

## Unavailable Documentation in Sales and Use Tax Audit Statistical Sampling: Comparing the Alternatives



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## Series Objectives

Continue the dialogue among auditors and practitioners from the 2004 and 2006 FTA-MTC Statistical Sampling Conferences.

Audio conferences avoid travel expenses.

Hope to continue this series with presentations on other topics and various speakers.

Series Moderator: John Feldmann

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## Today's Scope

- Limited to problems of Unavailable Documentation in Statistical Sales and Use Tax Audits
    - Focus on statistical sampling of purchases where some but not all items have unavailable documentation.
  - Define issues and suggest alternatives
- I. Presentation by Dr. Roberts & Dr. Yancey
- II. Respond to questions emailed to [john.feldmann@taxadmin.org](mailto:john.feldmann@taxadmin.org) and [will@willyancey.com](mailto:will@willyancey.com)

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## Why Are Documents Unavailable?

- Not retained long enough for sales and use tax audit
- Accounting system change
- Operations people did not provide them to accounting department
- Does the state legislature's statute require records to be kept in a particular format?
  - Yes for sales tax exemption certificates
  - No for most other documentation
- Do taxpayers deliberately withhold documents?
  - How can that be proved?

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## Unavailable for Some Time Periods

Prior to drawing the sample, know the time periods with unavailable records.

- Sample from available Light Period
- Auditor and taxpayer agree how to deal with unavailable Dark Period

After drawing the sample, discover periods with no available records

- Stop and redo the sampling plan
- Apply agreed alternatives for unavailable items as discussed in the rest of this presentation.

[A pilot sample might have discovered the periods with no available records. A pilot sample could be a “walk-through” on one record per month.]

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## Unavailable for Some Items

### 1. Alternative Documentation

Taxpayer to obtain alternative documentation for the item without the standard documentation.

- Contact the vendor for invoice copy.
- Affidavit from operations people.
- Obtain proof of resale
- Look at vendor’s website

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## 2. Infer from Similar Items With Documentation

- Other invoices from same vendor
- Decision rules set in taxpayers use tax accrual system
- Is this a systematic pattern (such as all items from one vendor) or a random non-systematic pattern (such as randomly misfiling documents)?

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## Unavailable for Some Items

### 3. Assume Error against Taxpayer

- Assume taxpayer has burden to prove not taxable or tax was properly paid.
- Motivate taxpayer to find documentation for this item.
- Deter taxpayer from poor record keeping in the future.
- Taxpayers will challenge this alternative.

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## Unavailable for Some Items

### 4. Replace Item with Another Item

- Not statistically sound in a probability sample.
- Important in a probability sample to establish an audited amount for each sample item.
- Underlying principle is that the same audit procedures should be applied to sampled items as would be applied if using a 100% sample.

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### 5. Ignore and reduce sample size

- In this alternative an unavailable item is removed from the sample errors and from the sample base.
  - Also known as removal from the numerator and denominator of the sample error rate.
- Reduces effective sample size.
- Requires verification that missing items are completely randomly distributed in the frame

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## 6. Appropriate Statistical Methods

- Use a weighting scheme
  - Based on available data, form groups of items in which the probability of being missing is equally likely for all group items
  - Use sample proportion of missing items in a group to estimate the probability of being missing
  - Use these as estimates to weight the sample results in forming the estimate of the total

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## Some statistical methods for estimating with missing data

- Use an appropriate imputation scheme for missing items
  - Use available data to model the probability that a missing item is taxable
  - For each missing item use available data to identify a group of similar items in the sample
  - Within each group, use sample data to estimate the probability that the missing item is taxable
  - Use either the expected taxable amount or generate a pseudo-value with the estimated probability

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## Some References

### References

- G. Kalton, *Compensating for Missing Survey Data*, (University of Michigan Institute for Social Research, 1983).
- R. J. A. Little and D. B. Rubin, *Statistical Analysis with Missing Data, Second Edition*, (Wiley, 2002).

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## Questions?

During conference email to  
[john.feldmann@taxadmin.org](mailto:john.feldmann@taxadmin.org) and  
[will@willyancey.com](mailto:will@willyancey.com)

Note: FTA is not providing CPE certificates for this audio conference.

What topics would you like for future audio conferences?

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