



Small Business and the Expiration of the 2001 Tax Rate Reductions: Economic Issues

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Summary

At the end of 2010, the lower income tax rates provided in the 2001 tax cuts will expire, absent legislative revision. President Obama has proposed to extend most of the income tax cuts, but to continue some higher tax rates for couples with income over \$250,000 and singles with income over \$200,000. The most important element of this proposal, as measured by revenue effect, is allowing the top two rates of 33% and 35% to expire, when they will rise to 36% and 36.9%.

Some critics of allowing the tax rates to rise express concerns about possible negative effects on small business owners' hiring and the dampening effect on job creation. This view is buttressed by a popular conception that small businesses are responsible for the majority, perhaps the vast majority, of new jobs.

The first issue addressed in evaluating this argument is how well retaining the lower levels of the top two rates target small business. Two aspects of targeting are considered: the fraction of small businesses affected by the rate changes and the fraction of revenue gain accruing to taxpayers other than these small businesses. The results suggest that only a small fraction of businesses will be affected, around 2% to 3%. They also suggest that 80% of the reduced taxes are likely to accrue to non-businesses income and almost 90% to either non-business income or businesses without employees.

The claim that small businesses are the primary creators of jobs is based on research published originally in the 1980s. More recent research has revealed some methodological deficiencies in these original studies and suggests that small businesses contribute only slightly more jobs than other firms relative to their employment share. Moreover, this differential is not due to hiring by existing small firms, but rather to startups, which tend to be small. Some critics also question whether small business jobs should be encouraged because they tend to be lower paid, with fewer benefits and more turnover. Yet, small businesses may offer employment to workers with less education or other characteristics that lead to difficulty finding employment with larger firms.

In addition to targeting efficiency and job creation issues, there is uncertainty about the effects of taxation on small businesses. An extensive literature suggests that higher taxes have no effect or actually encourage self-employment. Researchers speculate that higher taxes may lead individuals to select self-employment because the opportunities for tax evasion and avoidance are greater. In addition, taxes reduce risk (the variance in return) and greater variance in earnings likely occurs in self-employment. Evidence of effects of taxes on existing firms' hiring is limited.

Perhaps the most important issue concerns job creation as a policy justification. In the long run, there is no need to address job creation as the market economy naturally generates jobs (although targeted programs, such as those for disadvantaged workers, may improve efficiency). In times of recession, the government may need fiscal stimulus, but the purpose of this stimulus is generally to increase aggregate demand. The most effective approaches are direct spending and tax cuts and transfers to lower income individuals who are more likely to spend. Tax cuts for high income individuals or business are less likely to be spent and are less effective as a stimulus.

There may be justifications for favoring small business, although small businesses, especially businesses owned by high income individuals, are already subject to favorable treatment. Tax policy might be most appropriately formulated in the light of any imperfections in the economy which justify preferential treatment.

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Absent legislative revisions, at the end of 2010, the lower income tax rates provided in the 2001 tax cuts will expire. President Obama has proposed to extend most of the income tax cuts, but to continue some higher tax rates for couples with income over \$250,000 and singles with income over \$200,000. The most important element of this proposal, as measured by revenue effect, is allowing the top two rates of 33% and 35% to expire. These rates will rise to 36% and 36.9%. This proposal would raise \$369 billion over FY2011-FY2020, about half of the total from all proposals for not extending tax cuts for these high income taxpayers.¹

Although a variety of issues surround this option, this report focuses on a particular issue, the effect on small business owners, and in turn, the potential effects on employment. Some critics of allowing the tax rates to rise express concerns about possible negative effects on small business owners' hiring and the dampening effect on job creation. This argument is buttressed by a popular conception that small businesses are responsible for the majority, perhaps the vast majority, of new jobs.

The first section of this report addresses the effects of the changes in top rates, and how well these revisions target small businesses. Two aspects of targeting are considered: the fraction of small businesses affected by the rate changes and the fraction of revenue gain accruing to taxpayers other than these small businesses. The results suggest that only a small fraction of small businesses will be affected, around 2% to 3%. They also suggest that 80% of the reduced taxes are likely to accrue to non-businesses income and about 90% to non-business income or businesses without employees.

The second section of the report reviews the claim that small businesses are the primary creators of jobs. This perception is based on research published originally in the 1980s. More recent research has revealed some methodological deficiencies in these original studies and suggests that small businesses contribute only slightly more jobs than other firms relative to their employment share. In addition, this differential is not due to hiring by existing small firms, but rather to startups, which tend to be small. This section also briefly summarizes issues raised by some researchers about the quality of jobs in the small business sector.

The third section reviews the evidence on the effect of taxes on entrepreneurship and self-employment. The results of these studies are mixed, but overall they do not suggest that lower taxes are likely to increase self-employment.

The following section discusses perhaps the most important issue to consider, job creation as a policy justification for targeted provisions. The basic economics of market equilibrium indicate that, in the long run, there is no need for the government to intervene in the creation of jobs. In the short run, intervention is appropriate during a recession, but tax cuts to businesses and high income individuals are not likely to be very effective for this purpose.

The final section briefly summarizes the current benefits and penalties for small businesses in the tax code and general justifications for preferential tax treatment.²

¹See U.S. Department of the Treasury, *General Explanations of the Administration's Fiscal Year 2011 Revenue Proposals*, February 2010, <http://www.treas.gov/offices/tax-policy/library/greenbk10.pdf>, p. 152. The other proposals are to retain the phase-out of personal exemptions (PEP) and itemized deductions (Pease), to retain a 20% tax rate for capital gains, and to tax dividend income at 20%.

² Some of the issues discussed in this report are also discussed in CRS Report R41085, *Distribution of Small Business Ownership and Income by Individual Tax Rates and Selected Policy Issues*, by Gary Guenther.

The Effects on Small Businesses of Allowing the Two Top Rates to Expire: Target Efficiency

Given an objective of benefiting small businesses, how well would retaining the top two current tax rates be targeted to small businesses? There are two parts to this question: the fraction of small businesses in the country affected by the tax change (which indicates whether most of the target is being reached) and the share of the tax benefit falling on activities other than those targeted (which indicates how much is being spent on income outside of business).

Before addressing these data questions, it is important to recognize what types of business income appear on individual tax returns, especially as subsequent analysis will also focus on the activities of different forms of business organizations.

Unincorporated businesses, or businesses taxed as if they were not incorporated, with owners' income subject to the individual income tax, generally operate as sole proprietors, partnerships, or Subchapter S firms. These businesses are also referred to as pass-through or flow-through entities. Sole proprietorships have one owner, while partnerships are businesses with two or more owners. Some types of partnerships have attributes of corporations, mainly limited liability (limited partnerships and limited liability corporations). Finally individuals or partners can operate as Subchapter S corporations, which are incorporated but treated, for tax purposes, as unincorporated businesses.

According to data from the Internal Revenue Service, there were 32.1 million businesses in 2007, most of them sole proprietorships. Firms include 1.9 million corporations, 4 million Subchapter S corporations, 3 million partnerships (0.7 million general partnerships, 0.5 million limited liability partnerships, and 1.8 million limited liability corporations), and 23.1 million sole proprietors.³

While businesses with flow-through income treatment are not all necessarily small, and most corporations are small, these flow-through businesses (proprietorships, partnerships or Subchapter S corporations), for purposes of analyzing tax effects, are treated as a proxy for small businesses in the data presented in this report.

In reviewing data on the targeting of these rate cuts, several factors qualify the results of some calculations and are useful to enumerate at this point. The first is that not all high income taxpayers who appear, based on income, to be affected by the rates changes will be, because of the alternative minimum tax (AMT). Some data sources account for this effect and some do not. Since these tax rates are not changing, the significant share of high income taxpayers who would otherwise pay tax at the 36% or 39.6% rates will pay the AMT and their taxes will not be affected.

The second is that a significant share of taxpayers and income at high income levels are recipients of passive rather than active income. An example of passive income might be rental income as a limited partner in a real estate leasing operation. Recipients of passive income through partnerships and Subchapter S corporations are similar to shareholders of corporations: they do not actively run the business or make hiring decisions.

³ Internal Revenue Service, Statistics of Income, Integrated Business Data, <http://www.irs.gov/taxstats/bustaxstats/article/0,,id=152029,00.html>

The third is that some businesses experience losses, and there is no income to be subject to tax. Whether calculations include businesses with losses will have consequences for the estimates.

Finally, the vast majority of small businesses, almost 80%, do not have employees. Although some limited evidence will be discussed, it is unlikely that a small tax reduction for these non-employer firms would induce these firms to hire.

What Share of Small Businesses Are Affected?

Small business owners would be expected to be relatively more affected by tax rate changes that apply to the top brackets than other taxpayers because they are more concentrated in the higher income brackets than the remainder of the population. **Table 1** compares the share of all returns in high income classes (which are roughly equivalent to the taxpayers potentially subject to the top tax rates) to the share of business returns. Business income is reported in two basic categories: income from business or profession, which reflects sole proprietorships, and income from partnerships and Subchapter S firms.

As **Table 1** indicates, returns for businesses are more concentrated in higher income classes than returns in general, and this effect is particularly the case for partnership and Subchapter S firms. The \$200,000 and above adjusted gross income class includes some taxpayers who would not be affected by the President's proposals (because their incomes would not place them in these top rates), which indicates a share of less than 9.6% of small businesses would be affected. As will be shown below, the shares of returns affected subject to the top two rates are also significantly reduced because of the AMT. The shares can also be affected by how returns with losses are treated.

Table 1. Share of Tax Returns in High Income Classes, 2008

Income Class	Share of All Returns	Share of Returns With Business Income or Loss	Share of Sole Proprietorship	Share of Partnership and Subchapter S
>\$200,000	3.1%	9.6%	5.1%	22.4%
>\$500,000	0.6%	2.7%	1.0%	7.4%

Source: Statistics of Income, Internal Revenue Service, Individual Income Tax, <http://www.irs.gov/taxstats/indtaxstats/article/0,,id=98123,00.html>.

The Joint Committee on Taxation, the Department of Treasury, and the Urban-Brookings Tax Policy Center have provided information on the share of returns and income of small business either in the higher income categories or subject to the top two tax rates.

The Joint Committee on Taxation (JCT) estimates that in 2011, 3% of taxpayers with net positive small business income (about 750,000 taxpayers) would be subject to the two top marginal tax rates under the President's proposal.⁴ This estimate does not include taxpayers with net losses.

⁴ Joint Committee on Taxation, Present Law And The President's Fiscal Year 2011 Budget Proposals Related To (continued...)

JCT also estimates that about 50% of business income will be reported on returns with these marginal tax rates (with aggregate income approximately \$1 trillion). This study included income from rents and royalties, and estates and trusts, as well as Subchapter S, partnership, and sole proprietorship business income in estimating shares.

A Treasury Study in 2007, prepared for an economic competitiveness conference, had a chapter on pass-through entities, which included data on the share of business income by high income taxpayers. This study focused on examining high income taxpayers with business income and did not adjust for the alternative minimum tax, so the numbers are comparable to those in **Table 1**. As with the JCT study, it focused on returns with positive net income. It included ordinary income from partnerships, sole proprietorships, and Subchapter S corporations, as well as capital gains from partnerships, Subchapter S corporations and estates and trusts. It provided, however, some important information of the effects of including passive versus active income. Some partners or shareholders of Subchapter S corporations are not active business owners. It also provided the share of returns and income in which income was reasonably large relative to wages (thus excluding those taxpayers whose income was a minor part of earnings). As shown in **Table 2**, the shares of returns falling in the income ranges of the top brackets are consistent with **Table 1**, but neither include the effect of the AMT and, therefore, both overstate the share subject to the two top tax rates.

Table 2. Shares of Returns and Income In High Income Brackets, 2006

	Share of Total Pass Through Entities	Share of Pass-Throughs with Active Income	Share of Business Income Greater than 50% of Wages
Returns	27.5 million	18.3 million	11.9 million
Top Two Rates	8%	7%	9%
Top Rate	4%	4%	5%
Share of Income	\$938 billion	\$762 billion	\$880 billion
Top Two Rates	72%	57%	69%
Top Rate	61%	46%	60%

Source: U.S. Department of Treasury, Treasury Conference on Business Taxation and Global Competitiveness, Background Paper, July 23, 2007, <http://www.treas.gov/press/releases/reports/07230%20r.pdf>.

Table 2 also indicates that a significant portion of returns (over a third) and income (19%) are passive.⁵ Excluding passive income slightly lowers the share of returns in the top brackets (from 8% to 7%) and significantly lowers the share of income (from 72% to 57%).

(...continued)

Selected Individual Income Tax Provisions Scheduled To Expire Under The Sunset Provisions Of The Economic Growth And Tax Relief Reconciliation Act Of 2001. JCX-36-10, July 12, 2010, p. 10, <http://www.jct.gov/publications.html?func=startdown&id=3691>.

⁵ Returns with passive income are 9.2 million (27.5 million minus 18.3 million) which is 33.5% of the total. Passive income is \$176 billion (\$938 billion minus \$762 billion) which is 18.8% of the total.

Table 2 also shows that a significant share of income will accrue to individuals where it is a minor part of their income, which might occur with a small consulting business for someone whose main source of income is wages.

The Urban-Brookings Tax Policy Center has also calculated the share of business returns and the share of business income falling into the top brackets. Their results are similar to those reported by the Joint Committee on Taxation. They also consider only taxpayers with positive income, and take into account the alternative minimum tax. As shown in **Table 3**, their results also indicate shares in the different rates, showing that most of the returns and income are in the top bracket. (For example, 3.6% of returns are subject to one of the top two rates, but 2.5% of returns are subject to the top rate, so that 1.2 % of returns pay tax at the second highest rate.)

Table 3. Share of Business Returns and Income in the Top Two Rate Brackets, 2011

	Total	Proprietorship	Partnership	Subchapter S
Returns	20.3 million	16.4 million	2.9 million	2.8 million
Top Two Rates	3.6%	1.4%	12.9%	13.5%
Top Rate	2.5%	0.9%	9.8%	10.0%
Income	\$905 billion	\$337 billion	\$251 billion	\$342 billion
Top Two Rates	44.8%	11.3%	58.5%	66.6%
Top Rate	40.7%	9.3%	52.9%	61.7%

Source: Urban-Brookings Tax Policy Center, Table T10-0211, <http://www.taxpolicycenter.org/numbers/displayatab.cfm?Docid=2787&DocTypeID=7>.

The Tax Policy Center also reports separately for sole proprietorships, partnerships and Subchapter S firms. As also was suggested by data in **Table 1**, high income business taxpayers are responsible for larger shares of partners and shareholders of Subchapter S income. **Table 3** reports a slightly smaller share in the top rate brackets for partnerships than for Subchapter S firms, but the shares are significantly less for sole proprietorships.

The data in **Table 3** indicate that among the taxpayers subject to the top rates, 23% are sole proprietors, 38% are partners, and 39% are shareholders of Subchapter S corporations. By contrast, about 80% of all returns with business income are sole proprietorship returns, with the remainder divided relatively evenly between partnership and Subchapter S.⁶

As is clear from these tables, adjusting for the AMT is important in calculating the fraction of businesses which would be subject to the top tax rates, as JCT estimates and **Table 3** indicate a share of around 3% while the estimates in **Table 1** and **Table 2** indicate a share of 9%.

⁶ Note that the returns with any business income are smaller than the sum of returns with each type of operation. This result occurs because taxpayers may report more than one type of business income. This effect is particularly pronounced at high income levels. For the population as a whole the sum of returns with each type of income is 9% larger than the total returns reporting business income; for taxpayers subject to the higher tax rates, the sum is 42% larger. Much of that effect may be due to passive income.

In addition, the calculations in **Table 2** and **Table 3** and by the JCT estimate the distribution of taxpayers with positive income, while the calculations in **Table 1** include both returns with net positive income and returns with losses. One can also make the argument that the universe of businesses include those with losses, but only those with gains would be subject to the higher tax rates.⁷

Table 4 returns to the aggregate data in **Table 1** and makes some of these adjustments to examine the share. First, it confines the numerator only to taxable returns (while retaining all businesses returns in the denominator). This correction makes very little difference to the outcome, however. Second, it also adjusts, separately and in combination, for including only returns with positive income in the numerator and for the AMT.⁸ When the AMT adjustment is made alone, the results are similar to those for the Tax Policy Center data in **Table 3**. Including only returns with positive income in the numerator lowers the share measurably, and in combination with the AMT, reduces the share from 3.5% to 2.5%.

Another correction, when considering the universe of small businesses, is to add corporate returns to the denominator. That is, corporate returns are not affected by these individual tax rate changes, but they do constitute part of the universe of small businesses. Of the 1.9 million corporate returns, the vast majority would be considered small business. How many should be added to the denominator depends on the definition of small business. According to Census data, there are approximately 1.3 million corporations (with the remaining 0.6 million probably non-employer businesses, that is, businesses with no employees).⁹ Many sources, including the Census Bureau, use firms with less than 500 employees as a standard for a small business. Since there are only 18,000 firms that have 500 or more employees, all of the 1.9 million would be added to the denominator of the ratio. This correction would reduce the 2.6% figure to 2.5%, and the 1.1% figure to 1%. If, for example, firms with 9 or fewer employees were considered small, the effects would be similar: the total of small corporations would be 1.6 million.

In addition to these small businesses reported on tax returns, small businesses that do not file tax returns, either because they had sufficient losses or because of evasion, would increase the size of the denominator and lower the share.

The implication of this analysis is that only a small fraction of small businesses are affected by the two top rates, ranging from 2.5% to 3.5%.¹⁰

⁷ That is, in calculating the share, only returns with positive income should be in the numerator, but returns with both positive income and losses should be included in the denominator.

⁸ Note that the effects for the AMT are different when the tax rates are presumed to be increased, as in the Tax Policy Center, as compared to the 2008 data in the IRS statistics, because the higher rates would cause fewer taxpayers to fall into the AMT.

⁹ Bureau of the Census, http://www2.census.gov/econ/susb/data/2007/us_naicssector_lfo_2007.xls.

¹⁰ The share of business income falling into these high tax rate categories is also reported. However, that share does not appear relevant to the issue of encouraging small business employment, as there is no evidence that businesses owned by high income employees have more employees than those owned by lower income employees; indeed, there is evidence that there is not a difference (discussed subsequently in the section on effects of taxes on small businesses).

Table 4. Share of Businesses In High Income Classes, Alternative Assumptions, 2008

Income	Share of Returns with Business Income	Share of Sole Proprietorship	Share of Partnership and Subchapter S
Taxable Returns Only			
>\$200,000	9.5%	5.1%	22.2%
>\$500,000	2.7%	1.0%	7.4%
Taxable and Positive Returns Only			
>\$200,000	7.2%	3.8%	16.8%
>\$500,000	2.1%	0.8%	5.7%
Taxable Returns Plus AMT Correction			
>\$200,000	3.5%	1.7%	8.4%
>\$500,000	1.5%	0.6%	4.1%
Taxable and Positive Returns Plus AMT Correction			
>\$200,000	2.6%	1.3%	6.4%
>\$500,000	1.1%	0.4%	3.1%

Source: Statistics of Income, Internal Revenue Service, Individual Income Tax.

What Share of the Tax Benefit Does Not Go to Small Business Operations?

The second aspect of the targeting is what share of the tax cut is likely to go to business income. The Tax Policy Center has estimated that 26% of income appears on returns whose highest bracket would be 36% and 33.4% of income on returns in the 39.6% bracket is business income. Weighting the two indicates a share of 33%.¹¹

Although this share suggests that two thirds of the tax benefit does not affect the targeted population, there are two reasons to expect that the estimate of the share benefitting businesses may be too high. First, a significant share of this business income does not come from operating an active business but from a passive investment. Based on the share of income that is passive reported in **Table 2**, this estimate would be reduced from 36% to 21%.

¹¹ Urban Brookings Tax Policy Center, Table T10-0186, <http://taxpolicycenter.org/numbers/displayatab.cfm?DocID=2783&topic2ID=60&topic3ID=68&DocTypeID=>

The second reason is that a significant share of businesses are non-employer businesses: according to Census data, out of 27 million businesses, 21 million are businesses that have no employees.¹² Thus, it is unlikely that a slight reduction in income tax rates for non-employer businesses are likely to induce these firms to hire.¹³ If the 21% share were multiplied by the ratio of all employer businesses (6 million) to all businesses (27 million), the fraction of the benefit going to small businesses with workers would be less than 5%. Unfortunately, there is no information available about the characteristics of these high income returns relative to the basic population, but there is some reason to reduce the expected share of income affected to reflect income of non-employer firms who are unlikely to hire employees. In the **Appendix**, this issue is explored with available data; the results suggest a reduction to around 12%.

Job Creation and Job Quality in Small Businesses

The popular idea that small business is responsible for most new jobs in the economy dates from a study by Birch in 1981.¹⁴ This study found that firms with less than 100 employees, which represented about 35% of the labor force, created 8 out of 10 jobs over the period 1969-1976.

Similar figures are still cited occasionally. For example, Headd reports, using the same methodology, that small businesses, defined as firms with less than 500 employees, who employ half of workers, accounted for 90% of net job creation from 1993-2006.¹⁵

The Birch findings have led to a series of studies questioning the methodology that led to these results. In general, the issues that might be raised about the Birch findings include the use of establishment rather than firm data and a statistical problem referred to as “regression to the mean.” Establishments may be individual firms, or they may be outlets of large firms (e.g., the local Walmart store, which is part of a large corporation).

The first study, by Armington and Odle, addressed the establishment versus firm issue.¹⁶ They found that the firms studied by Birch accounted for about 38% of net new jobs, roughly in proportion to their numbers, for 1978-80. They suggested that Birch had counted as small firms businesses that were outlets of larger firms.

Brown, Hamilton, and Medoff also report, based on a study by the Small Business Administration, that the Birch numbers overstated the share of jobs created, finding that these

¹² Data are from the Census Bureau. Data on businesses are at <http://www.census.gov/econ/susb/>. Data on non employers is at <http://www.census.gov/econ/nonemployer/> and data on employers is at http://www2.census.gov/econ/susb/data/2007/us_state_totals_2007.xls.

¹³ As will be seen below, there is a single study on this issue; this evidence suggests an effect that would be small. See Robert Carroll, Douglas Holtz-Eakin, Mark Rider, and Harvey S. Rosen, “Income Taxes and Entrepreneurs’ Use of Labor,” *Journal of Labor Economics*, vol. 18, pp. 324-351.

¹⁴ David Birch, “Who Creates Jobs?” *Public Interest*, V. 65, Fall 1981, pp. 3-14.

¹⁵ Brian Headd, *An Analysis of Small Business and Jobs*, Small Business Administration Office of Advocacy, March 2010. <http://www.sba.gov/advo/research/rs359tot.pdf>.

¹⁶ Catherine Armington and Marjorie Odle, “Small Business: How Many Jobs,” *The Brookings Review*, V. 1, No.2, Winter 1982, pp. 104. John Case has argued that the Armington-Odle criticism is not correct but does not elaborate on the issue. See his book, *From the Ground Up: The Resurgence of American Entrepreneurship*, New York: Simon and Schuster, 1992 and his article, The Disciples of David Birch, in *INC*, January 1989, pp. 3945.

firms accounted for 56% of new jobs.¹⁷ They found considerable variation across different time periods. In some intervals these small firms accounted for virtually all growth. On average, firms with less than 100 employees seemed to account for about half of jobs created from 1976 to 1986, more than their share in the labor force in 1980 of 35%. (These shares are similar to those of the period 1969-76.) Firms with less than 500 employees accounted for about 60% of net new jobs over the same time period, with a labor force share of about 50%.

These authors also had some other interesting insights into the figures on job creation by small firms. Although the data suggest that small businesses in general created new jobs in excess of their share of the labor force, there were two important qualifications to this observation. First, part of the growth reflected the fact that industries that tended to be dominated by small firms had been growing. The increased jobs by new firms may not have been so much because small firms were doing better than larger ones, but rather because the industries in which small firms operated were growing, perhaps for unrelated reasons.

Second, they point out that most of the jobs were created by new firms, which tend, of course, to be small (firms are not usually “born” large). According to Brown, et al., the majority of these jobs will not persist because many of the firms will fail; from 60% to 80% within the first few years. The data reflect a blending of small firms and new firms.

Economists were also concerning themselves with a problem referred to as “regression to the mean.” This problem arises in many contexts and refers to observations that are away from their means but moving toward them. In the context of small and large firms, the problem is that Birch and other researchers classified firms by their size in each year to assign changes in employment size. However, if firms are subject to shocks (either negative or positive) more firms that have suffered a negative shock will be in the small group and more firms that have had a positive shock will be in the large group. Thus, even if all the firms are the same permanent size, the firms identified as “small” firms will be growing and the firms identified as “large” will be declining.

This phenomenon led to a communication to the *Journal of Economic Literature* by the eminent economist Milton Friedman, published in 1992, criticizing researchers for not recognizing this problem and mentioning the small business job creation research as an illustration.¹⁸ At the time this communication was published, researchers were working to find a data set and test this effect. This research ultimately led to a book by Davis, Haltiwanger, and Schuh.¹⁹ They used longitudinal data on manufacturing that followed firms over a period of time. Instead of just examining firms and classifying them by size, they used average size or terminal size. All firm sizes were declining, but they found the smallest declines in the largest firms. These results contrasted with the results using Birch’s method on their data, which showed positive growth

¹⁷ Charles Brown, James Hamilton, and James Medoff, *Employers Large and Small*, Cambridge: Harvard University Press, 1990.

¹⁸ Milton Friedman, “Do Old Fallacies Ever Die?” *Journal of Economic Literature*, Vol. 30, December 1992, pp. 2129-2132. Friedman began by describing a criticism of a study by Horace Secrist in 1933 where this fallacy of regression to the mean appears. He went on to say, in describing other studies where this problem arose: “For example, ‘everyone knows’ that job creation comes mainly from small firms. That proposition may be true but the evidence offered for it that I have seen classifies firms by size in an initial year and traces subsequent levels of employment—precisely what Secrist did. I have yet to see what the data show if firms are classified by their terminal size, or by their average size over a period.” (p. 2131).

¹⁹ Steven J. Davis, John C. Haltiwanger, and Scott Schuh, *Job Creation and Destruction*, MIT Press, Cambridge MA 1996.

rates in the smaller firms and negative growth for larger firms. Their research appeared to show not only that regression-to-the-mean was important quantitatively, but also showed that it reversed the findings.

Following the Davis et al. study, Neumark, Wall, and Zhang examined this issue with a different data set that included all industries (although it was confined to firms operating in California) over the period 1992-2004.²⁰ They found correcting for regression-to-the mean to be quantitatively quite important but it did not reverse the direction of changes. For example, without the correction, using base size, employment in the smallest firms, with 0 to 10 employees, grew by 22% and employment in firms with 50,000 or more declined by 3%. With average firm size classification, employment in the small firms grew by 3.2% and employment in the largest declined by 1.6%. They also cite other research and suggest that the change in direction for the Davis, Haltiwanger, and Schuh study may have been due to the specific industry, manufacturing.

Haltiwanger, Jarmin, and Miranda use a national data base to further explore this issue.²¹ As with earlier studies, they found regression-to-the-mean to be a significant problem. After correcting for that, they find differences across firm sizes, with a general tendency for smaller firms to grow slightly faster, although the differences are generally small and job growth rates do not decline continually as firm size rises. Job growth rates are much larger for the smallest business (0 to 4) class. They then decline with larger firm size, up to 19 employees, rise up to 250 employees, are almost constant up to 2,500 employees, and then decline. Perhaps more importantly, the authors find any relationship disappears with controls for age. That is, it is new firms (which are generally small) that are growing faster, not mature small firms.

Headd's paper also reports, based on data using methods controlling for regression to the mean, that firms with less than 500 employees are responsible for 65% of employment growth, although it is difficult to determine from his exposition whether these results are reflecting establishments or firms.²² It is, at any rate, a marked contrast from the 90% figure he cites without controlling for these effects.

The absolute share of new jobs ascribed to small businesses depends on how small business is defined. Birch defined small businesses as firms with less than 100; the U.S. Bureau of the Census defines small businesses as firms with less than 500 employees; and the Small Business Administration has different sizes for different industries. Recent health legislation enacted in 2010, seeking to exempt small businesses from mandates, placed the cut-off at 50 employees. Headd's data are divided into three classes: less than 20, between 20 and 499, and 500 and over. The smallest class, less than 20, was responsible for 22% of net new jobs.²³

²⁰ David Neumark, Brandon Wall and Junfu Zhang, "Do Small Businesses Create more Jobs? New Evidence from National Establishment Time Series." National Bureau of Economic Research Working Paper, 13818, Cambridge, MA, February 2008.

²¹ John Haltiwanger, Ron S Jarmin, and Javier Miranda, "Who Creates Jobs? Small vs. Large vs. Young" National Bureau of Economic Research working Paper 16300, Cambridge, MA, August 2010.

²² Brian Headd, An Analysis of Small Business and Jobs, Small Business Administration Office of Advocacy, March 2010. <http://www.sba.gov/advo/research/rs359tot.pdf>.

²³ See CRS Report R40860, *Defining Small Business: An Historical Analysis of Contemporary Issues*, by Robert Jay Dilger.

In sum, the research on small business and job growth does not support the notion that small businesses produce a significantly larger share of net new jobs than their share of employment, and the importance of those jobs as an overall share of job growth depends on the definition of small business.

Brown, Hamilton, and Medoff also raise questions about the quality of small business jobs.²⁴ They point out that jobs in small firms tend to pay lower wages, have fewer fringe benefits, have poorer working conditions, and tend to be less secure than jobs in larger firms. The rates of creation and destruction for smaller (or younger firms that tend to be small) are large. Similar points have been made by other researchers as well. For example, Davis, Haltiwanger and Schuh document the greater turnover in small firms in the manufacturing sector.²⁵ Headd, while acknowledging these aspects of small business jobs, also notes that the small business sector fills a labor supply niche, of individuals who are more likely to be minorities and have lower educational qualifications.²⁶ These individuals might have more difficulty finding better jobs in any case. Therefore, it is not clear that the quality of jobs in the small business sector is a justification for either higher or lower taxes.

The Effect of Taxes on Small Business

How do taxes affect small business? Given the evidence that more job growth arises from new firms, evidence on the choice of self-employment may be more important than evidence on the behavior of existing firms. An extensive empirical literature on this issue is mixed, but largely suggests that higher tax rates are more likely to encourage, rather than discourage, self-employment.

Schuetze and Bruce review 21 studies of the effects of taxes on employment using a variety of data sets and statistical approaches.²⁷ Of these studies, 11 found that higher tax rates increased self-employment, two found that they decreased self-employment, and seven found no statistically significant relationship. One study focused on the degree of progressivity in the tax system rather than the level of taxes, and found that a progressive tax system discouraged self-employment.

The studies cover a range of approaches. Eight of the studies used aggregate time series data (for the United States, in most cases) with three studies finding positive effects on self employment for higher tax rates, two finding negative effects, and three finding no effect. Four studies examined cross sections of individuals (comparing tax rates and choice of employment of individuals at one point in time), with three finding a positive effect and one no effect. There are difficulties with both of these approaches that can often be addressed with panel studies (which follow individuals over time) or repeated cross sections. The study of progressivity was of this

²⁴ Charles Brown, James Hamilton, and James Medoff, *Employers Large and Small*, Cambridge: Harvard University Press, 1990.

²⁵ Steven J. Davis, John C. Haltiwanger, and Scott Schuh, *Job Creation and Destruction*, MIT Press, Cambridge MA 1996.

²⁶ Brian Headd, *An Analysis of Small Business and Jobs*, Small Business Administration Office of Advocacy, March 2010. <http://www.sba.gov/advo/research/rs359tot.pdf>.

²⁷ Herbert J. Schuetze and Donald Bruce, "Tax Policy and Entrepreneurship," *Swedish Economic Policy Review*, vol. 11, 2004, pp. 233-263, <http://www.sweden.gov.se/content/1/c6/09/54/27/848f6cf1.pdf>.

type. Of the remaining five studies in this category, four found that higher tax rates increased self employment, and one found no effect. Finally, three studies examined the effect of differential state tax rates, with two finding no effect and one a positive effect for higher taxes.

Four additional studies have been released subsequent to this review. Garret and Wall examined state panel data and found no statistically significant effect.²⁸ Bruce and Deskins examined state tax rates and found no effect of state income tax rates on state entrepreneurship rates, although they found that higher rates slightly reduce the state's share of entrepreneurs.²⁹ Bruce and Mohsin, using time series data, found negative but quantitatively small effects on entrepreneurship rates.³⁰ They suggest that it would take a prohibitively large tax rate change to generate a noticeable change in self employment. Gurley-Calvez and Bruce, examining the exit of individuals from self employment, find that cuts in the wage tax, holding employment tax rates constant, would increase exits from self employment, while cuts in self employment rates, holding the wage tax rate constant, would decrease exits.³¹ Based on magnitudes, an across-the-board tax cut would reduce entrepreneurial longevity.

While these four studies did not find the positive effects that dominated previous studies, the effects were often insignificant. Thus, on the whole, the research suggests that higher tax rates are not likely to decrease self-employment, and could increase it.

There are two reasons one might expect higher tax rates to encourage self-employment, and these are reasons often advanced by researchers. First, self-employment offers greater opportunities to avoid or evade taxes, and avoidance and evasion are more valuable the higher the marginal tax rates.³² The second reason is that earnings tend to vary more among the self-employed, and higher tax rates reduce the variance of earnings. That is, although expected earnings are taxed, the variation in those earnings is reduced because the government's tax causes it to act as a partner in the business, bearing some of the risk and receiving some of the return.³³

In contrast to the large body of research on self-employment choice, there is little research on the effects of tax changes on the investments or hiring decisions of existing small firms. Carroll, Holtz-Eakin, Rider, and Rosen used panel data to examine the behavior of firms without employees before and after the Tax Reform Act of 1986, where high income taxpayers had very

²⁸ Thomas A. Garrett and Howard H. Wall, "Creating a Policy Environment for Entrepreneurs," Federal Reserve Board of St/ Louis, Working Paper 2005-064B, revised March 2006, <http://research.stlouisfed.org/wp/2005/2005-064.pdf>.

²⁹ Donald Bruce and John Deskins, "State Tax Policy and Entrepreneurial Activity," Small Business Administration Office of Advocacy, November 2006. <http://www.sba.gov/advo/research/rs284tot.pdf>.

³⁰ Donald Bruce and Mohammed Mohsin, "Tax Policy and Entrepreneurship: New Time Series Evidence," *Small Business Economics*, vol. 26, Spring 2006, pp. 409-4245, <http://www.springerlink.com/content/v56w50731587m752/fulltext.pdf>.

³¹ Tami Gurley-Calvez and Donald Bruce, "Do Tax Cuts Prolong Entrepreneurial Longevity?" *National Tax Journal* vol. 61, June 2008, pp. 225-249.

³² See CRS Report R40219, *Tax Gap, Tax Enforcement, and Tax Compliance Proposals in the 111th Congress*, by James M. Bickley, for data indicating tax gap estimates that show significant underreporting by unincorporated businesses compared to underreporting of wages.

³³ Under proportional taxation and full loss offset, the effect of this reduction in risk can fully offset the effect of the tax on the expected earnings, as taxpayers can increase the share of risky assets in their portfolio to achieve the original no-tax solution. See Evsey Domar and Richard Musgrave, "Proportional Income Taxation, and Risk Taking," *Quarterly Journal of Economics*, vol. 58, May 1944, pp. 388-342. Progressive rates and limits on losses reduce, but do not eliminate, the value of this risk reduction.

deep cuts in tax rates.³⁴ Of particular interest are the estimates of the effects on hiring labor. Since the costs of labor are deductible, tax rates would matter only if the employer expanded the scope of his efforts or investment to increase the size of the firm. They compared high tax rate and low tax rate individuals. Based on their findings, retaining the top two tax rates would, as compared to allowing them to expire, increase workers hired by 6/10 of 1% due to the increase in the probability of hiring, and increase either workers or wages of those firms who already have workers by 9/10 of 1% within four years.³⁵

With only one study, one cannot easily rely on the results, particularly since there are limitations to this type of study. One reservation about the estimates is that they seem quite large as a behavioral response, especially for the response of initial non-employer firms to hire workers.³⁶ Since there is no direct effect on the incentive to hire workers from the changes in the owners tax rate, the increased hiring should derive from the increased effort of the owner or from cash flow effects. The study tested for the latter effect and found no relationship, but never examined the effect on the labor supply of owners. Moreover, in other cases where analysis was based on the 1986 tax reform and estimates were made based on tax changes (especially those that moved in the other direction), elasticities were found to be overstated. Reliance on these results might have to wait until a similar analysis is performed on the 1993 tax increase or the 2001 tax decrease.³⁷

The empirical evidence suggests that tax rates have small, uncertain, and possibly unexpected effects on the formation of small business, and given only one study, it is premature to conclude that raising taxes of the owner would decrease hiring in existing firms.

³⁴ Three papers were published on the basis of this study. See Robert Carroll, Douglas Holtz-Eakin, Mark Rider, and Harvey S. Rosen, "Entrepreneurs, Income Taxes and Investments, in *Does Atlas Shrug? The Economic Consequences of Taxing the Rich*, ed. Joel Slemrod, Russell Sage Foundation, New York, 2000; Income Taxes and Entrepreneurs' Use of Labor," *Journal of Labor Economics*, vol. 18, pp. 324-351; "Personal Income Taxes and the Growth of Small Firms, in *Tax Policy and the Economy 15*," ed. James Poterba, MIT Press, Cambridge, MA, 2001.

³⁵ The study reports an elasticity (percentage change in quantity divided by percentage change in price) of the probability of hiring workers relative to the net of tax share (1-t) of 1.2 and elasticity of the wage bill conditional on having workers as 0.37. The tax price of those in the top bracket would increase by 7.8% $(1-0.35)/(1-0.396)$ and the tax price of those in the second highest bracket would increase by 4.7% $(1-.33)/(1-.36)$. Weighting those effects by the share of firms in each group in **Table 3** yields a weighted change of 6.8%. The share of firms with workers in their data set is 0.21, so the percentage increase in employment is 0.068 times 0.21 times 1.2 times 0.036, the last number being the share of firms affected. The percentage increase in wages (and possibly employment) would be 0.068 times 0.37 times 0.36.

³⁶ For this effect, the elasticity (percentage change in the probability of hiring workers divided by the percentage change in net of tax share (or 1-t, where t is the tax rate) is 1.2 and for wages paid conditional on having employees 0.37 which would be considered large even for own labor supply response. For a review of labor supply responses see CRS Report RL31949, *Issues in Dynamic Revenue Estimating*, by Jane G. Gravelle; for a study finding virtually no effect of taxes on hours by the affluent, see Robert A. Moffitt and Mark O. Wilhelm, "Taxation and Labor Supply Decisions of the Affluent in *Does Atlas Shrug? The Economic Consequences of Taxing the Rich*, ed. Joel Slemrod, Russell Sage Foundation, New York, 2000.

³⁷ This approach compares the change in behavior of low tax and high tax individuals. One of the reservations with this type of approach is that these taxpayers may differ systematically in their growth rates in the absence of change and their response to tax rates. Examining a period when tax rates rose, such as 1993, would help to determine if this problem existed. For a discussion see CRS Report RL33672, *Revenue Feedback from the 2001-2004 Tax Cuts*, by Jane G. Gravelle, and Emmanuel Saez, Joel B. Slemrod, and Seth H. Giertz, "The Elasticity of Taxable Income with Respect to Marginal Tax Rates: A Critical Review," NBER Working Paper 15012, Cambridge, MA, May 2009, <http://elsa.berkeley.edu/~saez/saez-slemrod-giertzNBER09.pdf>.

Is Job Creation a Justification?

Is lowering taxes, or keeping taxes lower for small business, if there were evidence that tax cuts would be effective, justified by job creation objectives? This issue is perhaps the central one, since all of the other effects do not matter for the purpose of job creation if the answer to that question is no.

In answering this question, it is important to distinguish between longer run policies during periods of full employment and short run policies in a recession.

First, consider the long run. Economic theory suggests that there is no reason to view general job creation as a long run objective of government policies. The economy can generate the jobs needed by the natural process of growth and market adjustment. In 1961 and in 1991 the unemployment rate was the same, 6.7%. Employment, however, rose from 66 million to 117 million.³⁸ Employment tends to grow steadily; the unemployment rate fluctuates. Long term jobs policies, therefore, should not be aimed at increasing jobs (which at full employment will only lead to inflation), although they can be designed to reduce structural or frictional unemployment (such as improving the skills of disadvantaged workers).

Federal policies may, of course, be needed to smooth out short-term business cycles, but even in these cases it is the aggregate stance of fiscal policy that should be evaluated with respect to job creation, and not a specific program. The short term policy issue, therefore, becomes one of choosing to use resources by determining which type of stimulus is most effective. In general, research suggests that when using fiscal policy to stimulate the economy, direct spending and reducing taxes or increasing transfers to lower income individuals is likely to be most effective. The objective of tax cuts to stimulate the underemployed economy is generally to increase demand, since insufficient demand is the fundamental problem. For fiscal policy, money provided either through spending or tax cuts is only effective if it is spent, and high income taxpayers are probably the least likely to spend. Similarly tax cuts provided for businesses are also likely to be relatively ineffective.³⁹

Note that this issue of effectiveness of a stimulus does not depend on where jobs were lost or on evidence from past recessions. Headd, for example, discusses the greater job loss in a recession and gain in a recovery of small businesses.⁴⁰ But these contractions and expansions derive from reductions in aggregate demand which tend to affect some industries differently from others (e.g.

³⁸ To use an example of market adjustment, during the 20th century there was a massive contraction in the share of employment in agriculture and accompanying growth in other types of employment. This shift in employment shares did not, however, mean that agriculture was less efficient. Indeed, it was the consequence of enormous technological progress in agriculture, through mechanization and other technical advances, that allowed fewer labor resources to be devoted to farming.

³⁹ Several CRS Reports discuss these issues. See CRS Report R40104, *Economic Stimulus: Issues and Policies*, by Jane G. Gravelle, Thomas L. Hungerford, and Marc Labonte; CRS Report RS21136, *Government Spending or Tax Reduction: Which Might Add More Stimulus to the Economy?* by Marc Labonte; CRS Report R41034, *Business Investment and Employment Tax Incentives to Stimulate the Economy*, by Thomas L. Hungerford and Jane G. Gravelle; CRS Report RS21126, *Tax Cuts and Economic Stimulus: How Effective Are the Alternatives?*, by Jane G. Gravelle; CRS Report R41006, *Unemployment: Issues and Policies*, by Jane G. Gravelle, Thomas L. Hungerford, and Marc Labonte

⁴⁰ Brian Headd, *An Analysis of Small Business and Jobs*, Small Business Administration Office of Advocacy, March 2010. <http://www.sba.gov/advo/research/rs359tot.pdf>.

industries that produce durable goods or goods that are less likely to be necessities). To stimulate the economy with spending or tax cuts requires changes that will be spent initially, and which will naturally increase demand in those sectors that have contracted the most. Trying to deal with sectoral differences by targeting tax cuts to those sectors will likely not succeed if they do not increase spending.

Other Justifications for Special Tax Provisions and Treatment of Small Business

As the findings in this report suggest, across-the-board tax cuts for high income individuals are not efficiently targeted to small businesses. It is possible to design more focused provisions. However, two important issues should be considered in evaluating more carefully designed provisions. The first is whether small businesses are currently favored or disfavored by the tax law. The second is whether there are justifications for favorable treatment.

In general, small businesses, particularly high-income small businesses, are tax favored compared to large corporations.⁴¹ They are able to use pass-through forms of operation and do not have to pay a separate corporate tax. If they operate as a corporation, they benefit from graduated corporate rates, and they have a variety of special tax benefits. One of these benefits, the ability to immediately deduct the cost of investment in equipment, leads to an effective elimination of tax on the return to this type of investment. Also, as noted earlier, small firms are able to engage more freely in tax evasion. Two aspects of the tax rules may impose a burden, however. The first is the imposition of payroll taxes on all business income, not just labor income. This effect, however, is far more significant for lower- and middle-income small businesses because the old age, survivors, and disability insurance tax base is capped. In addition, additional taxes are associated with additional benefits. Moreover, passive investment income is scheduled to be taxed under Medicare, which has no ceiling, under the health reform proposals.⁴² The second is that, because of economies of scale, tax compliance costs are a smaller share of income for large firms than for small ones. In general, most researchers conclude that small businesses are favored relative to large ones.

Is there a justification for providing favorable tax treatment for small business other than job creation? In addition to tax compliance costs, justifications advanced for favoring small businesses include the argument that small businesses are important contributors to economic innovation and technological advance, small businesses undertake greater risks, and small businesses have more difficulty raising capital. While a more detailed examination of these issues is beyond the scope of this report, all three have been questioned by economists as arguments to justify general tax benefits, because of lack of merit in the argument, inefficient targeting, or both.⁴³ If this favorable treatment is not justified, then the tax system already distorts the

⁴¹ See Jane G. Gravelle, "Federal Taxation of Small Business: How Favorable? How Justified?" <http://www.ntanet.org/images/stories/pdf/proceedings/07/017.pdf> and Eric Toder, "Does the Federal Income Tax Favor Small Business?" <http://www.ntanet.org/images/stories/pdf/proceedings/07/018.pdf>, both in *the 2007 Proceedings of the National Tax Association*, and CRS Report RL32254, *Small Business Tax Benefits: Overview of Current Law and Economic Justification*, by Gary Guenther,

⁴² Because one source of capital income, active investment income of Subchapter S firms is excluded from the Medicare tax, the Medicare tax will become a benefit rather than a penalty for small business.

⁴³ Douglas Holtz-Eakin, "Should Small Business be Tax Favored?" *National Tax Journal*, vol. 48. September 1995, pp. (continued...)

allocation of resources away from larger firms and towards smaller ones. If it is justified, it would probably be more efficient to target such issues. For example, if innovation is the issue, tax subsidies should be directed to research and development. If there is a market failure in the capital markets, expanding small business loan guarantees might be more appropriate. If encouraging risk is desirable, provisions aimed at that problem, such as longer loss carryback periods, could be considered. If tax compliance by small business is an issue, expanded cash accounting methods may be helpful.

Conclusion

This report has examined the justification for retaining the lower rates for the top two tax rates because of concerns that allowing them to rise will reduce job creation by small businesses. An important reservation about such a justification is that lowering the top tax rates benefits only a small share (3% or so) of businesses, and 80% or more of the tax cut's benefits do not accrue to business. As well as lack of target efficiency, evidence on the role of small business in job creation, the effects of tax changes on small business behavior, and the likelihood this provision would not be an effective demand stimulus suggest that the formulation of small business policies should be informed and guided by any market failures that may exist.

(...continued)

387-395; Kelly Edmiston, "The Role of Small and Large Businesses in Economic Development," Federal Reserve Bank of Kansas City, *Economic Review*, 2nd Quarter, 2007, <http://www.kc.frb.org/PUBLICAT/ECONREV/PDF/2q07edmi.pdf>

Appendix. Estimating the Share of Non-Employer Firms

This appendix explores the issue of whether the share of the tax cut going to businesses should be reduced by the share of non-employer firms. With no reduction, the results presented earlier indicate that 79% of the tax cut accrues to taxpayers other than businesses, whereas with a full reduction, over 95% accrues to other taxpayers.

Two reservations arise about applying these general figures to high income taxpayers. The first is whether there are differences, given the same type of business operation, between high tax and low tax business owners. The Carroll, et al., study of proprietorships with and without workers found a very similar ratio of firms without employees among low income and high income taxpayers (78% and 79%).⁴⁴

The second is that the composition of business by organizational form differs in the case of high tax rate recipients of business income from the general population. Since it seems more likely that multiple owner businesses will have employees, we adjust the businesses recipients, after removing passive income, for the share that appear to be single owner firms.

To address this second issue, first consider the industry distribution and number of partners and shareholders for non-employer firms as a group, sole proprietorships, partnerships, and subchapter S firms. These distributions are listed in **Table A-1** (Non-employer firms), **Table A-2** (Sole Proprietorships), **Table A-3** (Partnerships), and **Table A-4** (Subchapter S Firms), which also provide references to data sources for each type of firm. Proprietorships have a very similar industry distribution to non-employer firms, not surprising as they dominate firms. Partnerships are significantly different (with a much larger share in finance and real estate) and Subchapter S firms have a distribution closer to the non-employer firms than to partnerships, with somewhat more of their business in trade and construction (as well as finance and real estate) and somewhat less in services.

According to data on passive income in **Table 2**, 36% of high income recipients of pass through income receive passive income. Most of those recipients are likely to be in partnerships, as supported by the much larger share of partners in finance, insurance and real estate in that category (61%) as compared to proprietorships (9%) and Subchapter S firms (17%). In addition, the partnership data provide information on the number of partners in general partnerships, limited partnerships, and limited liability companies. Presuming that these latter two types of firms provide largely passive income, they account for 85% of partners. Also, according to **Table 2** high income pass-through owners are allocated 23% to proprietorships, 38% to partners, and 39% to Subchapter S shareholders. By assigning 32% of passive recipients to partnerships (0.85 times 38%) to partnerships and the remaining 4% to Subchapter S firms, the result is a distribution of 23%, 6%, and 35% as the active owners in each sector. Dividing by the total of active owners as a share, a new distribution of active business owners across the three types can be derived: 36%, 9%, and 55%.

⁴⁴ Robert Carroll, Douglas Holtz-Eakin, Mark Rider, and Harvey S. Rosen, "Income Taxes and Entrepreneurs' Use of Labor," *Journal of Labor Economics*, vol. 18, pp. 324-351.

To use these new shares to adjust the numbers, consider as a rule of thumb that single owner firms are similar, so that the Subchapter S firms with one owner are treated as having a similar share of non-employer firms as proprietorships. According to the data on Subchapter S firms, about 65% of firms have only one shareholder, and given the number of shareholders, 37% of shareholders are single owner firms. Excluding partnerships and multi-owner subchapter S firms, 56% (36% plus 0.37 times 55%) of active firms would have a single owner. Taxing 56% of the difference between 21% and 5%, is 9%, suggesting that the 21% share accruing to active businesses should be reduced to 12% (21% minus 9%) to account for non-employer owners.

Table A-1. Industry Distribution of Non-Employer Businesses

Industry	Percentage of Returns
Services	56.1
Professional Services	14.2
Other Services	14.2
Administrative Services	8.6
Health Services	8.5
Construction	11.8
Trade	12.8
Finance, Insurance, and Real Estate	13.4
Finance	3.4
Real Estate	10.0

Source: U.S. Bureau of the Census, <http://www.census.gov/econ/nonemployer/>.

Table A-2. Industry Distribution of Sole Proprietorships, 2007

Industry	Percentage of Returns
Services	52.8
Professional Services	14.0
Other Services	10.4
Administrative Support Services	9.7
Health Services	8.7
Construction	12.6
Trade	12.0
Finance, Insurance, and Real Estate	9.2
Finance and Insurance	6.0
Real Estate	3.1

Source: IRS Statistics of Income, Individual Income Taxes, <http://www.irs.gov/taxstats/indtaxstats/article/0,,id=134481,00.html>

Table A-3. Industry Distribution of Partnerships and Partners

	Percentage of Partnerships	Percentage of Partners	Average Number of Partners
Finance, Insurance, and Real Estate	58.0	60.5	6.2
Finance and Insurance	48.1	36.6	4.6
Real Estate	9.9	23.8	14.3
Services	18.4	15.1	4.4
Professional	5.6	3.5	3.7
Food and Accommodations	3.4	2.0	3.6
Trade	7.1	4.6	3.7
Construction	6.7	3.0	2.7

Source: Tim Wheeler and Nina Shuofsky, "Partnership Returns 2007." Internal Revenue Service Statistics of Income Bulletin, Fall 2009, pp. 70-159, <http://www.irs.gov/pub/irs-soi/09fallbulpartret.pdf>.

Notes: For all industries, the average is six partners.

Table A-4. Industry Distribution of Subchapter S Firms and Shareholders, 2003

	Percentage of Firms	Percentage of Shareholders	Average Number of Shareholders
Services	41.6	38.7	1.6
Professional Services	15.3	12.9	1.5
Health and Social Services	6.2	5.1	1.4
Trade	16.9	16.8	1.7
Finance, Insurance, and Real Estate	15.1	17.0	1.9
Finance and Insurance	4.0	3.8	1.6
Real Estate	11.1	13.2	2.1
Construction	13.4	12.4	1.6

Source: Internal Revenue Service Statistics of Income, <http://www.irs.gov/pub/irs-soi/03scorp.pdf>.

Notes: Average Number of Shareholders for all firms is 1.8.

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