners. See appendix table 6-20, *Science and Engineering Indicators, 1998*, where venture capital according to that measure was \$4.2 billion in 1995; the Moneytree survey reported \$6.2 billion for that year.

The lack of targeting also suggests that a capital gains tax cut is unlikely to have very much effect on diverting funds into venture capital out of other uses. Since so many other types of investments are also affected by the capital gains tax, there is not much particular benefit for investment in new firms. A cut in the capital gains tax would favor all forms of equity investment in corporate stock, as well as partnership interests and investment in real estate.

More of the return to an investment in a new venture may accrue in the form of a capital gain, than is the case for stock of more mature firms (where dividends are paid) and investments in real estate (where rents are received). There are some offsetting effects, however, that make it unclear as to the degree of relative benefit received by venture capital through lower capital gains taxes. Certain theories of the firm and why they pay dividends would predict that the capital gains tax is more important for investment in mature firms rather than new firms.<sup>12</sup> Risk analysis does not clearly indicate that raising taxes will reduce investment in risky enterprises.<sup>13</sup>

Moreover, for enterprises that are expected to yield a high return, there is already a built-in tax benefit in the deferral aspects of the capital gains tax. For example, with a 2 percent inflation rate, and a 10 percent nominal return, an asset held for seven years will be subject to an effective tax rate of 19 percent (with a statutory rate of 20 percent). If the expected return is 20 percent, the effective tax rate is 13 percent. The effective tax rate falls, because the advantage of deferring taxes becomes greater with the larger rate of return.<sup>14</sup> Thus, while a capital gains tax cut would reduce the tax burden proportionally, the tax burdens on assets with capital-gains-intensive returns are smaller to begin with and the tax less important as a share of return.

There is little other direct evidence about portfolio substitution among investments. However, most evidence on the substitutability between debt and equity suggests a relatively modest substitution effect.<sup>15</sup> A new study of investments by sole

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<sup>12</sup>This would be true in the case of the “trapped equity” or “new view” of dividends. See M. Kevin McGee, Capital Gains Taxation and New Firms Investment, *National Tax Journal*, vol. 60, December 1998, pp. 653-671. This view assumes that the dividend tax is irrelevant to funds obtained from retained earnings because the dividend tax is saved in the short run, although paid in the future, and that only the capital gains tax matters for these investments. Note, however, that many economists do not find the “new view” persuasive because of certain inconsistencies with observed firm behavior.

<sup>13</sup> The capital gains tax reduces both expected return and the variation in return, so that investors could find it desirable to decrease the share of risky investment in their portfolio when taxes are lowered, so as to restore the mean and variance of return. The major caveat to this apparently unexpected result is the lack of full loss offset, which means that losses cannot always be fully deducted in the year incurred.

<sup>14</sup> The effective tax rate is the pretax real return (R) minus the after-tax real return (r) divided by the pretax real return. The formula used is  $r = (\ln(e^{(R+p)T}(1-t)+t)) - p) / T$ , where p is the inflation rate, T is the holding period, and t is the tax rate. The nominal return is the real return plus the inflation rate.

<sup>15</sup>See Jane G. Gravelle, *The Economic Effects of Taxing Capital Income*. Cambridge, MA: (continued...)

proprietors found a larger elasticity with respect to direct taxes on these proprietors; however, how closely this behavior relates to the effects of the capital gains tax on behavior of outside investors in a firm, or to “high tech” firms, is unclear, and such a study is fraught with many difficulties.<sup>16</sup>

While the evidence is anecdotal, taxes received virtually no mention in a recent text on new enterprises.<sup>17</sup> Indeed, the author stressed finding equity investors whose interests were in the enterprise itself, rather than financial return, and who could bring additional expertise into the business (e.g. contacts, business acumen).

Finally, there is currently a provision that allows for a fifty percent exclusion for gains on stock invested in certain small corporations. Gains taxes may be deferred if reinvested. This provision is limited to stock originally issued by a corporation with less than \$50 million in assets engaged in an active business and excludes firms in certain types of industries (finance, insurance, farming, extraction and certain types of services). Indeed, this provision, which was enacted in 1993, was explicitly directed at new innovative firms. (The rollover provision was adopted in 1997). Lowering the capital gains tax will reduce the relative advantage held by these assets and could discourage investment in the form of purchases of new stock issues.

Of course, it would be possible to design a more targeted capital gains tax cut that goes beyond this current exclusion for small business stock issues. How effective such a targeted incentive would be is difficult to determine, given the paucity of information. Most formal venture capital would not be affected by even a targeted tax cut, since most suppliers are not subject to the tax. Informal investors, and friends and acquaintances who supply seed money for new ventures may be less sensitive to financial return because they are influenced more heavily by other factors. That is, they would see alternative investments as less perfect substitutes and would be expected to be less sensitive to changes in financial returns.

Targeted tax subsidies, while they have more “bang for the buck,” would be more difficult to administer, especially in the case of a capital gains tax reduction where there is a lag between purchase and sale. Up-front investment incentives or intervention through small business loans are other potential options.

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<sup>15</sup>(...continued)

MIT Press, 1994, pp. 82-84 for a brief discussion of debt and equity substitution. The Treasury study of corporate tax integration used a substitution elasticity of 0.3, which is quite small. See U.S. Department of the Treasury, *Integration of the Individual and Corporate Income Tax Systems*, January 1992.

<sup>16</sup>Robert Carroll, Douglas Holtz-Eakin, Mark Rider, and Harvey S. Rosen. Entrepreneurs, Income Taxes and Investment. In *Does Atlas Shrug? The Economic Consequences of Taxing the Rich*, forthcoming. Some of this effect may be due to cash flow effects, which would not apply to investment subject to the capital gains tax.

<sup>17</sup>Timmons, op cit.

## How Desirable Is Reallocating Investment to Risky Enterprises?

Many of the arguments for increasing investment in venture capital or other high-tech enterprises presume that shifting investment into these operations is desirable. New enterprises, for example, are identified as creating jobs and innovating, earning higher rates of return. Timmons<sup>18</sup>, for example, reports that new firms are responsible for 68 percent of job growth and 50 percent of new innovations. Moreover, it is generally recognized that the return to society on innovations is high and that society tends to underinvest in R&D.<sup>19</sup> However, new enterprises also fail at a much higher rate. Almost a quarter (24%) fail within two years, over half (52%) fail within four years, and 63% fail within six years.<sup>20</sup>

Thus, the trade-off for obtaining these higher returns is risk. It is not clear, however, that it is desirable for tax policy to intervene by altering that risk-return ratio. If the social benefits exceed the private benefits, then it would be appropriate to induce more risk-taking and higher private returns through tax subsidies. However, it has not been clearly demonstrated that new business enterprises generate such externalities or that these externalities outweigh other costs. For example, a high failure rate has consequences not only for investors, who may lose some or all of their investment, but also for employees who work at more risky jobs.

### Stock Options

Another, although less important, route through which capital gains are sometimes argued to affect entrepreneurship, new firm formation and innovation is through capital gains taxes on stock options. These tax benefits are argued to attract skilled managers and high-level employees.

There are two important reservations about this argument. First, many stock options now granted executives are non-qualified options, which are not subject to the capital gains tax. Capital gains taxes do apply to qualified options, but there are many restrictions on the use of these options.<sup>21</sup>

Secondly, as in the case of stock of new firms in general, these types of stock options are a very small part of the capital gains tax. Executive stock options are estimated at about one-half of one percent of all shares outstanding,<sup>22</sup> and since many

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<sup>18</sup>Ibid., p. 5.

<sup>19</sup>Gravelle, op cit., p. 209.

<sup>20</sup>Timmons, op cit., p. 6.

<sup>21</sup>See CRS Report 97-910, *Employee Stock Options: Accounting and Tax Issues*, by Gary W. Shorter and Jack Taylor, October 1, 1997, for a discussion of this tax treatment.

<sup>22</sup>Christine Jolls, *Stock Repurchases and Incentive Compensation*. National Bureau of Economic Research Working Paper 6467, March 1998.

of these are non-qualified and many are for mature firms, very little of the revenue loss from a capital gains tax cut would accrue to these purposes.

## Conclusion

The pattern of venture capital provided over time does not support a strong role for a capital gains tax.

This absence of empirical relationships could be due to other influences; however, economic theory and analysis supports the view that a general capital gains tax cut is a poorly targeted and ineffective incentive to investment in small innovative firms. While a more targeted cut might be more effective, even a targeted capital gains tax reduction may not have much of an effect on venture capital commitments that are driven largely because of expectations of economic profitability and a close association with the entrepreneur or with the particular type of innovation. Such targeted tax cuts are also difficult to administer and it may be that a better alternative would be a non-tax subsidy or a different type of tax subsidy.