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Taxes and Entrepreneurial Activity: An Empirical Investigation Using Longitudinal Tax Return Data

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Purpose

The decision to start a business or engage in entrepreneurship depends in part on tax incentives. The U.S. income tax is a graduated tax, designed so that people pay an increasing percentage rate as their income rises through various tax brackets. The rate of tax paid on the highest dollars of income is the marginal tax rate.

Currently, the tax code is largely blind to the source of income when one files a personal income tax statement. Historically, however, income from wages and salaries and income from entrepreneurial activities—running a business—were taxed differentially. This study explores the historical differences and subsequent standardization, largely stemming from the Tax Reform Act of 1986, to determine how marginal income tax rates affect an individual's decision to enter, remain in, and exit entrepreneurial activities.

The report uses longitudinal tax return data to measure the responsiveness of individual tax filers to changes in marginal income tax rates with respect to their choices to engage in entrepreneurial activity. Individual choices to engage in wage-and-salary employment, entrepreneurial activity, or a mixture of both, are taken as given by the existence of each type of income as reported in individual income tax filings.

Overall Findings

Marginal tax rates have significant effects on entrepreneurial entry and exit, suggesting that the formation and closure of small enterprises are in part determined by the handling of income from these activities in the tax code. The findings show that the level of entrepreneurial entry, exit, and duration react differently to changes in marginal rates on wage-and-salary and entrepreneurial income. Specifically, lower marginal rates on entrepreneurial income encourage more entrepreneurial entry and lower rates of exit, and lengthen the duration of spells of activity. Similarly, higher marginal rates on wage-and-salary income also increase entrepreneurial activity as more workers switch from wage-and-salary work to starting their own business. Importantly, however, the magnitude of the entry, exit, and duration effect is larger for marginal tax rates on entrepreneurial income than on wage-and-salary income.

Highlights

• **Marginal tax rate reductions have effects on entrepreneurial entry.** A reduction in the marginal tax rate on entrepreneurial income of one percentage point would increase the probability of entry into entrepreneurial activity by 1.42 percentage points for single filers and 2.0 percentage points for married filers. Conversely, reducing the marginal tax rate on wage-and-salary income by one percentage point would decrease the probability of entrepreneurial entry by 0.58 percentage point for single filers and 0.51 percentage point for married filers.

• **Marginal tax rate reductions have effects on entrepreneurial exit.** Individuals' decisions to exit entrepreneurial activity are similarly related to tax rates. A marginal tax rate reduction of one percentage point on entrepreneurial income reduces the probability

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of exiting entrepreneurial activity by 17.32 percentage points for single filers and by 7.81 percentage points for married filers. Likewise, a reduction of one percentage point in the marginal tax rate on wage-and-salary income would increase the probability of exit from entrepreneurial activity for single and married filers by 9.17 and 3.98 percentage points, respectively.

• **The net effect of across-the-board marginal tax rate reductions is an increase in entrepreneurial entry and a decrease in entrepreneurial exit.** Entry and exit choices are affected by marginal tax rates on both entrepreneurial income and wage-and-salary income, but the magnitude of the effect is larger for entrepreneurial income. The result is that an across-the-board marginal income tax rate reduction of one percentage point would increase the rate of entrepreneurial entry by 0.84 percentage point among single filers and 1.49 percentage points among married filers. The same marginal rate reduction would reduce the likelihood of exit by 8.15 percentage points for single filers and 3.83 percentage points for married filers.

• **Marginal tax rate changes have effects on the duration of entrepreneurship.** In addition to affecting entrepreneurial entry and exit, changes in marginal tax rates affect the duration of entrepreneurship. A one percentage point reduction in the marginal tax rate on entrepreneurial income would increase the duration of entrepreneurial activity by 32.5 percent for single filers and 44.8 percent for married filers, while a one percentage point increase in the wage-and-salary marginal income tax rate would prolong the duration of entrepreneurship by 16.1 percent for single filers and 12.7 percent for married filers. The median entrepreneurial period in the sample was between three and four years; thus a marginal tax rate difference that increases duration by one-third corresponds to an increase of one year or more in the duration of entrepreneurship.

• Effects of marginal tax rate increases are the opposite of reductions. Effects of marginal tax rates are symmetric, and therefore increases by one percentage point will have the opposite effects from those described above for tax rate decreases.

Scope and Methodology

The researchers used a panel data file drawn from the University of Michigan Tax Research Database. This file was compiled by the Office of Tax Policy Research at the University of Michigan from public-use tax return data from the Internal Revenue Service (IRS) Statistics of Income (SOI) Division. The panel spans the years 1979-1990 to encompass exogenous tax policy changes that took place during the 1980s. These changes had the effect of largely standardizing the marginal tax rates on income from various sources, allowing the researchers to identify the effects of rate changes on entrepreneurship. In order to normalize the data, tax rates were estimated using the TAXSIM model developed by the National Bureau of Economic Research. The estimates of marginal tax rate effects use an instrumental variable (IV) regression model to control for detected tax rate endogeneity. Appendix Table 1 provides a complete detailed list of variables included in the modeling.

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