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Changes in corporate effective tax rates over the past 25 years[☆]

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ABSTRACT

We investigate systematic changes in corporate effective tax rates over the past 25 years and find that effective tax rates have decreased significantly. Contrary to conventional wisdom, the decline in effective tax rates is not concentrated in multinational firms; effective tax rates have declined at approximately the same rate for both multinational and domestic firms. Moreover, within multinational firms, both foreign and domestic effective rates have decreased. Finally, changes in firm characteristics and declining foreign statutory tax rates explain little of the overall decrease in effective rates.

1. Introduction

In this paper, we examine the trend in corporate effective tax rates (ETRs) over the past 25 years. While US statutory tax rates have remained relatively constant during this period, indications are that some firms have been able to reduce their effective tax rates through tax planning strategies and by taking advantage of favorable provisions in the tax code (Gravelle, 2013; Bloomberg, 2010; US Senate, 2014a; Dyreng, Hanlon, and Maydew, 2008). Many

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have suggested that the US tax system is broken because of the disparity between the high statutory rate and low effective rates that some companies realize, resulting in an inequitable system of taxation, perverse incentives, and undesirable consequences.[1] Despite recent attention paid to these issues by the US government, international tax bodies such as the Organization for Economic Co-operation and Development (OECD), the academic literature, and the popular press, surprisingly little evidence exists on how effective tax rates have evolved over time, even though such data would be informative to academics and policy makers when evaluating the current system relative to a set of alternatives. A great deal of research examines tax avoidance and effective tax rates, but almost all of this research examines the cross section of firms (e.g., Chen, Chen, Cheng, and Shevlin, 2010; Desai and Dharmapala, 2006; Kim, Li, and Zhang, 2011).

To investigate the existence of, and potential explanations for, a trend in effective tax rates over time, we examine a sample of 54,028 US firm-years over the 25-year period from 1988 to 2012. We primarily study the trend in the cash effective tax rate (worldwide cash taxes paid divided by pretax accounting earnings).We also examine domestic and foreign current effective tax rates, which we use to test foreign versus domestic rates for US corporations that have income from foreign sources (multinational firms).[2] To be clear, we do not examine taxes paid to the Internal Revenue Service (IRS) relative to taxable income reported to the IRS. Broadly speaking, taxes paid to the IRS will be equal to taxable income reported to the IRS multiplied by the statutory tax rate, reduced by tax credits. Examining the ratio of these two numbers does not capture tax avoidance strategies that reduce or delay the recognition of taxable income (e.g., shifting income to a low-tax foreign country, investment in tax favored activities such as municipal bonds, and investments that are subjected to accelerated depreciation for tax purposes) because those types of strategies reduce both taxes paid and taxable income reported to the taxing authority. In contrast, cash effective tax rates capture all reductions in taxes paid relative to pretax financial accounting income. Our measures are intentionally broad, so that they capture any form of tax reduction relative to pretax accounting income, whether through tax sheltering, location decisions, income shifting, tax preferences within the tax code, or rule changes.

We begin by testing whether or not cash effective tax rates have declined over the sample period. Overall, we find a significant downward trend in effective tax rates using our broad sample of publicly traded US corporations. On average, cash effective tax rates of our sample firms have decreased by about 0.4 percentage points per year over the past 25 years. The trend is economically large, representing a cumulative decline of between 5 and 10 percentage points, depending on the specification. A 10 percentage point decline translates into about $109 billion less in taxes paid in 2012 compared with what would have been paid had the effective rate remained constant at the 1988 level.[3]

Much attention has been focused on multinational firms because they are able to shift income from high-tax jurisdictions to low-tax jurisdictions, including tax havens (Dharmapala and Riedel, 2013; Dyreng and Markle, 2016; Dharmapala, 2014), especially when cross-border transactions are based on intangible assets which are more difficult to value and easier to move across borders (Grubert and Slemrod, 1998; Kleinbard, 2011; De Simone, Mills, and Stomberg, 2014). Recent international tax reform guidance has focused on these issues for multinationals, including the Base Erosion and Profit Shifting (BEPS) initiative at the OECD (OECD, 2013). If effective tax rates are declining more rapidly for multinational firms than for purely domestic firms, then multinationals can increasingly have a cost advantage over domestic firms. However, the literature provides little evidence about changes in effective tax rates of multinational firms compared to purely domestic firms over time.

We examine the time trend in effective tax rates separately for multinational and domestic firms. Surprisingly, we find essentially the same decrease in effective tax rates over time for purely domestic firms as for multinationals. We probe this finding further by comparing the trend in current effective tax rates on domestic income versus foreign income within our subsample of US multinational firms. As expected, we find that the decline in foreign effective tax rates of multinationals is largely explained by the well-documented decline in statutory tax rates of foreign countries. However, we also find a downward trend in the domestic effective tax rates of multinationals, which cannot be explained by declining foreign statutory tax rates.

These primary results are informative for tax policy. While multinationals have access to international tax planning opportunities, our results show that domestic corporations have declining effective tax rates as well. This suggests that significant and increasing opportunities exist to reduce (via planning or from provisions in the tax laws) effective tax rates on domestic income. Thus, perhaps policy makers should not focus exclusively on tax avoidance by multinationals and should consider the extent of current provisions for domestic-only firms.

We perform a number of additional tests to explain the trend in effective tax rates. First, we examine whether changing firm characteristics can explain the trend. Extant research shows that the characteristics of publicly traded firms today are different than they were 25 years ago (e.g.,

[1] For discussions and references, see H.R. 1, The Tax Reform Act of 2014 (113th Congress), US Senate (2014b, 2015), and Citizens for Tax Justice (2015).

[2] We explain these measures more fully and we test multiple alternate measures, such as the Generally Accepted Accounting Principles (GAAP) effective tax rate and a cash effective tax rate based on cash flows from operations, in the sections that follow.

[3] Our univariate analysis shows a decline in cash effective tax rates of about 5 percentage points (i.e., from about 32% at the beginning of the sample period to about 27% at the end of the sample period). Our multivariate analysis shows an average annual decline of 0.4 percentage points, which amounts to about 10 percentage points over the 25-year sample period. The $109 billion is calculated by aggregating pretax income of our sample firms in 2012 of $1,088 billion and multiplying by 0.10.