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## HOW DO WE TAX THE INCOME OF ENTREPRENEURS?

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October 4, 2017

Entrepreneurs create successful enterprises that generate substantial value through the innovations they introduce. They typically must wait many years before their firms generate net operating profits. The tax system favors entrepreneurial activity by allowing deferral of tax on the accrual of wealth within new firms and by taxing the gains of entrepreneurs when realized at favorable capital gains rates. But taxes on the income of mature enterprises offset some of this benefit by reducing the value of the firms that entrepreneurs create. Taxation of entrepreneurial income matters because of the important contributions the innovations entrepreneurs introduce make to economic growth.

*Eric Toder is co-director of the Urban-Brookings Tax Policy Center. The author thanks Chenxi Lu for research assistance and Donald Marron and Mark Mazur for helpful comments. This brief was funded by a generous grant from the Ewing Marion Kauffman Foundation. We are grateful to them and to all our funders, who make it possible for us to advance our mission.*

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## INTRODUCTION

Entrepreneurs make a large contribution to economic growth by starting companies that introduce new products, deploy new technologies, and create improved forms of business organization. In the long run, economic growth can occur only through increases in labor and capital in the economy and improvements in productivity. Economists have found that increases in labor and capital can explain only a portion of the economic growth that occurs in advanced economies, so productivity gains must play a key role. Such productivity gains are produced in part by scientific research, but they also require the efforts of entrepreneurs who introduce new technologies into the marketplace and bring them to scale.

Economic historians, most notably Joseph Schumpeter, have stressed the transformative nature of entrepreneurship and its importance for economic growth. Schumpeter described the defining characteristic of an entrepreneur as “simply the doing of new things or the doing of things that are already being done in a new way (innovation)”. He adds that the new thing “need not be spectacular or historical importance. (Schumpeter 1947). He stressed the importance of the “creative destruction” that these advances produce in the development of capitalist economies.

This brief discusses how existing taxes and proposed tax reforms treat the income of entrepreneurs. We begin by defining the special characteristics of entrepreneurial incomes. We then discuss how tax laws applying to both rapidly growing new businesses and mature enterprises affect the overall returns to entrepreneurial activity. Finally, we consider the effects of different tax reforms and comment on policy implications.

## WHAT ARE ENTREPRENEURS AND HOW DO THEY RECEIVE INCOME?

### *Entrepreneurs versus Small-Business Owners*

Americans celebrate the “entrepreneur,” but the term’s meaning is murky, and people have applied it to very different activities. Merriam-Webster dictionary defines an entrepreneur as “one who organizes, manages, and assumes the risk of a business or enterprise.” Under this definition, the term entrepreneur would apply to just about anyone who is self-employed or owns a small business. Others often apply the label “entrepreneurial” to anyone who demonstrates creativity in the workplace, such as by developing new approaches to problem solving, inventing new products, or performing similar activities beyond the routine performance of work.

In this brief, however, we adopt the Schumpeterian view of entrepreneurship. We define a successful entrepreneur as someone who creates an enterprise that grows to a significant scale and generates for a time economic rents or supernormal profits for the owners, reflecting the innovation that the firm creates. This innovation can take many forms and does not necessarily enjoy patent protection. It could be a new product or service, a new business in an underserved market, a novel production method that lowers the cost of an established good or service, or a superior form of business organization or governance that outperforms competitors. It is not restricted to high-tech activities. The founders of national chains such as McDonalds and Starbucks, which sell mundane products such as hamburgers and coffee, are just as much entrepreneurs as the founders of Apple and Microsoft.

### ***Special Attributes of Entrepreneurial Income***

A business founder's entrepreneurial income differs in two important ways from ordinary wage and salary income. First, the suppliers of this work are business owners themselves rather than employees receiving a contractual wage in exchange for services. Second, entrepreneurial activities typically produce a stream of profits that begin some years after the initial work is performed. This delay in compensation is an important attribute of entrepreneurial income: returns occur only after a substantial period of product development, build-up of firm structure and supporting physical capital, development of marketing and sales tools to reach new markets, and the gradual growth in consumer acceptance and brand-name reputation.

Thus, entrepreneurial income reflects three components: the return to the entrepreneurs' efforts, reflecting hours of work, learned skills, new insights, and luck; the return to waiting, because significant time often elapses between the performance of effort and the time the business becomes profitable; and compensation for risk-taking, because the success rate of new enterprises is highly variable.

Standard economic models divide income into two components: labor income, or the return to work effort, and capital income, or the sum of the reward for deferring consumption and a risk premium. The return the entrepreneur receives is a combination of labor income and capital income. In a simplified representation of what occurs, the entrepreneur generates an idea and starts a new firm that will produce a new product or service, serve a new market, or apply new production or organizational techniques. The value of the firm at the time of its creation is the present discounted value of its expected future profits. The discount rate includes a risk premium, reflecting in general the premium that investors will demand for putting their funds in a new venture. The value of the entrepreneur's share in the firm that he or she creates at the firm's inception is the labor component of his or her income. As the firm matures and moves closer to generating operating profits, its market value will increase. This increase in value between the time of creation and the date at which profits begin is the capital income component of the entrepreneur's income: the return to waiting and the risk premium.

This description of entrepreneurial income is, of course, highly simplified. The entrepreneur's contribution of labor services and innovative activity will typically continue for years. In addition to gaining wealth by holding shares in future profits, the entrepreneur may also collect a salary with funds supplied by outside investors and may compensate other employees with ownership shares. The entrepreneur may also invest past savings or borrowed money into the firm on top of his or her contributed labor, or "sweat equity". Consequently, the entrepreneur may receive conventional labor and investment income in addition to entrepreneurial income. But the basic characteristics of what we define as entrepreneurial income remain as described:

- The share of future appreciation and operating profits instead of wages that the entrepreneur receives in return for his or her labor effort and innovations.
- The additional value of the firm that accrues because of the lag between the entrepreneur's efforts and when the firm starts generating operating profits.
- A risk premium in the form of a higher-than-average rate of return from investing in new ventures, similar to the higher yield relative to the return on safe assets received by external investors who invest cash in rather than contribute labor to the firm.

## **WHAT IS THE TAX BURDEN ON ENTREPRENEURIAL INCOME?**

The entrepreneur benefits from significant tax preferences on income he or she accrues during the firm's start-up phase, when its value is being established and increasing. Some or all of this value, however, can be reduced by the taxes that the firm will later pay as a mature enterprise if it becomes a publicly traded company subject to the corporate income tax on its ongoing profits.

### ***Tax Preferences in the Growth Phase***

The taxation of entrepreneurial income in the growth phase reflects the special characteristics of that income. In the time between a firm's start and when it begins to generate operating profit, the entrepreneur's return comes in the form of an increase in the value of the firm. The entrepreneur reports this income as a realized capital gain on any shares he or she eventually sells. Tax on the gain on the portion of the company's shares that the entrepreneur does not sell at the time the firm starts generating profits is deferred further until the entrepreneur sells the shares. If the shares are held until death, the capital gain escapes income tax entirely, although the wealth accrued by the entrepreneur from founding this firm and other activities over his or her lifetime may be subject to an estate tax if that wealth is sufficiently large.

Thus, the entrepreneur receives two benefits relative to the taxes that an employee or recipient of interest income would pay on a similar amount of income. The first is the deferral of tax on the accrual of wealth within the company over many years. The second is the preferential capital gains tax rate that the entrepreneur faces when he or she realizes a portion of the gain by selling shares in the business: what is essentially a return to the effort and skills of the

entrepreneur is taxed as capital gain rather than earnings. In contrast, recipients of wages and interest income pay tax annually on accrued income at ordinary income tax rates.

The degree of preferential treatment the entrepreneur receives in the growth phase varies positively with the required rate of return to outside investors in risky ventures and the number of years it takes the firm to reach maturity, because increases in both annual yields and the time span of the investment raise the value of deferral. The value of deferral also increases with the size of the difference between the capital gains and ordinary income tax rates.

**TABLE 1**  
**Effective Income Tax Rates on Build-Up of Entrepreneurial Income: Current Law**



Years to maturity	Discount rate	Effective tax rate
4	20%	16.7%
6	20%	13.6%
8	20%	11.5%
10	20%	10.0%
12	20%	8.8%
8	10%	15.3%
8	15%	13.1%
8	20%	11.5%
8	25%	10.4%
8	30%	9.8%

**Note:** Table assumes that all entrepreneurial effort occurs in the first year; net cash returns are zero until the firm reaches maturity; entrepreneur is in the top marginal rate bracket; maximum marginal income tax rate is 44.6 percent; and maximum marginal capital gains tax rate is 25.0 percent.

For example, suppose an entrepreneur faces the maximum marginal individual income tax of 44.6 percent (the sum of the 39.6 top rate on ordinary income, the 3.8 percent Medicare tax on earnings, and the 1.2 percentage-point tax increase from the phase-out of itemized deductions) and the maximum capital gains rate of 25 percent (the sum of the 20 percent top capital gains rate, the 3.8 percent high-income surtax on investment income, and the 1.2 percentage-point tax increase from the phase-out of itemized deductions). At a discount rate of 20 percent, the effective tax rate on the entrepreneur’s income declines from 16.7 percent if the time between start up and maturity is four years to 8.8 percent if the time between startup and maturity is 12 years (table 1). If the number of years to maturity is eight, the effective tax rate declines from 15.3 percent with a discount rate of 10 percent to 9.8 percent with a discount rate

of 30 percent. The high assumed discount rates reflect the larger-than-normal riskiness associated with new ventures.

### ***Effects of Taxing Ongoing Businesses at the Corporate and Shareholder Level***

Individual corporate shareholders face two levels of federal income tax: a profits tax at the corporate level (at federal rates up to 35 percent) and a tax on shareholder dividends (at rates up to 25 percent, including the effects of the 3.8 percent investment income surtax and the limitation on itemized deductions). Combining these two taxes, and accounting for the fact that dividend income is reported net of corporate income tax, the maximum total rate that individual shareholders pay on distributed corporate profits is equal to 51.25 percent ( $0.35 + ((1 - 0.65) \times 0.25)$ ).

Over time, the value of firms should equal the discounted value of after-tax returns to equity investments. The double taxation of corporate income reduces the value of firms, but taxes on interest income reduce the after-tax discount rate and raise the value of firms. Thus, in principle, the tax system could either increase or reduce the value of the firms the entrepreneurs create, depending on whether it reduces the after-tax return to corporate equity by a larger or smaller percentage than it reduces the after-tax return on alternative investments (the discount rate).

Consequently (and as shown by Toder [2017]), the effect of the tax system on the value of the firm the entrepreneur creates depends on many factors. These include the worldwide interest rate on loans to highly rated borrowers; the risk premium in the absence of taxes that investors require to compensate them for holding corporate equity instead of debt (the equity premium); marginal tax rates on interest income, dividends, and capital gains; the share of the company's assets that are debt financed; the shares of equity returns paid out as dividends and retained earnings that are realized as taxable capital gains; and the statutory and effective corporate tax rates. The effective corporate tax rate can be less than the statutory rate both because of legislated provisions that allow companies to exclude some income from tax or defer income using accelerated cost-recovery provisions and because of the ability of multinational corporations to defer tax by shifting reported profits to low-tax foreign jurisdictions.

The effective tax rate on the sale price can be defined as  $(V^* - V) \div V^*$ , where  $V^*$  is the value of the firm in the absence of taxes and  $V$  is the value of the firm including the effect of taxes. This tax rate is higher (1) the larger the equity premium, (2) the smaller the share of the firm financed by debt, (3) the lower the market interest rate, (4) the higher the effective tax rate on corporate income, and (5) the higher the tax rate on capital gains and dividends of the "marginal" investor who is equilibrating returns between corporate equity of US firms and other investors. For example, if the market interest rate is 4 percent, the corporate debt to capital ratio is 40 percent, the equilibrating capital gains and dividend tax rates are 6.3 percent (reflecting a combination of a 25 percent top rate and the fact that only about a quarter of US corporate shares are held by

taxable investors), the corporate effective tax rate is 25 percent, and the equity premium is 6 percentage points, the effective tax rate on the sale price is 8.3 percent. Varying the individual parameters while holding others constant changes the effective tax rate (table 2). With all other variables the same, the effective tax rate on the sale varies from

- -5.5 percent with an equity premium of 2 percentage points to 14.1 percent with an equity premium of 10 percentage points;
- 4.2 percent with a corporate debt to capital ratio of 60 percent to 11.0 percent with a corporate debt-to-capital ratio of 20 percent;
- 3.1 percent at an interest rate of 6 percent to 15.9 percent at an interest rate of 2 percent;
- -4.0 percent at a corporate effective tax rate of 15 percent to 20.5 percent at a corporate effective tax rate of 35 percent; and
- from 4.5 percent if the equilibrating investor is tax exempt to 19.8 percent if the equilibrating investor faces a 25 percent marginal tax rate on dividend and capital gain income.

Combining the effects of taxation of mature corporations and taxation in the build-up phase of the firm yields a large range of potential estimates of the effective tax rate on entrepreneurial income. Using a range of reasonable assumptions, our estimated total tax rate ranges from slightly over 5 percent using a low value of both the tax rate in the build-up phase and the tax rate on the sale value of the firm to slightly under 34 percent using high values of the two tax rates (table 3). The midrange tax rate is slightly under 20 percent, significantly lower than the rate an accrual income tax would impose on the same taxpayer (just under 45 percent).

The midrange effective tax rate on entrepreneurial income is also slightly lower than the 24 percent effective rate on income that a consumption tax (an income tax that exempts the normal return to capital investment) would impose with the same other assumptions. The consumption tax rate is lower than the statutory income tax rate because the entrepreneur receives the benefit of deferring tax on his or her labor contribution until the firm is sold or starts generating positive profits, so a significant portion of the entrepreneur's return represents tax-free capital income.

**TABLE 2**

Effective Tax Rate on Firm Value under Alternative Assumptions



Interest rate	Equity premium	Debt-to-capital ratio	Equilibrating tax rate on individual equity income	Effective corporate tax rate	Tax rate on sales price
4%	6%	40%	6.3%	15%	-4.0%
4%	6%	40%	6.3%	25%	8.3%
4%	6%	40%	6.3%	35%	20.5%
4%	6%	40%	0%	25%	4.5%
4%	6%	40%	6.3%	25%	8.3%
4%	6%	40%	25%	25%	19.8%
4%	6%	20%	6.3%	25%	11.0%
4%	6%	40%	6.3%	25%	8.3%
4%	6%	60%	6.3%	25%	4.2%
4%	2%	40%	6.3%	25%	-5.5%
4%	6%	40%	6.3%	25%	8.3%
4%	10%	40%	6.3%	25%	14.1%
2%	6%	40%	6.3%	25%	15.9%
4%	6%	40%	6.3%	25%	8.3%
6%	6%	40%	6.3%	25%	3.1%

**Note:** Assumes investors are in the top marginal rate bracket; maximum marginal income tax rate is 44.6 percent, maximum marginal capital gains tax rate is 25.0 percent; firms pay out 50 percent of their profits as dividends and investors realize 50 percent of their accrued capital gains on average; the top corporate statutory rate is 35 percent.

**TABLE 3**

Combined Effective Tax Rate on Entrepreneurial Income under Alternative Assumptions



	Tax rate on build-up	Tax rate on asset value	Combined effective tax rate
Low	8.8%	-4.0%	5.2%
Medium	11.5%	8.3%	18.8%
High	16.7%	20.5%	33.8%

**Source:** Author's calculations.

The tax reform outline released by the Trump administration would reduce these effective rates by lowering the top individual rate from 44.6 to 35 percent, the top capital gains rate from 25 percent to 20 percent, and the corporate tax rate from 35 percent to 15 percent. We estimate that the Trump outline would reduce the overall effective tax rate in the build-up phase to between 7.1 percent and 13.3 percent because of the reduction in the capital gains rate (table 4). It would reduce the tax rate on asset value much more dramatically, to between -8.2 percent and 13.1 percent, largely because of the reduction in the corporate tax rate combined



with a maintenance of relatively high tax rates on interest income that keep the after-tax discount rate low. The overall combined effective tax rate drops from between 5.2 percent and 33.8 percent to between -0.6 percent and 24.7 percent.

**TABLE 4**

**Combined Effective Tax Rate on Entrepreneurial Income under Alternative Assumptions: Trump Outline**



	Tax rate on build-up	Tax rate on asset value	Combined effective tax rate
Low	7.1%	-8.2%	-0.6%
Medium	9.2%	0.5%	9.7%
High	13.3%	13.1%	24.7%

**Source:** Author's calculations.

These effective tax rates are illustrative and do not represent the tax rates on the plan that will ultimately emerge. Further, to the extent that tax cuts increase the deficit and raise interest rates, they could reduce the value of corporate equity and therefore offset any increase in the after-tax rate on entrepreneurial income from reduced taxes. Nonetheless, they illustrate how the effective tax rate can be affected by changes in capital gains tax rates, corporate tax rates, and the relationship between tax rates on capital gains and ordinary income.

**WHY DO TAX BURDENS ON ENTREPRENEURS MATTER?**

Understanding the special attributes of entrepreneurial income and how we tax it is the first step to designing tax policies that provide the right incentives for entrepreneurial activity. Designing the right policies, however, requires that we address additional questions.

The first issue to understand is how much entrepreneurs contribute to economic growth. In the long run, growth in output per capita depends on the composition of the labor force, the amount of capital per worker, and multifactor productivity—that is, the amount of output that a given amount of labor supply and capital generates. Estimates using both the neoclassical model developed by Robert Solow and growth models developed later reach the conclusion that technical progress that drives long-term economic growth (Solow 1956). Between 1948 and 2016, the growth rate in multifactor productivity has accounted for over half the growth rate in output per hour worked. And the slowdown in the rate of growth in recent years is largely because of a decline in the growth in multifactor productivity.

Anecdotal evidence suggests that entrepreneurs who had led the way to the introduction and spread of new technologies—from mass-produced automobiles in the 1920s to electronic computers in the 1950s and 1960s and to the internet and information revolution of the 1990s and early 2000s—have made a major contribution to productivity growth. Yet it is hard to precisely quantify the role of entrepreneurs. Nonetheless, there is a widespread belief that having laws, institutions, and customs that enable entrepreneurial activity is critical to achieving continued growth in living standards in the future.

The tax system can favor entrepreneurial activity in three ways. First, lower tax rates on entrepreneurial income (compared with tax rates on standard earnings ) could induce more people to enter entrepreneurial ventures. Second, US tax laws that allow highly successful individuals to earn very high after-tax returns could encourage more talented and ambitious individuals to migrate to the United States. Finally, lower tax rates on capital gains relative to other forms of investment income could attract more financial capital into new ventures, bringing the potential of large capital appreciation instead of safer assets with lower potential returns but less risk.

The potential for very large rewards from entrepreneurial activities, however, does not necessarily imply that entrepreneurs should receive more favorable tax treatment than others. Truly transformative activities may generate such large private returns that many would undertake them without any special tax benefits. Tax subsidies may instead lower the hurdle rate for people to enter ventures with more modest prospects and therefore raise the number of modestly successful or unsuccessful efforts instead of contributing to truly transformative activities. The question of whether more generous tax subsidies for entrepreneurs would add much to growth is still a subject for debate and future research.

### ***Other Policies Also Matter***

This brief has focused on how the tax system affects entrepreneurs' returns. But many policies other than tax incentives affect the climate for entrepreneurship. Entrepreneurial activities may be stifled by high regulatory burdens, including complex tax provisions that raise the cost of compliance. Compliance costs are especially burdensome for small and emerging companies who do not have the resources to spend on tax professionals to help them navigate the tax rules. Entrepreneurial activities rely on rules that protect intellectual property and benefit from the free movement of goods, people, and ideas. Finally, public funding of basic scientific research can create the knowledge base for entrepreneurs who then develop practical applications that are economically profitable.

## **CONCLUSIONS AND POLICY IMPLICATIONS**

Entrepreneurs play a key role in economic growth by creating new businesses that serve people's needs in new ways. Key features of these activities are a long lag between the founding of a firm and when it generates operating profits and a high degree of risk assumed by the founder. Entrepreneurial income consists of both a labor income component (the return to the entrepreneur's ideas and efforts) and a capital income component (the return to deferring the realization of income and to risk-taking).

The tax system favors entrepreneurial income in the build-up phase over other forms of income by allowing the entrepreneur's income, which is received in the form of an increase in the firm's value instead of taxable wages, to be tax deferred; the tax system also favors such income by taxing it when realized at the favorable rates applied to capital gains. But the increase in the market value of an emerging firm may be reduced by taxes applied to mature firms. This brief has illustrated how taxes in the build-up phase and future taxes that successful firms pay combine to affect the after-tax income that entrepreneurs receive.

Therefore, in evaluating how taxes affect the returns to entrepreneurs, one must consider both the taxes entrepreneurs pay directly from starting new firms and bringing them to maturity and the ways taxes affect the value of the firms they create. Beyond this, however, unanswered questions remain. We have little evidence on how changes in tax rates might affect the supply of entrepreneurs and whether new tax subsidies would encourage high-value activities or simply induce more marginally successful or unsuccessful efforts. And we must understand how other policies (such as regulatory policy, public education, immigration and trade policy) and rules to protect intellectual property affect the supply of entrepreneurs.

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