Methodology for State-by-State Estimates of the Non-Electronic Remote Sales Tax Gap

Issue:

The 2009 Fox, Bruce and Luna study estimated the uncollected use tax resulting from remote sales in electronic commerce. They commented on and estimated the national amount of uncollected use tax resulting from business-to-consumer (B-to-C) non-electronic remote sales. In addition they commented on, but did not estimate, the amount of uncollected use tax resulting from business-to-business (B-to-C) non-electronic remote sales.

Assignment:

Estimate the amount of uncollected use tax resulting from business-to-business non-electronic remote sales and spread the national number provided by Fox, Bruce and Luna from business-to-consumer non-electronic remote sales across the states.

I. B-to-B Non-Electronic Remote Sales

A) Overall Methodology

1) The Washington State Compliance Study estimates of use tax non-compliance by sector were employed to create state-by-state estimates of use tax non-compliance.

a) The measure of use tax in the study represents all B-to-B sales that would be affected by the requirement for vendors to collect remote sales taxes.

b) Adjustments were made to the non-compliance use tax estimates to remove non-remote types of use tax transactions. These transactions are: equipment that is built by the business, in-state dual-purpose purchases by speculative builders, and in-state purchases by businesses that have an agreement to pay use tax instead of sales tax. These adjustments were estimated to be only about 1% of the total use tax non-compliance. But to be conservative, a 5% adjustment was made.

c) An adjustment was made to remove the electronic portion of B-to-B use tax noncompliance, which had already been measured by Fox, Bruce and Luna. The Fox, Bruce and Luna estimate of the electronic B-to-B sales tax gap was subtracted. Based on discussions with Fox, the B-to-B electronic tax gap equaled 31.7% of Washington's total electronic tax gap as reported by Fox, Bruce and Luna. This offset 53.5% of Washington's estimated total use tax noncompliance. The remaining 46.5% of each industry's use tax noncompliance was assumed to be from non-electronic remote sales.

d) It was decided that other adjustments did not have to be made to make the Washington numbers consistent with other states for the following reasons:

i) Nexus – It was decided that using the broadest measure of what constitutes nexus would best represent what states would receive if vendors were collecting remote sales taxes. Because of this, the Washington study is good because Washington's nexus definition is one of the broadest.

ii) Compliance -- Washington has relatively high compliance rates. Since it does not have an income tax, Washington probably puts more efforts into sales and use tax non-compliance. For these two reasons, using the Washington measure of compliance gives a conservative estimate.

B) Applying the Washington non-compliance estimates to other states.

There were three different methodologies for applying the Washington compliance estimates to other states depending on the level of data available from the state. States were surveyed for their use tax data. Only data on use tax paid by businesses was applied; use tax paid by households was removed.

1) For states (13) that provided use tax collections data by industry (the highest level of detail).
    a) Washington adjusted non-compliance rates for each industry were applied. The rates equaled total adjusted non-compliance (see above regarding adjustments) divided by total use tax collections.
    b) The resulting non-electronic B-to-B non-compliance estimates for each industry were summed to give a total.

2) For States (8) that provided total use tax collections without industry breakdowns.
    a) To adjust for state differences in industry mix, Gross State Product for each industry was multiplied by the Washington ratio of use tax to Gross State Product for that industry to yield an estimated use tax for that industry. Because the resulting total differed from the state's actual total use tax, the estimated use tax for each industry was scaled back proportionately.
    b) The Washington adjusted non-compliance rate for each industry was applied to calculate the state's total use tax non-electronic B-to-B non-compliance.

3) For states that did not provide data.
    a) The relationship between the B-to-B non-electronic sales tax losses and the Fox, Bruce and Luna estimates of electronic commerce sales tax losses, for states that provided data, was extrapolated to the remaining states. For the 21 states that did provide data, a weighted ratio of their B-to-B non-electronic remote sales tax losses divided by their total electronic remote sales tax losses (the Fox, Bruce and Luna estimates) was calculated.
    b) This ratio was multiplied by each state's estimate of total electronic remote sales tax losses (the Fox, Bruce and Luna estimates).

C) Growth from 2008 through 2012. A growth rate of 8.88% each year was used. This growth rate came from Bill Fox and was used in the Fox, Bruce and Luna estimate on non-electronic B-to-C estimates. Note that non-electronic remote sales have been growing at a slower growth rate than electronic remote sales.

D) Underlying Assumptions

1) Other states use tax non-compliance rates are assumed to be the same as Washington's. This is a conservative assumption. Washington probably has a higher than average use tax compliance rate because more effort is put into these taxes given Washington's reliance on sales and use tax. Washington also has a higher than average audit presence.

2) The Washington assumption that 95% of business use tax represents business purchases made out-of-state is assumed to apply to other states. This assumption is also thought to be conservative. The 95% assumption for Washington is lower than estimated.

3) It is assumed that non-electronic B-to-B accounts for 46.5% of the estimated total use tax gap in each industry in each state. This is based on Bill Fox's estimate that 31.7% of Washington's e-commerce gap is B-to-B – which offset 53.5% of the estimated total use tax gap in Washington.

4) For states that did not provide use tax data, the underlying assumption is that the relationship between electronic remote sales and non-electronic B-to-B sales is consistent with the average relationship for states that provided data. This assumption seems reasonable for most states. For the states that did provide data, other than a couple of outliers, most had approximately the same ratio.

II. Allocation to individual states of the Fox, Bruce and Luna national B-to-C estimate. Each state's share of the Fox, Bruce and Luna national estimate of the B-to-C non-electronic tax gap was assumed to be the same as that state's share of the Fox, Bruce and Luna national electronic sales tax gap estimate.

Responsible Parties.

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