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Corporate Taxes and Retail Prices

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As an accounting fundamental, higher corporate taxes must result in lower payments to shareholders, lower wages, or higher product prices. The actual incidence of corporate taxes on workers, consumers, and capital is therefore key to debates on tax policy. While a large body of work focuses on the incidence of corporate taxes on shareholders and more recent work has studied the impacts on wages, no empirical work has yet examined the effects of corporate tax changes on consumer prices. Models used by federal policymakers assume that corporate taxes are fully incident on only capital and labor. While the passage of the 2017 Tax Cuts and Jobs Act instituted the biggest federal corporate tax cut in recent American history, the impact on consumers was unknown.

There are two significant challenges to identifying the effects of state-level corporate taxes on retail prices. The first is that corporate tax changes may be correlated with other factors that determine retail prices. For example, states may be more likely to raise taxes during recessions, when price growth is lower due to lower demand. The second challenge is that it has been difficult to assemble a corpus of data with information on both retail prices and the tax nexus of firms that produce those items.

We deal with the first empirical challenge by utilizing the fact that firms that produce tradable goods are often located in different states from those where goods are sold. If a firm has tax nexus (employees and property) in one state but sells products in multiple states, then the firm's profits will be primarily subject to the tax laws of the state where the firm has nexus. We are able to use tax changes in the states where firms' primary operations are located (the nexus states) and study the impact on retail prices in other states where their products are sold (which we refer to as sold states).

In this manner, we avoid the issue stemming from the endogeneity of the local tax changes by exploiting item sales where the location of production and the location of the sale are different. This approach allows us to compare items sold within the same retailer in the same state and year but whose producers face different levels of corporate taxation because they have different nexus states. That is, we control for time-varying state-specific shocks to retail prices, such as local economic conditions where an item is sold. We also control for time-varying retailer shocks that may affect pricing, such as a national retail chain facing financial distress.

To overcome the second empirical challenge, we link several data sets that enable us to observe barcode-level product prices, the location of each item's producer, and tax rates. First, and most importantly, we utilize scanner data from Nielsen Retail Measurement Services (RMS), a representative sample of retail sales in all major metropolitan areas. We link this Nielsen RMS data to barcode data from GS1, the company that assigns items a Universal Product Code. This database contains the identity of the firm that actually produced an item. This provides us with a link between the firm that produced an item and the item's final retail price across different geographical locations and retailers. We further identify firm characteristics, including administrative and ownership data, and assemble corporate tax rate information through 2017.

Our empirical analyses are motivated by a simple model of corporate tax incidence. We find an elasticity of retail price to the net of corporate tax rates of approximately 0.17. This

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means that a one percentage point increase in the corporate tax rate leads to a 0.17 percent increase in retail product prices. While our data do not contain information to identify the wage effects of corporate taxes, our model and empirical estimates allow for a back-of-envelope calculation of the wage elasticity to be 0.43.

Informed by our empirical estimate, we can gauge the incidence of corporate taxes on consumers by relating the welfare change of consumers induced by a marginal change in the net-of-tax rate to the sum of the welfare changes of consumers, workers, and firm owners. We find that the incidence on consumers, workers, and shareholders is 31 percent, 38 percent, and 31 percent, respectively. This stands in sharp contrast to the case where we do not take into account the effect of corporate income tax on product prices; under this assumption, workers and shareholders will bear 42 percent and 58 percent of the tax burden, respectively.

We complement our main analysis with a graphical event study using large state-level corporate tax changes, defined as tax changes greater than or equal to one percentage point. Our analysis indicates that, for both tax increases and cuts, the timing of price changes following tax events reflects the tax change itself. We see little price movement in the periods immediately before tax events, and we see prices rise (or fall) following tax increases (or cuts).

Additionally, we repeat our analysis using a set of firms that are not subject to corporate taxes: S corporations. These corporations take a different legal form and are required to pay personal income taxes rather than corporate income taxes. If our empirical strategy identifying the causal effects of corporate tax changes is valid, we should only find price effects of corporate taxes for C corporations and not for S corporations. On the other hand, if changes in state corporate income taxes are correlated with unobserved supply-side shocks, then both C corporations and S corporations should be affected. We find positive and significant price effects for C corporations seeing corporate income tax rate changes. In contrast, we see no price effects for tax rate changes that do not affect the legal entity—neither for C corporations following personal income tax rate changes nor for S corporations when corporate income tax rates change.

Our findings have important implications for the incidence and progressivity of corporate taxes. Because of their effects on prices, corporate taxes have similar effects as sales taxes. Many studies of corporate tax incidence ignore the impact on consumers, as do many models used by policymakers. For example, the Congressional Budget Office assumes that corporate taxes are not incident on households through consumer prices but instead allocates incidence purely to owners of capital and through labor income, with three-quarters being incident on shareholders. The U.S. Treasury model assumes an even higher incidence on shareholders, with more than four-fifths of corporate tax incidence borne by capital income. Our analysis reveals a striking result that approximately 31 percent of the total incidence of corporate taxation falls on consumers through higher product prices, with capital owners and workers bearing a similar amount.

NOTE:

This research brief is based on Scott R. Baker, Stephen Teng Sun, and Constantine Yannelis, "Corporate Taxes and Retail Prices," NBER Working Paper no. 27058, April 2020, http://www.nber.org/papers/w27058.