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Destination taxation and evasion: Evidence from U.S. inter-state commodity flows[☆]

William F. Fox[a,1], LeAnn Luna[b,*], Georg Schaur[c]

[a] The University of Tennessee, Department of Economics and CBER, 715 Stokely Management Center, Knoxville, TN 37996-0550, United States

[b] The University of Tennessee, Department of Accounting and CBER, 711 Stokely Management Center, Knoxville, TN 37996-0550, United States

[c] The University of Tennessee, Department of Economics, 505A Stokely Management Center, Knoxville, TN 37996-0550, United States

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ABSTRACT

Tax evasion has been an important issue in the accounting literature for several decades, but the focus has been on corporate income taxes. We develop a new way to examine tax evasion that focuses on corporate transactions, rather than corporate profits. Specifically, we examine how commodity flows respond to destination sales taxes, allowing for tax evasion as a function of distance between trade partners. After accounting for transportation costs, we find that the effect of taxes decreases as distance increases. This is consistent with the notion that longer distances between trade partners hinder government oversight and increase the likelihood of successful tax evasion. Our results are robust with respect to outliers, strategic neighbor effects, information sharing agreements and other re-specifications. These results are important to policymakers because they evidence the difficulty of enforcing destination taxation in open economies such as U.S. states and the European Union.

1. Introduction

Tax evasion and avoidance have key implications for government revenues, efficiency losses, and equity. However, careful empirical analysis of tax evasion and avoidance is limited because of the difficulty of observing or inferring such behavior. A literature examining tax evasion and avoidance has developed in recent years (for example, Dyreng et al., 2008), but authors such as Hanlon and Heitzman (2010) and Shackelford and Shevlin (2001) argue that more research is needed. Research-to-date generally concentrates on the corporate income tax, though the potential for evasion and avoidance crosses all taxes as evidenced by Robinson (2012), leaving us with a limited understanding of the broader issue. Hanlon and Heitzman (2010) also observe that finding new ways to measure and identify avoidance, which they define to include evasion, avoidance, aggressiveness and other terms, is a key area for new research. This study examines how traders of commodities across state borders respond to changes in destination tax rates with a focus on how distance between trading partners affects that response. In general, we find that the effect of taxes decreases as distance increases, consistent with the

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* Corresponding author.
E-mail addresses: billfox@utk.edu (W.F. Fox), leann@utk.edu (L. Luna), gschaur@utk.edu (G. Schaur).
[1] Tel.: +1 865 974 6112; fax: +1 865 974 3100.

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notion that distance makes enforcement of destination taxes more difficult, and therefore increases the likelihood of successful tax evasion.

This paper uses a novel approach to investigate evasion for a relatively unstudied area, state and local sales taxes. In fact, we are not aware of any comprehensive examination of sales tax evasion, with most previous tax evasion research being done at the national or international levels (Dyreng and Lindsay, 2009). The lack of research cannot be attributed to the fact that sales taxes are a minor source of revenue. Total state and local sales tax receipts exceed the federal corporate income tax. For example, state and local governments collected $296.8 billion in sales taxes during fiscal 2011. By comparison, the federal corporate income tax yielded $277.9 billion in 2010.

Analysis of evasion is difficult because by its very nature it is generally not observable, but researchers have developed approaches that allow for evasion to be indirectly measured. For example, Dutt and Traca (2010) examine international commodity flows and employ a structural model to examine the relationship between corruption and the collection of tariffs at borders. As is true in our case, they do not observe the actions of border officials and traders directly, but they infer their conclusions from the structure of the model that documents behavior consistent with evasion. In our domestic context, successful evasion of transactions taxes depends on the buyers and the sellers failing to report the transactions and the governments′ propensities to audit relatively few transactions and firms. Therefore, we provide evidence for a channel of tax evasion on domestic transactions.

This channel of evasion is important because it evidences that limited audit resources, and therefore incomplete enforcement of local tax policy, have important consequences. Failure to collect sales taxes subsidizes remote sellers while punishing close by and in-state sellers who are more likely to be audited and thus subject to a higher expected tax on their sales. Enforcement of state sales taxes parallels application of the VAT in Europe where the tax is due on a destination basis and border controls are not available for enforcement.

The existing literature has examined evasion of sales taxes in two narrow settings. First, shoppers evade taxes by physically crossing state borders to take advantage of lower tax rates and either carry the item with them or have it shipped back to the home state for consumption. In this literature, the tax benefits from cross-border shopping are fixed by rate differentials and consumers realize the benefits if they are not offset by transportation costs (Kanbur and Keen, 1993). Recent studies of cross-border shopping generally examine specific commodities, such as cigarettes, and focus on excise taxes (Devereux et al., 2007) that are also required to be paid at the destination but in practice are collected as origin taxes at the point of sale. The cross-border excise tax literature typically examines flows between bordering states and finds that beginning with equal tax rates, an increase in the home state tax rate causes instate buyers closest to the border to shop out of state.

Second, prior research examines the inability to collect sales tax on transactions ordered via mail order and the Internet (Einav et al., 2014; Ellison and Ellison, 2009; Goolsbee, 2000). Sellers are not required to collect sales taxes on items shipped to states in which the seller has no physical presence. The buyer owes the use tax, but the tax is often evaded. Concerns about this type of evasion are receiving considerable attention as states attempt a variety of means to force large remote sellers to collect the sales tax.

We focus on a third type of evasion, which has not been examined previously in the literature and which expands the relatively small geographic area examined in the excise tax models. This evasion arises both through the sales and use tax. On the sales tax side, evasion occurs when the out-of-state firm has a sales tax collection responsibility but does not admit to having nexus and therefore does not collect the sales tax. The propensity to evade is expected to rise with distance because sellers are more difficult to detect when they are located further from the destination state. This evasion is broader than the two previously discussed, though it effectively subsumes them, because people and businesses consummate many transactions through means other than e-commerce or cross-border shopping.

We develop a theoretical model for cross-state sales that depends on transportation costs, sales taxation, and the extent of sales tax evasion. We then exploit a relatively unstudied Department of Commerce database to determine whether the flow of goods is consistent with tax evasion that is possible because of the tax authorities′ inability to observe and audit taxable transactions that occur over long distances. Our results strongly support the use of cross-state sales to facilitate evasion and evidence that the inability to enforce destination taxes can significantly alter sales patterns. Specifically, we find that a home-state rate increase lowers cross-state commodity flows less from out of state vendors that are further away because of sellers′ greater ability to evade sales taxes.

The remainder of the paper is divided into six sections. Section 2 provides background on how firms and consumers evade taxes and relates this background to our hypotheses. Section 3 explains the empirical specification that nests tax evasion. We describe the data in Section 4 and provide results and sensitivity tests in Section 5. Section 6 concludes.

2. Sales tax obligations and compliance

In this section we explain who is responsible for paying sales taxes, discuss the limited existing evidence for sales-tax evasion, and identify some ways that evasion (non-compliance) can occur. Given this institutional background, we end this section with intuition for the particular channels of tax evasion that we formally develop and test in the remainder of the paper.

Sales taxes are imposed on final consumption by individual consumers and a wide range of intermediate purchases by individuals or businesses. Business purchases are generally exempt if the goods will be resold or are inputs that become