

Tax Avoidance and Corporations in the United States—The Effective Tax Rate Abnormality for the Top Five Percent by Corporate Size

Da-Hsien Bao
Rowan University

George C. Romeo
Rowan University

This paper describes the unusual pattern of corporate effective tax rate by corporate size. We used the concept of rent seeking to explain this behavior. The entire sample shows there is a positive relation between effective tax rate and firm size, and there is a positive price-earnings relation. However, the results for the largest 5% firms are entirely different. Among these firms, there is a negative relation between effective tax rate of firm size, and the price-earnings relation is less significant. Thus, the largest corporations are able to invalidate the progressive tax structure.

INTRODUCTION

Is the American system for taxing large corporations always progressive? Corporate income taxes predated individual taxes in the U.S. by four years, and have been an integral part of the federal revenue system for the greater part of its history (Davies, D. 1986). However, corporate income tax has declined significantly since the early 1950's as a source of revenue for the federal government. Revenues as percent of GDP has decreased from 5.6% to 1.2% from 1953 to 2003 and is becoming a shadow of its former self (Gravelle, 2004). Corporations are also paying a lower share of the tax burden in the U.S. than they used to. The corporate tax as a percentage of total federal tax revenue has declined from 30 percent in the 1950's to 6.6 percent in 2009.

Some of the reasons are political, including the decreasing corporate marginal tax rates, the legalization and proliferations of S Corporations, and favorable tax laws; but another major part of the story includes the extensive use of shelters to get around the tax laws. Free trade, international capital markets, and the flexibility of the final production costs have led to international competition for corporate taxes and wealth and made it more difficult for the U.S. government to compete. Even though the U.S. currently taxes corporations at a higher rate than most other countries, many corporations pay zero taxes. In fact, for the years 2008 to 2010, of the 280 most profitable corporations in the U.S., 30 corporations paid less than zero taxes in the last three years, and 78 of the companies didn't pay any federal income tax in at least one of the last three (Taylor, M. 2011). For example, General Electric had a \$14.2 billion world-wide profit in 2010 and paid no U.S. corporate taxes. It has hired 975 employees in its tax department with a goal of minimizing taxes legally (Kocieniewski, 2011). Besides General Electric, Exxon Mobil, Bank of America, Chevron, Goldman Sachs, Citigroup, ConocoPhillips are all examples of companies whose net income was in the billions, yet they received tax refunds from the federal

government (Oak, 2011). There are numerous examples of corporations aiming for tax avoidance, even though their actions may be perfectly legal. With a tremendous emphasis on net income, earnings per share, and cash flows, any corporate taxes will be seen as a detriment.

Tax rules are supposed to be equitable, efficient, and progressive. While a progressive tax assumes that the share of income paid in taxes will rise as incomes also increases, a regressive tax is just the opposite, in which the share of income paid for taxes decreases as income rises. Corporations as a legal entity should be sharing in the burden of providing tax monies to the U.S. government. Corporations currently pay a maximum marginal tax rate of 35% except for the \$100,001 to \$335,000 bracket, in which the maximum marginal tax rate increases to 39%. The question remains why many large corporations pay little or no taxes, which goes against the principles of a progressive tax. One of the objectives of this paper is to show that the largest corporations have more options and choices to engage in tax havens and thus actually pay less taxes, resulting in a regressive tax for the top five percent.

TAX HAVENS AND TAX SHELTERS

Even though there seems to be a wider recognition in the USA about the negatives of tax havens, and how they are basically anti-market and undemocratic (Christensen, 2011), large corporations pride themselves in making worldwide profits and paying little U.S. corporate taxes. Free trade, accessible capital markets, and mobility of the production factors have increased the competition among nations for international corporate taxation (Barker, 2010). Other problems contributing to tax havens and tax shelters include: 1. Low audit coverage, 2. Insufficiently severe penalties to deter taxpayers, 3. Overly aggressive tax and financial advisors, 4. Inconsistent court decisions (Meleney and Godfrey, 2005).

Tax havens and tax avoidance will continue to have negative ramifications for government revenue. First, these are taxes usually not collected from wealthy people and corporations, and thus the tax burden must fall on the not so wealthy. This can only undermine public confidence in the law, forcing ethical corporations to compete on an unfair basis with the unethical institutions (Christensen, 2011). This can also lead to copycat techniques, forcing others to emulate the rich avoiders. This is a situation similar to professional baseball in the U.S. during the 1990's and early 2000's, in which many players were using steroids. Cheating became prevalent, as others followed the lead of some of the best players so they also could become competitive and have the same advantages of those who were using steroids. This is not much different than tax havens with large U.S. companies continuously preferring investments in foreign nations with smaller income taxes, which leads to capital flight and loss of American jobs (Barker, 2010).

Another complicating factor is the grey area between tax evasion and legal tax avoidance. Tax evasion or noncompliance occurs when an entity commits a fraud to unlawfully pay less taxes than the law mandates. This is a criminal offense subject to criminal statutes (Slemrod, 2007). Tax avoidance relates to the numerous provisions in the tax code that contribute to the reduction of taxes. Conceptually, the difference between tax evasion and legal tax avoidance centers on the legality of the taxpayer's intentions. However, sometimes the dividing line between illegal tax evasion and legal tax avoidance is unclear and difficult to measure, and depends on the legality of the taxpayer's dealings. It is not uncommon for tax accountants, lawyers, bankers, brokers, and other financial engineers to continue to work for devising tax shelters for the sole purpose of reducing corporation taxes. It is also not unusual for large corporations to influence the political process, develop expertise in tax planning, and organize their activities in optimal tax saving ways as tax shelters and tax havens proliferate.

Methods Large Corporations Use to Avoid Paying U.S. Taxes

Moving Offshore

Enron was not the first to use offshore financial centers, but the case brought to light the complexity of its corporate structure and use of financial centers and subsidiaries to avoid paying U.S. taxes (Johnson and Holub, 2003). In fact, Enron as well as many other corporations would consider their tax departments as profit centers as opposed to compliance centers (DiCicco, 2002).

Corporations have been and are moving head offices offshore in order to save millions in U.S. taxes. Currently, U.S. companies have approximately \$1.5 trillion in profits sitting offshore, and these large U.S. corporations are not volunteering these profits for U.S. corporate taxation (Reuters, 2012). Offshore financial centers (OFCs) are usually characterized by zero or low taxation, little regulatory or financial supervision, flexible corporate structures, no requirements for physical presence, and secrecy (Johnson and Holub, 2003). In addition, many of these OFCs offer corporations tax subsidy agreements to entice them to do business in their country.

Transfer Price

The use of transfer pricing allows entities to shift taxable income from countries with high tax rates to countries with lower tax rates for the purpose of a tax advantage. Transfer pricing refers to the prices charged for goods and service between related companies in two different countries. An example of transfer pricing is when U.S. companies can sell goods and services at a very low price to a related party in a low-taxed country. Since U.S. corporations are not taxed on most of the income earned by foreign subsidiaries, their taxes will be reduced. The amount of the prices charged for goods and services can lead to manipulation of taxes. Aggressive pricing can change the allocation of income worldwide.

Other

Some of the other methods corporations can use relates to how they distribute their debt and equity between subsidiaries in low tax foreign countries and the parent corporation. The U.S. firm becomes heavily debt financed while the subsidiaries in low tax foreign countries become heavily financed in equity. This allows U.S. firms to deduct interest to lower the taxable income of the parent. This has contributed to corporations' increased reliance on debt. U.S. corporations can also allow their income to accumulate in low-tax foreign countries so they are not burdened with the accumulated earnings tax.

Political Cost Hypothesis--Large Corporations

Larger corporations have greater resources to influence the political process and have more resources directed toward tax avoidance. Firm size can be used as a proxy for political costs based on positive accounting theory and the political cost hypothesis. As mentioned by Dyreng, Hanlon and Maydew, much of the research is mixed, with studies showing both a positive and negative association (2008). Large firms can be more noncompliant than smaller firms consistent with the explanation that large, complex firms have more opportunities for tax avoidance. Prior accounting studies, such as Watts and Zimmerman (1978), used the size hypothesis to conclude that larger firms are more politically sensitive and that firm size is a proxy (even though with much noise) for political costs.

Rent Seeking Concept

“Rent” in the rent seeking concept is broadly defined by economists as “a benefit obtained not productively but through influencing the decisions of others” (Hillman, 2009). Rent seeking implies that a firm uses its resources to create benefit for itself and that this behavior is not Pareto-efficient, i.e., it is not that the rent seeker gains and no one loses. The rent seeking behavior has the following characteristics: 1. The rent seeker uses scarce resources to possess, not to produce; 2. The rent seeker uses scarce resources to obtain or maintain advantages over its competitors; 3. The rent seeker obtains benefit/privilege legally through political process; it is theft if not through legal means; it is corruption if politicians involved in the process do not behave ethically; 4. The rent seeker incurs costs to its competitors because of barrier to competition. The rent seeker also incurs costs to itself, e.g., lobbying costs. The marginal benefit, however, exceeds the marginal cost for the rent seeker (Tullock, 1967, Krueger, 1974, and Henderson, 2008). Thus, tax avoidance meets the criteria and is a form of rent seeking while tax evasion is not rent seeking because it is illegal.

A few examples of rent seeking include agricultural subsidies, import tariffs and quotas, and professional licensure. American farms receive government subsidies to maintain agricultural products' price floors. They generally benefit large farms and large agricultural businesses without producing and

receiving benefits through the political process. Import tariffs and quotas benefit the domestic firms by incurring costs to their foreign competitors because of the artificial barriers to competition. Professional licensure also benefits the license holders from competition by creating monopolies and closure to the professions. Tax selfishness in the form of tax avoidance is also a form of rent seeking. A corporation minimizing taxes is transferring resources away from other taxpayers of government programs.

OBJECTIVES

The first objective of this paper is to describe the pattern of effective corporate tax rate by corporate size. In the second objective, we hope to use the concept of rent seeking to explain the behavior of the largest companies, and hypothesize the effects of the rent seeking behavior on earnings reporting and the price-earning relation. For the third and fourth objectives, we wish to empirically examine the relation between effective tax rate and corporate size, and empirically examine the effect on price-earning relation.

SAMPLE

All firms in the Research Insight database from 1991 to 2010 are included. The information selected includes tax expense, pretax income, total assets, total liabilities, stockholders' equity, common equity, sales, net income, share of common stock, book value per share, basic earnings per share excluding extraordinary items, closing price per share, dividend per share, and cash flows. The total sample consists of 9,782 companies.

Effective tax rate is calculated by dividing tax expense by pretax income that resulted in 97,491 effective tax rates in the sample. A 0.5% winsorizing procedure is applied to the calculated effective tax rate to control the outliers (Barnett and Lewis, 1994). This is a transformation of the sample by limiting extreme values in the statistical data to reduce the effect of possible spurious outliers. Size was determined by a logarithm of total assets.

DISCUSSION AND RESULTS

As displayed in Table 1, the first objective was to describe the pattern of corporate tax rates by using 10% increments for the whole sample and 1% increments for the top 5%. The mean effective tax rate is computed by dividing Tax Expense by Pretax Income.

Hypothesis 1 is first suggested by the empirical results in Table 1. The mean corporate effective tax rate is 18.51%, with the range of 1.57 for the lowest 10 percent in size to 27.24 percent for those in the 90 to 100 percentile in size. The entire sample shows that there is a positive relationship between effective tax rate and corporate size. That is, the larger the company size based on a logarithm of total assets, the higher the effective corporate tax rate if we categorize companies by percentiles of ten percent. However, there is a negative relationship between effective tax rate and corporate size if we focus on the largest 5% of the sample. Thus, for the top 5% of corporations based on size, there is an inverse relationship between size and corporate tax rate.

Our second objective was to use the concept of rent seeking to explain the behavior of the largest companies. The results presented in Table 1 also suggest that the largest companies engage in rent seeking behavior because tax minimization is obtained not productively, i.e., the benefit of increasing profit is not through productivity increases. It benefits the stockholders and managers of the firms. It incurs costs not only to their competitors but also to the firms themselves. But because the largest firms have more resources at their disposal (than other firms), they can engage in rent seeking behavior and still generate net benefit; i.e., marginal benefit is larger than marginal cost to the firms.

TABLE 1
MEAN EFFECTIVE TAX RATE BY CORPORATE SIZE

Size	Mean effective tax rate (%)
< 10 percentile	1.57
10 to < 20 percentile	7.29
20 to < 30 percentile	10.91
30 to < 40 percentile	16.14
40 to < 50 percentile	20.81
50 to < 60 percentile	23.22
60 to < 70 percentile	25.13
70 to < 80 percentile	26.24
80 to < 90 percentile	26.20
90 to ≤ 100 percentile	<u>27.24</u>
Mean for all corporations	18.51
<u>Top five percent</u>	
≥ 95 percentile	26.42
≥ 96 percentile	26.08
≥ 97 percentile	25.21
≥ 98 percentile	23.26
≥ 99 percentile	19.26

Note: Size is logarithm of total assets.

Hypothesis 1: There is a negative relation between effective tax rate and size for the largest firms.

Prior accounting studies, such as Watts and Zimmerman (1978), used the size hypothesis to conclude that larger firms are more politically sensitive and that firm size is a (noisy) proxy for political costs. The behavior of the largest firms, therefore, is different from that of other firms (Watts and Zimmerman, 1978). Hypothesis 1 is suggested by the results in Table 1, and will be formally tested using regressions and t-tests. Effective tax rate will be regressed on size measured by the logarithm of total assets. T-tests are used to statistically compare effective tax rates between the largest firms and other firms. Based on the effects of the rent seeking behavior on earnings reporting and the price-earnings relation, our hypothesis can be stated as follows:

Hypothesis 2: The price-earnings relation established in accounting research is not valid for the largest firms.

The positive relation between price and earnings has been established since the studies by Ball and Brown (1968) and Beaver (1968). A firm's earnings result from its productivity. The higher the firm's productivity, the higher its stock price is. The price-earnings relation can be described as follows in Figure 1 (For example, see Korthari, 1992):

**FIGURE 1
PRICE-EARNINGS RELATION**

$$(P_i - P_{i-1}) / P_{i-1} = \alpha + \beta \times ((E_i - E_{i-1}) / P_{i-1}) + \varepsilon$$

where P_i is price per share at the end of year i , E_i is earnings per share for year i .

The dependent variable is price change normalized by beginning price, and the independent variable is earnings change normalized by beginning price. Both variables are subject to 0.5% winsorization for controlling the outliers. The following price-earnings regression as shown in Figure 2 can be performed to statistically test the difference in earnings coefficients for two groups:

**FIGURE 2
PRICE-EARNINGS REGRESSION**

$$(P_i - P_{i-1}) / P_{i-1} = \alpha + \beta_1 \times ((E_i - E_{i-1}) / P_{i-1}) + \beta_2 \times G \times ((E_i - E_{i-1}) / P_{i-1}) + \varepsilon$$

where $G = 0$ for group 0, $G = 1$ for group 1.

The earnings coefficient for group 0 is β_1 while the earnings coefficient for group 1 is $\beta_1 + \beta_2$, and is significantly different if β_2 is significantly different from zero.

The largest firms can use their resources in rent seeking. They can use their resources to politically change the tax codes in their favor, or they can use their resources to legally find “the loopholes” in the tax codes for minimizing their taxes. Earnings of these firms may reflect less of their productivity. The price-earnings relation of the largest firms, therefore, may not be as valid as that of other firms. Price-earnings regressions will be used to test this hypothesis. For our third and fourth objectives, we would like to empirically examine the relation between corporate effective tax rate and size, and empirically examine the effect on price-earnings relation.

In Table 2, firms will be divided into two groups: the largest firms (first defined as firms in the top 5% in size of the sample) and other firms. The largest 1% firms have significantly larger total assets, total liabilities, stockholders’ equity, common equity, cash flows, sales, pretax income, tax expense, net income, shares and book value per share, but not significantly larger earnings per share, price per share, or dividend per share.

**TABLE 2
EFFECTIVE TAX RATE-SIZE REGRESSIONS
(USING 95 PERCENTILE FOR TWO GROUPS)**

	All	> = 95 percentile (GP = 1)	Other (GP = 0)
N	97102	4855	92247
Intercept	3.77*** (0.25)	41.62*** (5.47)	2.65*** (0.26)
Size	2.76*** (0.04)	-1.20** (0.49)	3.05*** (0.04)
Adj. R ²	0.0466	0.0010	0.0475

Notes: Dependent variable is the effective tax rate. Size is logarithm of total assets. Standard deviation is in parenthesis. ** for significant at 0.05 level. *** for significant at 0.01 level.

Using the results of the entire sample indicates there is a positive relation between effective tax rate and size; i.e., the larger the size, the higher the effective tax rate. This confirms the results in Table 1. However, when examining the largest 5% firms, there is a negative relation between effective tax rate and size for the largest 5% firms. This means the larger the size, the lower the effective tax rate is among the largest 5% firms. There is also a positive relation between effective tax rate and size for other firms. Thus we can conclude that the behavior of the largest 5% firms is different from that of other firms, and Hypothesis 1 is confirmed.

Hypothesis 1 is suggested by the results in Table 1, and will be formally tested using regressions and t-tests. Effective tax rate will be regressed on size measured by the logarithm of total assets in Table 3. To statistically compare effective tax rates between the largest firms and other firms, t-tests will be used.

TABLE 3
MEAN EFFECTIVE TAX RATE COMPARISON
(USING 95 PERCENTILE FOR TWO GROUPS)

	> = 95 percentile (GP = 1)	Other (GP = 0)
N	5244	92247
Mean	26.42	18.06
Std. dev.	0.48	0.13
t-value	15.50***	

Notes: t-test is for comparing the mean effective tax rate. *** for significant at 0.01 level.

The mean effective tax rate of the largest 5% firms is significantly higher than that of other firms as evidenced by Table 3. Thus, the largest 5% firms, engaging in rent seeking, are unable to lower their effective tax rate to the level of other firms' effective tax rate.

TABLE 4
PRICE-EARNINGS REGRESSIONS
(USING 95 PERCENTILE FOR TWO GROUPS)

	All	> = 95 percentile (GP = 1)	Other (GP = 0)	All
N	77195	4249	72946	77195
Intercept	0.19*** (0.00)	0.13*** (0.01)	0.20*** (0.00)	0.19*** (0.00)
EC	0.18*** (0.00)	0.07*** (0.02)	0.19*** (0.00)	0.19*** (0.00)
GP * EC				-0.12*** (0.02)
Adj. R ²	0.0271	0.0063	0.0283	0.0277

Notes: Dependent variable is price change normalized by beginning price. EC is earnings change normalized by beginning price. Standard deviation is in parenthesis. *** for significant at 0.01 level.

The price-earnings regressions are presented in Table 4. For the entire sample, there is a significant and positive price-earnings relation as shown in prior research. There is also a significant and positive price-earnings relation for the largest 5% firms and for other firms, respectively. However, the price-earnings relation, as measured by the earnings coefficient, is significantly smaller (-0.12 at 0.01 level) for the largest 5% firms. Thus, Hypothesis 2 is not confirmed.

Firms Are Divided into Two Groups

Table 5 provides the effective tax rate-size regressions for the largest firms (defined as firms in the top 1% in size of the sample) and other firms.

TABLE 5
EFFECTIVE TAX RATE-SIZE REGRESSIONS
(USING 99 PERCENTILE FOR TWO GROUPS)

	All	> = 99 percentile (GP = 1)	Other (GP = 0)
N	97102	971	96131
Intercept	3.77*** (0.25)	56.89*** (18.74)	3.26*** (0.25)
Size	2.76*** (0.04)	-2.42* (1.47)	2.88*** (0.04)
Adj. R ²	0.0466	0.0018	0.0480

Notes: Dependent variable is the effective tax rate. Size is logarithm of total assets. Standard deviation is in parenthesis. * for significant at 0.10 level. *** for significant at 0.01 level.

There is a positive relation for the entire sample between effective tax rate and size; i.e., the larger the size, the higher the effective tax rate. This confirms the results in Table 1. There is also a negative relation between effective tax rate and size for the largest 1% firms; i.e., the larger the size, the lower the effective tax rate is among the largest 1% firms. There is also a positive relation between effective tax rate and size for other firms. Thus, the behavior of the largest 1% firms is different from that of other firms, and Hypothesis 1 is confirmed.

The mean effective tax rate comparisons between the top 1% and all other firms are presented in Table 6.

TABLE 6
MEAN EFFECTIVE TAX RATE COMPARISON
(USING 99 PERCENTILE FOR TWO GROUPS)

	> = 99 percentile (GP = 1)	Other (GP = 0)
N	1360	96131
Mean	19.26	18.50
Std. dev.	0.90	0.12
t-value	0.73	

Note: t-test is for comparing the mean effective tax rate.

The mean effective tax rate of the largest 1% firms is not significantly different from that of other firms. Thus, the largest 1% firms, engaging in rent seeking, are able to lower their effective tax rate to other firms' effective tax rate.

TABLE 7
PRICE-EARNINGS REGRESSIONS
(USING 99 PERCENTILE FOR TWO GROUPS)

	All	> = 99 percentile (GP = 1)	Other (GP = 0)	All
N	77195	1047	76148	77195
Intercept	0.19*** (0.00)	0.20*** (0.04)	0.19*** (0.00)	0.19*** (0.00)
EC	0.18*** (0.00)	-0.02 (0.02)	0.19*** (0.00)	0.19*** (0.00)
GP * EC				-0.21*** (0.02)
Adj. R ²	0.0271	-0.0002	0.0291	0.0285

Notes: Dependent variable is price change normalized by beginning price. EC is earnings change normalized by beginning price. Standard deviation is in parenthesis. *** for significant at 0.01 level.

The results of the price-earnings regressions presented in Table 7 document that there is a significant and positive price-earnings relation for the entire sample as shown in prior research. There is not a significant price-earnings relation for the largest 1% firms, but there is a significant and positive price-earnings relation for other firms. The price-earnings relation, as measured by the earnings coefficient, is significantly smaller (-0.21 at 0.01 level) for the largest 1% firms. Thus, Hypothesis 2 is also confirmed.

Firms Are Divided into Three Groups

TABLE 8
EFFECTIVE TAX RATE-SIZE REGRESSIONS
(USING 95 AND 99 PERCENTILES FOR THREE GROUPS)

	All	> = 99 percentile (GP = 2)	Between 95 and 99 percentiles (GP = 1)	Other (GP = 0)
N	97102	971	3884	92247
Intercept	3.77*** (0.25)	56.89*** (18.74)	27.31** (11.52)	2.65*** (0.26)
Size	2.76*** (0.04)	-2.42* (1.47)	0.15 (1.08)	3.05*** (0.04)
Adj. R ²	0.0466	0.0018	-0.0003	0.0475

Notes: Dependent variable is the effective tax rate. Size of logarithm of total assets. Standard deviation is in parenthesis. * for significant at 0.10 level. ** for significant at 0.05 level. *** for significant at 0.01 level.

The results shown in Tables 5, 6, and 7 seem to suggest the sample should be divided into three groups: The largest firms (defined as firms in the top 1% of the sample; where GP = 2), the second largest firms (firms between the top 2% and 5% of the sample; where GP = 1), and other firms (where GP = 0). The findings are provided in Table 8.

The entire sample shows there is a positive relation between effective tax rate and size; i.e., the larger the size, the higher the effective tax rate. This confirms the results in Table 1. There is a negative relation between effective tax rate and size for the largest 1% firms; i.e., the larger the size, the lower the effective tax rate is among the largest 1% firms. There is no significant relation between effective tax rate and size for the largest 2% - 5% firms (where GP = 1). There is also a positive relation between effective tax rate and size for other firms. The behavior of the largest 1% firms is different from that of all other firms. Thus, Hypothesis 1 is confirmed.

The findings relating to the mean effective tax rate comparisons for the three groups are provided in Table 9.

TABLE 9
MEAN EFFECTIVE TAX RATE COMPARISON
(USING 95 AND 99 PERCENTILES FOR THREE GROUPS)

	t-value	> = 99 percentile (GP = 2)	Between 95 and 99 percentiles (GP = 1)	Other (GP = 0)
N		1360	3884	92247
Mean		19.26	28.93	18.06
Std. dev.		33.20	35.17	38.17
Comparison between GP = 0 and GP = 1	17.44***			
Comparison between GP = 0 and GP = 2	1.16			
Comparison between GP = 1 and GP = 2	8.85***			

Notes: t-test is for comparing the mean effective tax rate. *** for significant at 0.01 level.

The mean effective tax rate of the largest 1% firms (where GP = 2) is significantly lower than that of the firms in the largest 2% - 5% firms (where GP = 1). However, the mean effective tax rate of the largest 1% firms (where GP = 2) is not significantly different from that of other firms (where GP = 0). Thus, the largest 1% firms (where GP = 2), engaging in rent seeking, are able to lower their effective tax rate to other firms' (where GP = 0) effective tax rate.

Table 10 below presents price-earnings regressions for the three groups. For the entire sample, there is a significant and positive price-earnings relation as shown in prior research. There is not a significant price-earnings relation for the largest 1% firms, but there is a significant and positive price-earnings relation for the largest 2% - 5% firms and for other firms.

The price-earnings relation, as measured by the earnings coefficient, is significantly larger (0.23 at the 0.01 level) for the largest 2% - 5% firms. The price-earnings relation, as measured by the earnings coefficient, is significantly smaller (-0.21 at the 0.01 level) for the largest 1% firms. Thus, Hypothesis 2 is confirmed.

TABLE 10
PRICE-EARNINGS REGRESSIONS
(USING 95 AND 99 PERCENTILES FOR THREE GROUPS)

	All	> = 99 percentile (GP = 2)	Between 95 and 99 percentiles (GP = 1)	Other (GP = 0)	GP = 0 + GP = 1	GP = 0 + GP = 2
N	77195	1047	3202	72946	76148	73993
Intercept	0.19*** (0.00)	0.20*** (0.04)	0.11*** (0.01)	0.20*** (0.00)	0.19*** (0.00)	0.20*** (0.00)
EC	0.18*** (0.00)	-0.02 (0.02)	0.42*** (0.02)	0.19*** (0.00)	0.19*** (0.00)	0.19*** (0.00)
G1 * EC					0.23*** (0.04)	
G2 * EC						-0.21*** (0.02)
Adj. R ²	0.0271	-0.0002	0.1162	0.0283	0.0295	0.0277

Notes: Dependent variable is price change normalized by beginning price. EC is earnings change normalized by beginning price. Standard deviation is in parenthesis. G1 = 1 for GP = 1 and G1 = 0 for GP = 0; G2 = 1 for GP = 2 and G2 = 0 for GP = 0. *** for significant at 0.01 level.

CONCLUSIONS

The entire sample shows there is a positive relation between effective tax rate and firm size, and there is a positive price-earnings relation. The results for the largest 5% firms, however, are entirely different. Among these firms, there is a negative relation between effective tax rate and firm size, and a less significant or invalid price-earnings relation. Thus, the largest corporations are able to invalidate the progressive tax structure, and the consequences of this phenomenon can have harmful effects on the American system for taxing corporations as well as the resource cost of raising taxes.

Taxing economic events of large and international companies is a complex situation. One of the goals of tax reform is to effectively tax the large global corporations through a proper determination of the tax base. The present system creates excess avoidance options, distorts economic decisions, and allows inefficiencies, loopholes, incentives, tax earmarks, and baffling complexity (The National Commission on Fiscal Responsibility and Reform, 2010). The largest firms can use their resources in rent seeking; that is, they can use their resources to politically change or use the tax codes to their favor. They can use their substantial resources to legally find “the loopholes” in the tax codes for minimizing their taxes. Thus, if large corporations strictly follow the tax codes but still pay little or no taxes, then the problem is the tax code. If the players play by the rules, and the game is still unfair, then the rules of the game should be changed. The results of this paper provide evidence that supports this assertion that Congress should close the loopholes so that large corporations cannot purchase special benefits.

There are some actions that the U.S. could take to ameliorate this problem of the taxing of large corporations. First, the U.S. could reduce the corporate tax rate from the current 35% to a percentage that is more in line with the rest of the world. This would help to a certain extent, but no matter how much we lower taxes, there still will be safe harbors that allow little or no taxes. Second, the U.S. could begin enacting policies making it more difficult to utilize off-shore tax havens or abuses in transfer pricing. This

would be a more difficult action, since it would involve the cooperation of international countries to be effective.

Since these obvious actions may prove to be not effective enough, Congress needs to devise means of working both with large corporations and other governments to effect a real change in tax practices. Globalization and tax competition will continue to place pressure on the current tax system. The present system is riddled with problems, and tax selfishness will continue to be widespread in the form of tax avoidance and rent seeking. Since tax heavens have been supported on an international scale, the U.S. is going to need international cooperation to remedy the problem of the largest corporations using tax avoidance techniques to invalidate the progressive tax system.

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