A COMPARATIVE ANALYSIS OF
SALES TAX COMPLIANCE COSTS
FOR RETAIL BUSINESSES

EXECUTIVE SUMMARY
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This executive summary presents the major results of a study conducted by Peat Marwick for the Small Business Administration to determine the relative costs of collecting and remitting sales tax for small and large retail businesses. The central questions we addressed are:

- Is the cost of sales tax compliance higher for small retailers than for large retailers and, if so, what is the relative magnitude of the difference?
- What specific cost elements contribute most to differences in compliance costs?
- What are the differences in compliance costs for different types of retailers?
- What aspects of state sales tax laws contribute most to compliance cost differentials between small and large retailers?
- Which states have tax laws that contribute significantly to inequitable tax compliance costs for small retailers?

In conducting the study we used a computer model developed by Peat Marwick for the American Retail Federation. The current study differs from the American Retail Federation study in two ways. First, in this study we concentrated on the cost differences between small and large retailers. Secondly, we did not study particular states beyond the seven in the original study, which would have required an extensive survey of the retail characteristics of the new states. The results presented here are partially based on the characteristics of a "representative state". It is a state...
that has compliance characteristics roughly equal to the composite of the characteristics of the seven states of the original study; namely Arizona, New York, California, Maryland, Pennsylvania, Illinois, and Missouri.

FINDINGS

We present here the major results of our study of the costs of collecting and remitting sales tax for small and large retail businesses.

Compliance Costs Are Higher for Small Retailers

Our results show clearly that small retailers incur significantly higher tax compliance costs than large retailers. The magnitude of the difference varies according to the state tax law characteristics, the state profile of retailers, and the type of retail establishment. The magnitude of the cost differentials, measured as a percent of taxes collected, can be for small retailers as much as three times the cost for large retailers. Major compliance costs for small businesses are for:

- Sales tax filing
- Remittance of tax
- Register collection
- Drawer balance and reconciliation
- Bank deposits
- Office equipment expenses
- Theft insurance
Tax Features Affect Cost Differences

Tax features that significantly affect cost differences are:
- exemption of items from tax
- exemption of purchasers from tax
- frequency of payment and filing.

The more exemptions, the higher the compliance cost for all retailers but the increase is felt more by small retailers. The less frequently payment and filing are required, the lower the cost to all retailers, but small retailer benefit proportionately more than large retailers.

**Cost Differences are not Eliminated With a Uniform Tax Law**

Because small retailers have less opportunity to achieve economies of scale, and have to spread their compliance costs over a smaller collected tax, their compliance costs, as a percent of tax collected, are higher than compliance costs of large retailers even when the tax law is simple, with no exemptions, and is applied uniformly to all firms regardless of size.

Only by allowing small retailers special tax rules and regulations can their compliance costs be reduced to those of large retailers.

**Tax Law Changes Could Reduce Cost Differentials**

Small retailers would benefit from tax law changes. The following actions would reduce the magnitude of compliance cost differentials between small and large retailers.
- reduce exemptions of items
- reduce exemptions of users
- reduce reporting and payment frequency for small retailers.

The first two methods benefit all retailers but they reduce the differential between small and large retailers. Reduced reporting and payment frequency yield substantial savings in compliance costs for two
reasons. Filing and remittance costs are greatly reduced. Additionally, retailers benefit substantially from the use of tax monies collected but not yet remitted. Filing and remitting on a quarterly rather than a monthly basis can reduce total compliance costs by over 40 percent.

**Collection Credits Could Reduce Net Cost Differentials**

Twenty five states offer retailers credits, or rebates, for collecting tax. However, a uniform rate for collection credit would not reduce the cost differential between small and large retailers. If the collection credit is suitably scaled, with higher percentage credits to small retailers, then net compliance cost parity with large retailers can be achieved.

This method does not change actual compliance costs, unlike the lessening of payment and filing requirements for small retailers. It is a transfer payment from the state to compensate retailers for collecting and paying tax.

With minor exceptions, almost all collection credits are applied uniformly for all size retailers. Thus small retailers are generally not compensated, in relation to their costs, as well as large retailers.

**Most State Laws do not Favor Small Retailers**

Our cost results show that any state which imposes the same reporting and payment requirements for small retailers as for large retailers is forcing higher compliance costs onto small retailers. Of 45 states that have sales tax laws, only 7 allow small retailers some form of reduced filing and payment requirements.
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Statements and conclusions herein
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the Small Business Administration.
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I. INTRODUCTION

This report presents the results of a study conducted by Peat Marwick for the Small Business Administration to determine the relative costs of collecting and remitting sales tax for small retail business and large retail businesses. The central questions we addressed are:

- Is the cost of sales tax compliance higher for small retailers than for large retailers and, if so, what is the relative magnitude of the difference?
- What specific cost elements contribute most to differences in compliance costs?
- What are the differences in compliance costs for different types of retailers?
- What aspects of state sales tax laws contribute most to compliance cost differentials between small and large retailers?
- Which states have tax laws that contribute significantly to inequitable tax compliance costs for small retailers?

In conducting the study we used a computer model developed by Peat Marwick for the American Retail Federation. That model and the results of a seven state cost comparison are described in "Costs to Retailers of Sales and Use Tax Compliance". An appendix to that report "Summary of Tax Features by State" describes the sales tax laws in all states. These reports are available from the American Retail Federation, 1616 H Street NW, Washington, DC.

The current study differs from the American Retail Federation study in two ways. First, we concentrated on the cost differences between small and large retailers. Secondly, we did not study particular states beyond the
seven in the original study, which would have required an extensive survey of the retail characteristics of additional states. The results presented here are partially based on the characteristics of a "representative state". It is a state that has characteristics roughly equal to the average of the characteristics of the seven states of the original study; namely Arizona, New York, California, Maryland, Pennsylvania, Illinois, and Missouri.

The next section describes the cost model and the cost data used to calculate the results.

The results of our study including detailed cost comparisons are given in Section III. We discuss the current state of state sales tax laws in Section IV and offer our suggestions for the elimination of cost inequities in Section V.
II. THE COST MODEL

We present here a description of the cost model and the cost data which were used to calculate sales tax compliance costs.

A. Cost Elements

The cost elements considered by the model are those activities and equipment investments that are quantitatively related to the collection and remittance of sales tax.

Item identification. When a retail department includes both taxable and nontaxable items, each item must be separately identified at the point of sale as either taxable or nontaxable. For retail departments equipped with sophisticated point-of-sale registers, this task is no problem; however, for other departments this sorting task can be a large one. Retailers incur this incremental cost for sorting items because some items are exempt from tax. If all items were taxable at the same rate item identification cost would be zero.

Purchaser identification. Since the burden of proof for tax exemptions is generally on the retailer, the company must maintain sufficient records to supply this proof. If the documentation is insufficient, the retailer may be forced to remit sales tax which was never collected. The retailer incurs costs for obtaining proper documentation from certain tax-exempt classes of purchasers because these exemptions exist. For simplification, we considered end-use purchaser exemptions, such as feed grain for farmers, to be purchaser exemptions.
Tax calculations. The existence of a sales tax requires cashiers to make additional calculations, one for the tax itself, the other for either the taxable subtotal or the after-tax total. If the department sells only tax-exempt items, then the cashier need make no additional calculations. If the department sells only taxable items, then the taxable subtotal takes the place of the normal total, and only the calculation of the tax and the after-tax total are additional. If the department sells both taxable and tax-exempt items, then the taxable subtotal and the calculation of the tax are additional.

POS equipment. Costs for POS (Point of Sale) equipment include: depreciation and carrying costs for purchased machines or the rent for leased ones, and either the maintenance cost for those maintained or the service contract cost of those covered. We allocated a portion of this equipment cost to tax compliance based on the percentage of its use for calculating sales tax. The contention by some retailers that the incremental cost of equipment due to sales tax is greater than the incremental use cannot be substantiated either by us or POS equipment vendors.

POS programming. POS equipment must be specially programmed to differentiate between taxable and nontaxable departments or to calculate the tax and tax-related totals. In a department selling only taxable goods, the POS software must only calculate the tax and the after-tax total, and keep records of taxable sales. In a department selling both taxable and nontaxable goods, POS programming must differentiate taxable and nontaxable
items, as well as perform the other functions. We did not consider departments selling only nontaxable goods to have any sales-tax-related POS programming costs.

Office equipment (and supplies). The costs for office equipment used in preparing sales tax related reports and filings were allocated to compliance, based on percent of use for tax purposes. Although retailers did not specifically identify the cost of supplies devoted to sales tax in the questionnaire, where costs attributable to sales tax were identified they were included with office equipment costs. One example of cost of supplies is postage for filings.

Computer use. Retailers are using computers for recordkeeping and report writing with increasing frequency. Where survey respondents could identify specific sales-tax-related computer projects or data processing department budget items, we attributed these costs to sales tax.

Computer programming. In general, we treated programming costs similarly to use. However, we attributed a portion of data entry time to sales tax compliance based on incremental time required.

Training costs. We have attributed to compliance, based on the incremental time spent on sales tax, the cost of training personnel in complying with sales and use tax regulations. Training costs included the time for both the instructor and the trainee as well as specific sales-tax-related materials.

Collections at registers. The time taken to collect cash from registers depends on the volume of cash. The time attributable to sales tax compliance is the incremental time needed to collect the increased volume of cash due to sales tax.
Drawer balancing or reconciliation. The time taken for drawer balancing also increases with the volume of cash. For the portion of drawer balancing which requires handling the cash, we attributed to sales tax compliance the incremental time associated with the additional volume of cash due to sales tax.

Bank deposit. For the portion of time spent depositing the receipts in the bank (related to the volume of cash), we attributed to compliance the incremental time for handling the additional cash.

Store reports. The time needed to complete the tax-related lines on a retailer's store report is attributable to sales tax.

Processing store reports. The same consideration as above applies to processing store reports at the central office.

Sales tax filings. Costs for completing a sales tax return are entirely attributable to the existence of a sales tax, but depend on the frequency of the filing.

Remitting tax to state. Same as above.

Internal audit. Costs for time spent by internal auditors reviewing sales tax information is attributable to sales tax.

External audit. Those costs for an external audit related to reviewing sales tax information are attributable to sales tax.

State audit assist. We have amortized over the expected time between audits costs for time spent by retailer personnel assisting state auditors, these costs being entirely attributable to state sales and use tax compliance.
Use of funds. Sales tax monies collected but not yet remitted to the state can be used by retailers to offset other borrowing or be invested. The interest gained (or not paid) by the retailer offsets other costs the company incurs for compliance.

Other administration. The time other retail company personnel spend supervising or in some other manner administering sales tax-related activities, is attributed to compliance based on special projects costs, department budgets, etc.

Losses related to cash theft. We attributed to sales tax collection the incremental portion of net cash theft (cash theft after insurance recovery) added by sales tax.

Insurance against cash theft. The cost of insuring cash increases with the volume of cash. The incremental insurance premium for the incremental cash from sales tax is attributable to compliance.

Security against cash theft. Same as above.

Bad debt. Bad debt costs increase with the volume of credit sales. The incremental amount of bad debt for sales tax is attributable to compliance.

Service charges on credit. Major credit card services charge the retailer a percentage based on the total bill. The retailer, therefore, pays a service charge on the sales tax.

Store Credit. Where the retail company has its own credit card, the delay between purchase and reimbursement can be substantial. Generally, if the customer pays on time and in full, no finance charge is assessed. The retailer is therefore financing the outlay, which includes sales tax. The interest on the additional amount financed is attributable to compliance.
B. Cost Categorization

We categorized the cost elements into one or more of the following "compliance elements":

1. Collection - the actual collection of sales tax monies at point of sale
2. Reporting - the recording and reporting of sales tax information
3. Payment - the remittance of sales tax monies to the state and the handling of these monies between payments
4. Auditing - the reviewing of sales tax information by internal, external, or state auditors
5. Miscellaneous Other - administration and other costs not assignable to the above classifications

The cost elements are categorized in compliance elements as follows:

- **Collection**
  - Item identification
  - Purchase identification
  - Tax calculations
  - POS programming
  - POS equipment
  - Training of sales personnel
  - Collections at registers
  - Drawer balancing
  - Bank deposits
  - Losses related to cash theft
  - Insurance versus cash theft
  - Security versus cash theft
  - Bad debt
  - Service charges on credit
  - Store credit

- **Reporting**
  - Office equipment (& supplies)
  - Computer use
  - Computer programming (& data entry)
  - Training of other personnel
  - Store reports
  - Processing store reports
  - Sales tax filings
o Payment
  - Remitting tax to state
  - Use of funds

o Auditing
  - Internal audits
  - External audits
  - State audit assist

o Miscellaneous other
  - Other administration

C. Costs Not Attributed to Sales and Use Tax

Retailers incur some tax-related costs that we did not include in our cost summaries, either because they are sporadic expenses or are part of a firm's fixed costs.

**Extraordinary Expenses.** During the study, retailers reported details of one-time, extraordinary costs associated with changing their method of accounting for sales taxes. These costs arose directly from compliance with sales tax regulations, but were not regular, annual expenses. For example:

1. Reclassification of departments in all stores of a multistore operation as taxable or nontaxable.

2. Design and implementation of a sophisticated inventory tracking system to allow assessment of sales and use tax on inventory movement rather than cash register tapes.

3. Litigation expenses from a sales tax case.

To preserve the substantive results of this study, we excluded these costs from the cost summaries.

**Costs Related to Changes in Tax Laws.** Participating retailers also reported expenses incurred due to occasional changes in the tax laws. These costs include increased POS programming, retraining of cashiers and
bookkeepers and computer programming for new reports. These costs are attributable to sales tax compliance, but at sporadic, unpredictable intervals, which vary state by state. Since they are not part of the regular, ongoing compliance costs, we did not include them in our study. These costs would be an appropriate subject of a further study.

**Other Costs Not Quantified.** In addition to the extraordinary expenses and the costs associated with changes in the tax laws, we excluded other costs from our study. These are costs that, although related to sales tax compliance, represent fixed costs for the firm that are invariable for the immediate future. The presence or absence of a sales tax makes little difference for these costs, and they are thus not considered attributable to the tax. These include:

- Building or space rent
- Utilities
- Check-handling costs
- Lost sales due to longer, slower checkout lines
- General overhead

**D. Impact of Tax Features on Cost**

Some costs of compliance can be attributed to specific tax features, such as exemptions by class of purchaser. Retailers incur other costs solely because sales tax regulations exist, and still others arise from a combination of tax features. We have attempted to assign costs to specific tax features where possible. These costs do not represent the total cost of a specific tax feature but rather a lower bound. The tax features are:
**Existence.** We defined these costs to be those associated with functions and operations basic to the compliance with state sales tax laws and not with any specific feature of the law. Cost elements are:

- Tax calculations (those costs not previously accounted for in exemptions)
- POS equipment
- POS programming (those costs not previously accounted for in exemptions)
- Office equipment and supplies
- Computer use
- Computer programming
- Collections at registers
- Drawer balancing
- Bank deposits
- Store reports
- Processing of store reports
- Sales tax filings (costs for filing once per year per firm)
- Remitting tax to state (costs for remitting once per year per firm)
- Internal audit
- External audit
- Other administration
- Losses related to cash theft
- Insurance versus cash theft
- Security versus cash theft
- Bad debt
- Service charges on credit
- Store credit costs

**Exemptions by class of item.** Retailers incur these costs for differentiating between taxable and nontaxable items. Cost elements are:

- Item identification
- Tax calculations (the portion for calculating the taxable subtotal in mixed departments)
- POS programming (the portion related to mixed departments is considered largely due to the differentiation of items)

**Exemptions by class of purchaser.** These costs arise from purchases of taxable goods by customers with tax-exempt status. Cost elements are:

- Purchaser identification
- Tax calculations (the portion for calculations avoided due to tax-exempt status of purchaser. This is a credit, not a cost.)
Note: For these categories, the incremental costs for reporting and auditing exemptions could not be determined.

- **Frequency.** We defined the costs associated with frequency as those costs arising from either the frequency of a required function or the increased frequency of this function above a minimum. Cost elements are:

  - **Sales tax filings.** The existence of a sales tax law means that a retailer must file a minimum of once a year. We considered that portion of the cost related to existence. Tax law characteristics that require a retailer to file more than once a year or provide a level of disaggregation not normal for the operation of the firm create extra expense for the retailer. This cost is attributable to the tax feature "frequency."
  - **Remitting tax monies to state (same as filings).**
  - **State audit assistance.** All costs associated with a state audit are included under "frequency" since we could not arbitrarily assign a minimum number of audits. The costs shown are therefore the costs incurred with the current frequency of audits.
  - **Use of funds.** The interest credited to the use of funds between remittances arises from the frequency of payments.

- **Other not attributable.** Costs that could not be attributed to either the existence of sales tax or a specific tax feature were summarized as "other costs, not attributable"; such costs are:

  - Training of sales personnel
  - Training of other personnel.

**E. Sources of Cost Data**

We collected cost data using both a telephone questionnaire and an on-site questionnaire completed at retail stores by our consultants. The information obtained from the telephone survey included both objective and subjective estimates. To eliminate dependence on retailer-supplied subjective estimates, the on-site survey obtained independent, objective time measures. Our consultants applied a predetermined time standard method, MODAPTS (Modular Arrangement of Predetermined Time Standards), to
procedures performed by retailer personnel. Examples of information requiring independent time standards include: time to identify and enter taxability status of item, time to perform cash collection at register, and time to complete tax portion of store report.

Some classes of information did not require independent verification. These include: type and quantity of registers, transaction frequencies, and sales. Examples of subjective estimates not verified include: amount of training time related to sales tax, amount of POS programming related to sales tax, and portion of computer use related to sales tax. Developing independent time measures for comparison and cross-verification with retailer-supplied information was part of the conservative approach taken by the study team.

Retailer Profile

The retailer profile describes characteristics of the retailer population in the seven selected states, based on retailer size and type. We broke down the retailers within the profile to create retailer groups that have similar cost parameters. Costs measured at the sample firms in the telephone and on-site surveys were extrapolated to the State's retailer population as a whole based on the retailer profile.

Profile Elements

The profile contains three descriptive elements:

- gross retail sales -- by primary business type and firm size, within each state;

- number of establishments (individual stores) -- by primary business type and size of firm to which establishments belong, within each state; and

- number of firms -- by primary business type and size within each state.
Business Type

We grouped the selected types of businesses examined in the study by their major two or three-digit Standard Industrial Classification (SIC) code. From secondary research, later confirmed by the study results, we hypothesized that variations in type of business affect compliance cost parameters, because of differing relevant exemptions, differing labor costs, differing equipment, etc. The types of businesses and their primary SIC codes included in the retailer profile are:

- SIC 52: Building materials, hardware, garden supply, and mobile home dealers, including
  - Building materials and supply stores
  - Lumber and other building materials dealers
  - Paint, glass, and wallpaper stores
  - Hardware stores
  - Retail nurseries, lawn and garden supply stores
  - Mobile home dealers

- SIC 53: General merchandise group stores, including
  - Department stores
  - Variety stores
  - Miscellaneous general merchandise stores

- SIC 54: Food stores, including
  - Grocery stores
  - Meat and fish (seafood) markets, including freezer provisioners
  - Fruit stores and vegetable markets
  - Candy, nut and confectionery stores
  - Retail bakeries
  - Dairy products stores, and
  - Miscellaneous food stores

- SIC 56: Apparel and accessory stores, including
  - Men's and boys' clothing and furnishing stores
  - Women's ready-to-wear stores
  - Women's accessory and specialty stores, furriers
  - Family clothing stores
  - Shoe stores
  - Men's shoe stores
  - Children's and infants' wear stores
  - Miscellaneous apparel and accessory stores
SIC 57: Furniture, home furnishings and equipment stores, including
- Furniture stores
- Floor covering stores
- Drapery, curtain, and upholstery stores
- Miscellaneous home furnishing stores
- Household appliance stores
- Radio and television stores
- Record shops
- Musical instrument stores

SIC 591: Drug and proprietary stores
- Drug stores
- Proprietary stores

SIC 59 (excepting 591): Miscellaneous retail stores, excluding drug and proprietary stores, including
- Liquor stores
- Used merchandise stores
- Sporting goods stores and bicycle shops
- Book stores
- Stationery stores
- Jewelry stores
- Hobby, toy and game shops
- Camera and photographic supply stores
- Gift, novelty, and souvenir shops
- Luggage and leather goods stores
- Sewing, needlework, and piece goods stores
- Nonstore retailers
- Fuel and ice dealers
- Florists
- Cigar stores and stands
- News dealers and newsstands
- Pet shops
- Typewriter stores
- Optical goods stores
- Other miscellaneous retail stores

Not included in the scope of the model are two business types:

Automotive dealers and Gasoline Service Stations, including
- Motor vehicle dealers-new and used cars
- Motor vehicle dealers-used cars only
- Tire, battery, and accessory dealers
- Other auto and home supply stores
- Boat dealers
- Recreational and utility trailer dealers
- Motorcycle dealers
- Other automotive dealers
- Gasoline service stations
Eating and drinking places
- Restaurants and lunchrooms
- Cafeterias
- Refreshment places
- Other eating places
- Drinking places (alcoholic beverages)

Size Groups

All retailers were grouped into three firm sizes by annual sales volume as follows:

- Gross sales of $1 million or less
- Gross sales greater than $1 million but less than $10 million
- Gross sales greater than $10 million

This grouping reflects in part Peat Marwick's experience in retailing as well as secondary research indicating that compliance costs differ with firm size. The group ranges were chosen to maximize differences among groups while maintaining a sufficiently broad internal range to assure that individual firm differences were not taken as systematic.

The smallest size group represents "Mom and Pop" stores, which typically use more manual equipment and more owner labor, and have limited opportunities for efficiencies of scale. The mid-size group operates with efficiencies of operations somewhere between the two end groups. Some of these firms are multi-unit. The third size group covers the largest firms, many of which are multi-unit and many with individual establishments numbering in the hundreds and thousands. These stores typically use more sophisticated equipment and have the sales volume to justify employing specialized staffs and equipment to perform tasks such as bookkeeping, distribution, and data processing.
Based on our retail experience and on the results of previous studies, we also assumed that size has differing effects on different business types. For example, compliance costs for small grocery stores will differ more from large supermarkets than those for small clothing stores do from large clothing stores. For this reason, we used a matrix of size groupings within each business type in the retailer profile.

Sources of Data

Two main data sources were used in constructing the retailer profile:

- United States Department of Commerce, Retail Census Office, published census publications and unpublished yearly surveys gathered through telephone interviews
- Dun's Marketing Survey, an unpublished 1981 data base of retail firms nationwide which arrayed:
  - number and sales for firms operating in each state by size group an SIC code; and
  - number of branches (stores not associated with a firm headquarters) in each state by SIC code.

Methodology for Calculations

No single data source provided direct information for the retailer profile. We used the following methods in deriving the information for each item of the profile:

Gross sales. For six of the seven selected states the U.S. Department of Commerce reported 1981 gross retail sales by SIC code. For the seventh -- Arizona -- no current figures exist categorized by SIC code, so we used the 1977 U.S. Department of Census Retail Census figures. We adjusted the 1977 data for Arizona to 1981 dollars using appropriate Consumer Price Index components for each SIC code.
We then allocated the SIC-total figures for all seven states to the three firm size categories using proportions from an approximation of sales by firm size (whose SIC totals were less reliable). We arrived at this approximation by applying the average firm size for each size group and SIC group for all states (from Dun's Marketing Survey) to the number of firms per size group in each SIC code for each state (also from Dun's Marketing Survey).

Number of establishments. The Dun's survey also lists the number of firms headquartered in each state by SIC code and by size group. We assumed that each firm is associated with at least one establishment, i.e., store. The survey also supplied, by SIC code for each state, the number of branch stores, i.e., establishments associated with firms with more than one establishment (no matter where that firm is headquartered). In distributing these branches by size group, we assumed, on average, approximately one-third of these branches represent firms in the medium range and the rest of the branches were associated with firms in the largest group.

Number of firms. The Dun's survey directly listed the number of firms operating in each state by size group for each SIC code.

Telephone Survey

The primary data in the study came from a telephone survey of eighty retailers combined with on-site measurement of time and cost factors. Our emphasis in designing and carrying out the telephone survey was on developing methods to ensure that we collected reliable data. To that end, we assembled a lengthy and detailed questionnaire, structured to parallel the cost model, which facilitated a refined breakdown of the various cost elements.
On the questionnaire we asked retailers for very detailed operating information. The participating retailers were required to collect a good deal of information in advance.

**Sample Selection**

The retail trade associations in each of the seven selected states supplied lists of retailers for the size ranges and business types addressed by the study. In keeping with the study scope, only retail firms were considered, excluding those non-retail firms which report nominal retail sales. From these lists, we selected a total of nearly three hundred firms in the three size groups and seven business type classifications to receive the questionnaire. A total of eighty firms actually completed the survey, representing a sample with the following seven-state statistical profile:

- 2,622 individual operating units
- $14.488 billion in 1981 gross sales

**Telephone Survey Approach**

Questionnaires were mailed to nearly three hundred retailers with an explanation of what the Federation was seeking to accomplish. About a week later, Peat Marwick contacted each retail firm to verify that it received the questionnaire and determine if the manager had been able to review it. At that point, we set a telephone appointment for a time to go through the entire questionnaire. In most cases, it took that call plus one or more call-backs to complete the questionnaire. The complexity of the questionnaire eliminated many retailers who had neither the inclination nor the ability to complete it properly. Beyond that, we actively discouraged
those who were less than fully committed to participating in the study, to
ensure that we received only carefully collected data.

This double screening of prospective respondents left us with eighty who
expended significant effort in the process. A number of retailers spent
several man-days gathering the questionnaire data, and some spent up to a
week or more.

While the task was greatest for the major retailers, who have more
complex operations and voluminous data, it was actually most burdensome for
the small independent operators whose resources and staff are severely
limited.

Despite the complexity of the questionnaire and the need for full
commitment, we were able to obtain a participation rate of 30 percent of
retailers on the mailing list.

**Verification of Data**

We checked the survey data for internal consistency: data for a store
had to be reasonable in light of other data for the same store and the same
class of data for other stores. The process of taking the data over the
phone - more active than a passive mail survey - allowed continuous
questioning and instant verification. Also, we continually used the results
of the on-site survey to verify telephone survey data. When we completed
this phase of the survey, the data were consolidated, entered into the
computer model data base, again checked for reasonableness, and
cross-verified where appropriate. In addition, our data review incorporated
a sensitivity analysis so that the more critical data components were
rigorously examined to ensure the validity of the results.
On-Site Survey

While the telephone survey defined a number of the cost elements that comprise the cost model, the on-site survey provided scientific measurement of the key activities so that precise costs could be assigned.

Sample Selection

In the two states selected for the on-site survey, California and Washington, we identified eighteen firms for on-site cost measurement studies. We structured the sample selection to be representative of individual tax compliance cost elements rather than retailer types. Since the on-site survey measured time for all the cost elements identified in the telephone survey, it was critical for the on-site survey sample to include firms that cover all cost elements. We chose a set of retailer size and SIC types meeting this criterion, using the telephone survey data. This set served as the pool from which we selected the retailer sample for on-site measurement.

On-Site Survey Approach

The technique we employed in measuring the physical operations involved in sales tax compliance is called MODAPTS (Modular Arrangement of Predetermined Time Standards). MODAPTS breaks down any given activity into its smallest components and assigns a predetermined time value to each, based on the basic MOD unit of .129 seconds. For example, taking something from a drawer might consist of: reaching for the drawer, grabbing the handle, pulling the drawer out, releasing the handle, reaching into the file, selecting a file, etc.
When used by trained industrial engineers, MODAPTS is much more effective than stopwatch time-and-motion studies. Part of the reason for this is that the potential for a significant overall error is minimal given the limited impact of each component on the net result. Also, the predetermined time values are rooted in a sample reflecting thousands of observations so that the information base is far more accurate than could likely be attained in any individual study using the classical time measurement techniques. Lastly, the validity of the study results reflects both the non-subjective nature of the technique and conservative calculation of tax-related activity times, which purposefully exclude the standard time allowances for pace rating, wasted time and other inefficiencies. (It should be noted that the MODAPTS predetermined time values reflect task times for a person trained in the operation, familiar with it and operating at a normal pace.)

**Modapts Calculation Example**

The following pages illustrate how MODAPTS was used to measure one of the cost elements in the study. The two pages of Analysis Sheets break down a credit card transaction, enabling identification and calculation of time required for tax-related operations. The analysis sheets identify forty-one non-tax-related components and nine tax-related components in a credit card transaction where the cashier looks up the tax manually. The total number of MOD units for tax-related activities, shown on the second page, is 95 which when multiplied by the time conversion factor equals 12.26 seconds per transaction for tax-related operations.
## MODAPTS ANALYSIS SHEET

### Department

**Operation Type:** VISA CREDIT CARD TRANSACTION

### Operation

#### Non-Tax Related Operations
1. Decision - Credit Card Required
2. Ask Customer for Credit Card
3. Reach for Credit Card
4. Grasp Card
5. Move Card to Credit Card Stamping Machine
6. Place Card in Machine
7. Move Eyes to Credit Card Form
8. Reach for Credit Card Form
9. Grasp Credit Card Form
10. Move Credit Card Form to Stamping Machine
11. Place Form in Machine
12. Move Hand to Machine Lever
13. Grasp Lever
14. Push Lever to Close Position
15. Return Lever to Open Position
16. Move Hand to Form and Card
17. Grasp Both Form and Card
18. Return Card to Customer
19. Focus and Verify Card Print on Form
20. Move Form to Table
21. Move Eyes to Pen
22. Move Hand to Pen
23. Grasp Pen
24. Move Pen to Form on Table
25. Move Eyes to Price Tag
26. Focus and Read Price Tag
27. Move Eyes to Credit Form
28. Move Pen to First Line on Form
29. Write Item Description
30. Write Item Price

#### Tax Related Operation

- Move Eyes to Tax Chart
- Focus Eyes on Tax Chart
- Scan Chart for Tax Line
- Read Tax Amount

### Set By:

### Date:

### Total MOD Units

### Remarks:

---

**ADD OTHER ALLOWANCES**

**ADD REST ALLOWANCES**

**MULTIPLY BY 0.129**

**FOR NORMAL SECONDS**

**PREVIOUS STANDARD CANCELLED:**

**DEPARTMENT**

**PRODUCT**
<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CODE</th>
<th>FREQUENCY</th>
<th>MOD UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>35. MOVE EYES TO SALES SLIP</td>
<td>RE 2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>36. MOVE PEN TO CORRECT TAX LINE</td>
<td>M 3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>37. WRITE IN TAX AMOUNT (3 DIGITS)</td>
<td>M 3</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>38. ADD ITEM PRICE AND TAX</td>
<td>7 RH</td>
<td>1</td>
<td>35</td>
</tr>
<tr>
<td>39. WRITE TOTAL ON FORM</td>
<td>5 WC 5</td>
<td>1</td>
<td>25</td>
</tr>
</tbody>
</table>

NON-TAX RELATED OPERATION

<table>
<thead>
<tr>
<th>OPERATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>40. MOVE HAND TO FORM</td>
</tr>
<tr>
<td>41. GRASP FORM</td>
</tr>
<tr>
<td>42. ROTATE FORM TO FACE CUSTOMER</td>
</tr>
<tr>
<td>43. WAIT FOR CUSTOMER TO:</td>
</tr>
<tr>
<td>- MOVE HAND TO PEN</td>
</tr>
<tr>
<td>- GRASP PEN</td>
</tr>
<tr>
<td>- MOVE PEN TO FORM</td>
</tr>
<tr>
<td>- VERIFY TOTAL</td>
</tr>
<tr>
<td>- WRITE SIGNATURE</td>
</tr>
<tr>
<td>44. CLERK MOVES HAND TO FORM</td>
</tr>
<tr>
<td>45. GRASPS FORM</td>
</tr>
<tr>
<td>46. MOVES FORM TO TEARING POSITION</td>
</tr>
<tr>
<td>47. GRASPS FORM WITH SECOND HAND</td>
</tr>
<tr>
<td>48. TEARS OFF CUSTOMER RECEIPT</td>
</tr>
<tr>
<td>49. MOVES RECEIPT TO CUSTOMER</td>
</tr>
<tr>
<td>50. MOVES STORE COPY TO BIN</td>
</tr>
</tbody>
</table>

SET BY: [Sign]                                     |
DATE: [Date]                                      |
TOTAL MOD UNITS: 95                               |
PREVIOUS STANDARD CANCELLED:                      |
MULTIPLY BY 0.129                                  |
FOR NORMAL SECONDS                                |
ADD REST ALLOWANCES %                             |
ADD OTHER ALLOWANCES
Use of On-site Data

In the on-site survey of stores in the states of California and Washington, we used MODAPTS to calculate labor times for the following tax-related activities:

- Operating the cash register where tax is computed automatically after entering one or more keys, and when tax is calculated manually
- Manually completing sales slips
- Handling returns
- Removing and counting cash
- Counting and reconciling cash drawer
- Preparing bank deposit
- Determining tax status of an item
- Handling tax-exempt purchasers
- Creating and processing the daily store report
- Filing state tax returns.

For those operations dealing with cash and checks, the on-site survey calculated the average number of checks, bills, and coins per $100 of sales to standardize the time measurement.

The on-site survey thus objectively and accurately measured activities that could not be quantified in the telephone survey or that could only be subjectively estimated, even by experienced retail operations personnel. The cost data was input into the computer model, reviewed for reasonableness, and cross-verified where appropriate.
**Development and Use of Computer Model**

Calculating the cost of compliance for a given state involves extrapolating the costs of retailers surveyed to the population of retailers in the state. To accomplish this task, the model uses over thirty elementary cost equations involving over one hundred parameters, and for each parameter a separate estimate for each of the seven SIC types and three sizes of retailers.

To handle the volume of data and calculations required by the study, we used two auxiliary computer programs as well as the computerized cost model. We designed the auxiliary programs specifically to handle compliance cost data and interface with each other as well as with the computer model. The first program allows data entry of questionnaire information, calculates eighty-three different compliance-cost related parameters for the surveyed firm, and stores the information in a manner the succeeding program can use. The second program, the survey parameter data base, performs statistical analyses on each of the firm survey parameters and compiles and stores the data by state, by size of retailer, and by SIC. These parameters are relationships between costs and either retail or tax feature data.

The computerized cost model calculates the costs for each of the elementary cost equations one at a time, obtaining the necessary data from the survey parameter data base, the retail data base, the tax feature data base, and the on-site parameter data base.

The computerized model supplies three levels of report. The first presents the cost of each compliance element for the state with a partial breakdown by tax feature; the second reports the cost of compliance for each
of the twenty-one SIC types/size groups of retailer combinations; and the third provides the cost of each compliance element for each of the SIC types. These reports allow a retail firm to identify its total cost, the relative cost of compliance elements for retailers in the same SIC, and the relative cost of tax features for the state.
III. RESULTS OF THE STUDY

In this section we present detailed compliance cost comparisons. We designed a set of five different model scenarios to investigate the behavior of compliance costs for large and small retailers.

A. Description of Model Scenarios

To easily identify the different scenarios we assigned each a short descriptive name. All scenarios are based on specific changes relative to a standard case called the Base Case. The reader is referred to Table IV for a description of state tax laws.

Base Case

The base case represents a state tax law that is very straightforward, with all tax law features applied equally to small and large retailers. We use the base case to investigate the cost effects of tax law changes.

The base case assumes a tax rate of 4 percent. All items are taxable and no purchasers are exempt from paying tax. The retail profile, the size and numerical distribution of firms, in the base case state is an average mix based on the results of the study for the American Retail Federation.

In the base case, the frequency of filing and remitting taxes is monthly for all firms, a very common feature of tax laws in the 45 states that have retail sales tax. No local taxes are collected by retailers in the base case state.

The cost and allocation parameters used for the base case are the average cost and allocation parameters formed in the American Retail Federation study. These include:
the times required for performing tax related check out tasks,
the costs for POS equipment and computers,
the times required for drawer balancing and preparing store reports,
the costs of internal and external audits,
the costs of cash theft, insurance, and security,
the cost of bad debt,
the service charge costs on credit cards,
the mix of POS electronic, manual, and semi manual equipment.

The cost of money in the base case and in all other model scenarios is 10 percent per annum.

Frequency

The "frequency" scenario is the same as the base case with one exception. The frequency of filing and remitting is quarterly for small businesses (less than $1 million sales) and is monthly for medium retailers ($1 million to $10 million sales) and large retailers (greater than $10 million sales). Five states, California, Kansas, Massachusetts, New York and Texas, currently have this reporting and filing frequency.

Exempt Users

The "exempt users" case is the same as the base case with one exception. It is assumed that 4.6 percent of purchasers are exempt from paying tax. Such exemptions are often given to clergy, governmental agencies and other types of purchasers. The 4.6 percentage value is an average from the states studied for the American Retail Federation.
Exempt Items

This case is the same as the base case with the exception that 17.3 percent of the items sold are exempt from tax. Many states, for example, exclude prescription drugs, food, and out of state sales from sales tax. The 17.3 percent value is the average from the study for the American Retail Federation.

When items are exempt from tax, the retailer must decide how the departments in the store shall be arranged. The model represents three kinds of departments:

- departments with all items taxable
- departments with no items taxable
- departments which are mixed, some taxable and some non-taxable items

For the exempt items model run the following values, taken from the American Retail Federation study, were used

<table>
<thead>
<tr>
<th>Percent of Departments by Category</th>
<th>All Taxable</th>
<th>No Taxable</th>
<th>Mixed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Retailers</td>
<td>80</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Medium Retailers</td>
<td>80</td>
<td>17.5</td>
<td>.5</td>
</tr>
<tr>
<td>Large Retailers</td>
<td>96</td>
<td>2.5</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Representative

The "representative" case is a combination of the exempt user and exempt item cases. It is the same as the base case except that

- 4.6 percent of purchasers are exempt from tax
- 17.3 percent of items are exempt from tax
- firms collect local taxes
- the departmental mix is the same as for the exempt items case
The collection of local taxes has practically no effect on the compliance cost of small retailers and very little on the cost of larger retailers. The only additional requirement is that larger firms with multiple locations report their sales tax by tax entity (city, county, etc.) so the state can transmit the local taxes to the proper local authority. The denominator of the cost measure, total taxes collected, does not change as it does not include any local taxes.

B. Compliance Cost Element Comparisons

The cost results are described in Tables III.1 through III.6. All costs in these tables are given as a percentage of the tax collected. This allows a comparison of compliance costs to the tax credits or collection fees allowed by many states in the form of a percentage allowance. Values of zero in these tables mean the cost is less than .0005 percent.

The tax collected, the denominator of the cost percentage, is defined as total taxable sales times the state sales tax rate. As the number of exempt items and exempt purchases goes up the tax collected goes down. This tends to significantly increase the compliance cost percentage because the numerator, total cost of collection, increases as exemptions increase while the denominator decreases.

It should be noted that the tax rate has a significant effect on the compliance cost percentage. If a state's tax rate is doubled and compliance
costs remain exactly the same, the compliance cost percentage will be halved.

The results in Table III. 1 show that for all five scenarios the total compliance costs for small retailers are higher, on a percentage basis, than the costs for medium and large retailers.

For all cases, except the frequency case, the total compliance cost for small retailers is more than twice the total cost for medium retailers and more than three times the total cost for large retailers.

**Major Cost Differences**

The specific cost elements that contribute most to the differences in costs between small and larger retailers are:

- Office equipment expense
- Register collections
- Drawer balance and reconciliations
- Bank deposits
- Sales tax filing
- Remittance of tax
- Other administration
- Theft insurance

Generally, all of these cost elements exhibit economies of scale. Large retailers are able to achieve efficiencies in these compliance costs because they are able to spread the costs of these activities over a much greater collected tax volume. For example, making a bank deposit of $4,000 does not cost ten times as much as depositing $40,000. The activity cost as a percentage of dollars deposited is substantially smaller for the large depositor.
Another factor in these cost element differences is that the degree of automation and use of sophisticated POS equipment achieved by medium and large retailers far exceeds that of small retailers.

Small retailers have lower compliance costs than larger retailers for the following cost elements.
  o Computer usage
  o Internal audit
  o Theft security
  o Bad debt
  o Store credit.

The latter two elements have a lower cost for small retailers because small retailers grant less credit. They spend less on computers, spend less time on internal audits, and pay less for theft security than larger retailers. Many small retailers do not hire special theft security personnel.

Compliance Category Results

Table III.3 groups the cost elements into five compliance categories. It shows that collection activities contribute most to the total cost. The payments category is a negative cost, or benefit, for all model scenarios. This is because it includes the use of funds by retailers after tax is collected and before it is paid to the state. Table III.4 shows the cost changes relative to the base case for compliance categories.

Tax Feature Results

Table III.5 shows compliance cost elements assigned into categories related to tax features. Here it is seen that "existance" is by far the
major compliance cost. Existence, as described in Section II, means costs incurred as a result of having a law, without exemptions and excluding the use of funds.

The other major cost effects for tax features are caused by exemptions and the frequency of filing and remittance. Table III.6 shows cost changes relative to the base case for tax features.

C. Results of the Different Scenarios

The Base Case Results

The base case results show that large retailers have lower compliance costs than small retailers. Examining Table III it is seen that reporting costs for small retailers are ten times greater than reporting costs for large retailers. Collection costs, which are the largest compliance cost category, are almost twice as large for small retailers as for large retailers.

Table III.1 shows detail cost element differences. Table III.7 shows costs as a percent of total costs. One of the major cost element differences between small and large retailers is for filing sales tax returns. For small retailers this compliance element costs .951 percent of tax collected. This is 28 percent of small retailers total compliance costs. Large retailers have 2.7 percent in the cost of this compliance element, which represents only three percent of their total compliance cost. This large difference shows that filing tax returns is a very significant cost element for small retailers but is almost inconsequential for large retailers.
Three cost elements are largely controlled by the credit operations of retailers. They are:

- bad debt
- credit card service charges
- store credit

The cost of those elements is about the same for both small and large retailers. However, these costs represent 60 percent of total cost for large retailers but only 20 percent of total cost for small retailers.

The Frequency Results

The frequency scenario results show that total costs for small retailers can be reduced considerably (from 3.346 percent to 1.865 percent) by reducing the frequency with which they are required to file and remit taxes. Filing and paying taxes quarterly, rather than monthly, gives small retailers three major benefits, as seen in Tables III.1 and III.2.

- Sales tax filing costs are reduced for small retailers by .634
- Remittance of tax costs are reduced for small retailers by .111
- The benefit from use of funds is increased by .736

These effects are also shown in Tables III.3 and III.5.

The Exempt Users Results

The exempt users run shows the effects of having a tax law that exempts 4.6% of purchasers from tax, a typical value.

As shown in Table III.1 and III.2 the total cost effect is slight and the relative costs of small, medium and large retailers does not change.

The major cost element increases, as seen in Table III.2, due to exempt users are for tax calculations, register collections, drawer balance and reconcile, and sales tax filing.
The Exempt Items Results

This scenario shows the effects of a tax law that has 17.3 percent of items exempt from tax. Table III.1 shows that total costs increase from the base case for all size retailers but increase by a greater amount for small retailers (.674) than for medium (.385) and large (.187) retailers.

Many specific cost elements are affected by exempt users as shown in Table III.2. Two of the major cost components changes are for item identification and for sales tax filing. Together they constitute almost half of the total increase in costs over the base case.

Representative Case Results

The representative case shows the effects of both exempt purchasers and users. The total cost increase is slightly higher than the total cost for exempt users alone.

Major cost element increases over the exempt users case are shown in Table III.2 to be for item identification and sales tax filing.  

D. The Effects of Tax Law Features

Tables III.5 and III.6 show the cost effects of various tax law features. Costs associated with existence rise for exempt users and for exempt purchasers primarily because the tax amount collected diminishes. This is the denominator of the cost as a percent of tax collected.

The representative case results show that exempt items cause a greater increase in costs as a percentage of tax collected than exempt purchasers. Stores must expend considerable effort marking and/or separating exempt items on the showroom floor in addition to check out costs, whereas exempt purchasers require added effort only at the point of sale.
The tax law feature with the most significant cost effects is the frequency of payment and filing of tax information. The frequency case results show that decreasing this frequency from 12 times per year to 4 times per year reduces costs over the base case run by 1.48 percent for small retailers, over 40 percent of the total base case cost of 3.346 percent.

**Percentage Distribution of Costs**

Table III.7 shows that distribution of costs as a percentage of total compliance costs for the base case. It shows that sales tax filing costs represent over 28 percent of total cost for small retailers but only 2.74 percent for large retailers. Other cost elements that represent significantly larger percents of total cost for small retailers than for large retailers are:

- Bank deposits
- Remittance of tax
- Theft insurance

As mentioned previously, costs associated with debt and credit represent a much smaller percent of total costs for small retailers than for large retailers.
<table>
<thead>
<tr>
<th>COST ELEMENT DESCRIPTION</th>
<th>SMALL</th>
<th>MEDIUM</th>
<th>LARGE</th>
<th>SMALL</th>
<th>MEDIUM</th>
<th>LARGE</th>
<th>SMALL</th>
<th>MEDIUM</th>
<th>LARGE</th>
<th>SMALL</th>
<th>MEDIUM</th>
<th>LARGE</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
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<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Purchaser Identification</td>
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<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
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<td>0.000</td>
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<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>POS Equipment</td>
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<td>0.020</td>
<td>0.012</td>
<td>0.067</td>
<td>0.020</td>
<td>0.012</td>
<td>0.067</td>
<td>0.020</td>
<td>0.012</td>
<td>0.067</td>
<td>0.020</td>
<td>0.012</td>
</tr>
<tr>
<td>POS Programming</td>
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<td>0.000</td>
<td>0.009</td>
<td>0.030</td>
<td>0.000</td>
<td>0.009</td>
<td>0.030</td>
<td>0.000</td>
<td>0.009</td>
<td>0.030</td>
<td>0.000</td>
<td>0.009</td>
</tr>
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<td>Office Equipment Expense</td>
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<td>0.010</td>
<td>0.003</td>
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<tr>
<td>Computer Usage</td>
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<td>0.043</td>
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<td>Computer Programming</td>
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<tr>
<td>Training Costs</td>
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<td>0.102</td>
<td>0.119</td>
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<td>0.102</td>
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<td>0.119</td>
<td>0.141</td>
<td>0.102</td>
<td>0.119</td>
</tr>
<tr>
<td>Register Collections</td>
<td>0.382</td>
<td>0.193</td>
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<td>0.171</td>
<td>0.382</td>
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<td>0.171</td>
<td>0.382</td>
<td>0.193</td>
<td>0.171</td>
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<tr>
<td>Drawer Balance &amp; Reconcile</td>
<td>0.586</td>
<td>0.134</td>
<td>0.153</td>
<td>0.586</td>
<td>0.134</td>
<td>0.153</td>
<td>0.586</td>
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<td>0.134</td>
<td>0.153</td>
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<td>Bank Deposit</td>
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<td>0.028</td>
<td>0.341</td>
<td>0.070</td>
<td>0.028</td>
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<td>Store Report - Complete Form</td>
<td>0.009</td>
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<tr>
<td>Store Report - process Report</td>
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<td>Sales Tax Filing</td>
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<td>0.086</td>
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<tr>
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<td>0.000</td>
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<td>0.018</td>
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<td>0.000</td>
<td>0.000</td>
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</tr>
<tr>
<td>State Audit Assist</td>
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<td>0.007</td>
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</tr>
<tr>
<td>Use of Funds</td>
<td>0.605</td>
<td>-0.034</td>
<td>-0.066</td>
<td>1.340</td>
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<tr>
<td>Other Administration</td>
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### TABLE III.3: COMPLIANCE COSTS (AS A PERCENT OF TAXES) BY COMPLIANCE ELEMENT

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<th>LARGE</th>
<th>EXEMPT ITEMS SMALL</th>
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### TABLE III.4: COMPLIANCE COSTS (AS A PERCENT OF TAXES) BY COMPLIANCE ELEMENT: CHANGES FROM BASE CASE

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### TABLE III.5: COMPLIANCE COSTS (AS A PERCENT OF TAXES) BY TAX FEATURE

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### TABLE III.6: COMPLIANCE COSTS (AS A PERCENT OF TAXES) BY TAX FEATURE: CHANGES FROM BASE CASE

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<td>MEDIUM</td>
<td>LARGE</td>
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<td>Exemptions By Purchaser</td>
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<td>-1.481</td>
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<td>BASE CASE COSTS</td>
<td>BASE CASE PERCENT OF COST</td>
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<td>-----------------</td>
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<tr>
<td></td>
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<td>MEDIUM</td>
<td>LARGE</td>
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<td>0.020</td>
<td>0.012</td>
<td>2.00% 1.26% 1.17%</td>
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<td>0.003</td>
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<td>0.043</td>
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<tr>
<td>Computer Programming</td>
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<td>0.009</td>
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<td>Training Costs</td>
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<td>0.102</td>
<td>0.119</td>
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<td>Register Collections</td>
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<td>0.193</td>
<td>0.171</td>
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<td>Drawer Balancing &amp; Reconcile</td>
<td>0.286</td>
<td>0.134</td>
<td>0.153</td>
<td>8.55% 8.44% 14.96%</td>
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<td>Bank Deposit</td>
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<td>0.070</td>
<td>0.028</td>
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<tr>
<td>Store Report - Complete Form</td>
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<td>0.000</td>
<td>0.000</td>
<td>0.27% 0.00% 0.00%</td>
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<tr>
<td>Store Report - Process Report</td>
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<td>0.000</td>
<td>0.000</td>
<td>0.00% 0.00% 0.00%</td>
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<tr>
<td>Sales Tax Filing</td>
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<td>0.027</td>
<td>28.42% 5.42% 2.64%</td>
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<td>Remittance of Tax</td>
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<td>0.015</td>
<td>0.004</td>
<td>4.99% 0.95% 0.39%</td>
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<tr>
<td>Internal Audit</td>
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<td>0.003</td>
<td>0.018</td>
<td>0.00% 0.19% 1.76%</td>
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<tr>
<td>External Audit</td>
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<td>0.00% 0.00% 0.00%</td>
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<tr>
<td>State Audit Assist</td>
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<td>0.014</td>
<td>0.010</td>
<td>0.21% 0.88% 0.98%</td>
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<tr>
<td>Use of Funds</td>
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<td>-0.604</td>
<td>-0.604</td>
<td>-18.05% -38.06% -59.04%</td>
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<td>Other Administration</td>
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<td>0.021</td>
<td>2.84% 1.07% 2.05%</td>
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<td>Theft Insurance</td>
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<td>0.109</td>
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<td>5.38% 6.87% 0.59%</td>
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<tr>
<td>Net Cash Theft</td>
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<td>0.010</td>
<td>0.031</td>
<td>0.96% 0.63% 3.03%</td>
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<tr>
<td>Theft Security</td>
<td>0.018</td>
<td>0.027</td>
<td>0.074</td>
<td>0.54% 1.70% 7.23%</td>
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</tr>
<tr>
<td>Bad Debt</td>
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<td>0.270</td>
<td>0.376</td>
<td>7.71% 17.01% 36.75%</td>
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</tr>
<tr>
<td>Credit Card Service Charge</td>
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<td>0.547</td>
<td>0.178</td>
<td>10.85% 34.47% 17.40%</td>
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<tr>
<td>Store Credit</td>
<td>0.034</td>
<td>0.051</td>
<td>0.058</td>
<td>1.02% 3.21% 5.67%</td>
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<tr>
<td>Total Compliance Cost</td>
<td>3.346</td>
<td>1.587</td>
<td>1.023</td>
<td>100.00% 100.00% 100.00%</td>
<td></td>
</tr>
</tbody>
</table>
IV. STATE TAX LAWS AND COMPLIANCE COSTS

The base case and the other model scenarios give a good indication of the behavior of compliance costs when tax law features are applied rather uniformly across all types of retailers.

In reality, states normally have tax laws with considerable variation and lack of uniformity for different types of items. Table IV.1 shows the major tax law features as of 1981 of the 45 states that have retail sales tax. Major features are:

- Tax rates range from 2 percent to 7 1/2 percent (Connecticut)
- Many states allow local taxes, up to 4 1/4 percent in New York
- Exemptions for items vary among states. Many states exclude prescription drugs and almost all exclude sales to out of state residents. Food is excluded in 19 states. Alabama excludes furniture and appliances. Connecticut exempts children's clothing but not adult clothing.
- Filing and remitting periods are usually the same for small and large retailers. One exception is California, in which filings are quarterly but payments must be made monthly for medium and large retailers. The states that allow small retailers less frequent payments and/or remittances than medium and large businesses are:
  - California
  - Connecticut
  - Illinois
  - Indiana
  - Kansas
  - Massachusetts
  - New York
  - Texas
- Collection credits are offered in some form by 25 states. They range from a low of one percent in Indiana and Texas to a high of 3.3 percent in Colorado. In no state do small retailers receive a larger credit than medium and large firms.
- Grace periods for payment of taxes after they have been collected range from zero to 30 days. The state of Illinois requires prepayment of taxes. Typical values for the grace period are between 20 and 30 days.
Actual State Compliance Costs

To compare the results of our model scenario runs with actual state results and to investigate differences in costs for different SIC codes, we prepared Table IV.2 from the results of the American Retail Federation Study. It presents the compliance costs for small, medium, and large retailers for each of seven SIC codes. The SIC code definitions are given in Section III.

Considering first the total compliance cost over all SIC codes for different sized firms, the last column of Table IV.2 shows the following:

- Actual state results are very similar to our model scenario results. Small retailers' compliance costs are almost always higher than those of medium and large retailers.

- The spread between actual compliance costs for small and larger retailers is less than our model results. Generally, large firms' actual costs are greater than those found in our model scenarios. This is because the actual state results reflect a more complex set of item and purchaser exemptions than we assumed in the model runs.

- Illinois has the highest compliance costs for small retailers and one of the lowest costs for large retailers. This is because Illinois has tax law characteristics which coupled with its retail profile lead to high compliance costs. No single factor explains the high cost illustrating that it is necessary to analyze a particular state in detail if its compliance cost is to be accurately estimated.

- In one state, Arizona, the compliance cost for small retailers, 4.57, is less than the cost for medium retailers, 4.90.

- In California, small retailers have lower total costs for small retailers (3.02) than for large retailers (3.28). This is because sales of large retailers are very high in SIC 54 (Food), which has high compliance costs, and sales of small retailers are highly concentrated in SIC 59 Excl 591 (Miscellaneous), which has low compliance costs.
Conversion to Costs per Taxable Sales

As mentioned above the tax collected used as the denominator for compliance cost percentages depends on the state tax rate. By multiplying compliance cost percentages by the states tax rate we obtain the cost divided by taxable sales or the cost per taxable sale dollar. The following table illustrates how the small retailers of the seven states of Table IV.2 compare when their tax rate is taken into account.

<table>
<thead>
<tr>
<th>State</th>
<th>Tax Rate %</th>
<th>Compliance Costs - Small Retailers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona</td>
<td>4</td>
<td>As % of Tax Collected: .183</td>
</tr>
<tr>
<td>California</td>
<td>4.75</td>
<td>As % of Taxable Sales: .143</td>
</tr>
<tr>
<td>Illinois</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Maryland</td>
<td>5</td>
<td>.176</td>
</tr>
<tr>
<td>Missouri</td>
<td>3.5</td>
<td>.127</td>
</tr>
<tr>
<td>New York</td>
<td>4</td>
<td>.164</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>6</td>
<td>.210</td>
</tr>
</tbody>
</table>

The conversion to costs as a percent of taxable sales shows that Illinois has the highest cost, .262. For every $1,000 taxable sales small retailers in Illinois spend $2.62 for tax compliance. Missouri has the lowest cost per taxable sale dollar, .127, even though it has the forth highest cost when measured as a percent of tax collected.

Variations by SIC Code

Table IV.2 shows great variation of compliance costs among SIC codes. Major results are:

- Food (SIC 54) and general merchandise (SIC 53) exhibit very large compliance costs in some states. This is mainly because item exemptions make collection more costly and reduce the tax base over which costs are spread.
- The SIC codes which generally have high costs for small retailers are also SIC 53 and SIC 54.
The highest compliance costs, ranging from 12.16 to 15.99, are for:

- Arizona - small retailers - SIC 54 (food)
- California - small retailers - SIC 54 (food)
- Illinois - small retailers - SIC 53 (general)
- Maryland - small retailers - SIC 54 (food)
- New York - small retailers - SIC 54 (food)
- Pennsylvania - small retailers - SIC 53 (general)
- Missouri - small retailers - SIC 53 (general)

We do not present the costs by SIC category for our five model scenarios because we do not think they are reliable indications of cost differences for any particular SIC code in any particular state. As Table IV.2 shows there is little consistency in cost results for an SIC code across the seven states studied for the American Retail Federation.

A more detailed study would be required to determine accurate cost differentials between small and large retailers for different SIC codes. These cost differentials are closely related to the retail profile in a state and the particular features of the state tax laws.
**TABLE IV.1: TAX LAW SUMMARY - 1981**

<table>
<thead>
<tr>
<th>State</th>
<th>Collection Credit</th>
<th>Tax Rate</th>
<th>Local Taxes</th>
<th>Filing Freq. Per Yr.</th>
<th>Remit. Freq. Per Yr.</th>
<th>Grace Period Days</th>
<th>Exemptions By SIC</th>
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</thead>
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<tr>
<td>Alabama</td>
<td>2.0</td>
<td>4</td>
<td>1-3</td>
<td>12/</td>
<td>12/</td>
<td>20</td>
<td>57-Furn &amp; Appl., OOS</td>
</tr>
<tr>
<td>Arizona</td>
<td>No</td>
<td>4</td>
<td>1-2</td>
<td>12/</td>
<td>12/</td>
<td>30</td>
<td>54-Food, 57-00S</td>
</tr>
<tr>
<td>Arkansas</td>
<td>2.0</td>
<td>3</td>
<td>1-2</td>
<td>12</td>
<td>12</td>
<td>20</td>
<td>591-Rx, 57-00S</td>
</tr>
<tr>
<td>California</td>
<td>No</td>
<td>4.75</td>
<td>1-1 3/4</td>
<td>4</td>
<td>4/12/12</td>
<td>30/20/24</td>
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<tr>
<td>Colorado</td>
<td>3.3</td>
<td>3</td>
<td>0-4</td>
<td>12</td>
<td>12</td>
<td>20</td>
<td>Same</td>
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<tr>
<td>Connecticut</td>
<td>No</td>
<td>7.50</td>
<td>No</td>
<td>4/12/12</td>
<td>4/12/12</td>
<td>30</td>
<td>591-Rx, 54-Food, 56-Childrens Clothing</td>
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<td>Florida</td>
<td>1.0(1)</td>
<td>5</td>
<td>No</td>
<td>12</td>
<td>12</td>
<td>20</td>
<td>591-Rx, 54-Groc, 57-00S</td>
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<td>1-2</td>
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<td>12</td>
<td>20</td>
<td>57-00S</td>
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<td>No</td>
<td>12</td>
<td>12</td>
<td>30</td>
<td>57-00S</td>
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<td>25</td>
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<td>1-2</td>
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<td>30/0/0</td>
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<td>4/12/12</td>
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<td>12</td>
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<td>4/12/12</td>
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<td>12</td>
<td>12</td>
<td>15</td>
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</table>
### TABLE IV.1: TAX LAW SUMMARY - 1981

<table>
<thead>
<tr>
<th>State</th>
<th>Collection Credit %</th>
<th>Tax Rate %</th>
<th>Local Taxes %</th>
<th>Filing Freq. Per Yr.</th>
<th>Remit. Freq. Per Yr.</th>
<th>Grace Period Days</th>
<th>Exemptions By SIC</th>
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<td>12</td>
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<td>No</td>
<td>4/12/12</td>
<td>4/12/12</td>
<td>20</td>
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<tr>
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<td>12</td>
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<td>25</td>
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<td>4/12/12</td>
<td>20</td>
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<td>12</td>
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<tr>
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<td>No</td>
<td>4</td>
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<td>12</td>
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<td>591-Rx, 56-Clothing, 54-Food</td>
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1. Under frequency per year 12/ means all firms have monthly filing or remittance requirements. 4/12/12 means small firms are on a quarterly basis, medium and large are on a monthly basis.
2. OOS = out of state purchasers
3. Rx = Prescription Drugs
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V. REDUCTION OF COMPLIANCE COST DIFFERENTIALS

States could reduce or compensate for the relatively higher compliance costs for small retailers in four ways.

Reduce the Exemptions of Items and Purchasers

Major costs arise from the exemption of items and purchasers. If no items and no purchasers are tax exempt compliance costs are at a minimum. Reduction of exemptions aids both small and large retailers but the reduction of costs is greater for small retailers. It is important to note that this change in tax laws aids both the state (more items taxable) and the retailer (less cost of compliance).

Reduce the Filing and Remittance Frequency

Less frequent payment of taxes and filing of tax reports greatly decreases compliance costs. A few states currently allow small retailers to file and pay quarterly while medium and large retailers are on a monthly basis. This reduces inequities in compliance costs. This method partially harms the state in that it receives taxes later for small retailers. However, the reduction in compliance costs for small retailers is greater than the lost revenue to the state.

Extend the Grace Period

Longer grace periods would allow small retailers to benefit from use of funds. The reduction in compliance costs, however, is relatively minor and added delays in payment harms the state exactly as much as it aids retailers.

Change Collection Credit Policy

Even if tax laws cannot be structured to reduce the difference in compliance costs for small retailers over larger retailers, the difference could be alleviated by allowing small retailers a more generous collection
credit percentage than larger retailers. This could be accomplished by designing a variable credit percentage based on tax collected. For example: allow a 4 percent credit on the first $5,000 tax, 3 percent credit on tax between $5,000 and $20,000 and a 2 percent credit for tax collected over $20,000. This effectively gives the low volume retailer a larger credit percent to offset higher compliance costs. Obviously these credits reduce the state's total income.

Of the 45 states with tax laws, only Florida, Kentucky, South Carolina, Tennessee, and Wisconsin have collection credit policies that compensate for the total compliance cost differential of small retailers over large retailers. See Table IV.1. for details of their tax law provisions.

CONCLUSION

Of these four methods for reducing compliance cost differentials, the most promising are reduced filing and remitting frequency for small retailers and variable collection credits.

This study has shown clearly that small retailers have significantly greater tax compliance costs than large retailers. This result is significant for it shows that almost all states with retail sales tax have structured their tax law such that small businesses pay a proportionately larger compliance cost.

We have investigated and shown the effects of changes in tax laws that would reduce existing cost differentials. The results of this study are a substantial basis from which interested parties can begin the processes required to reduce cost differentials.
The results of this study are based on a "representative" state and one might ask "How relevant are these results to my state?" We believe that the results are relevant to any state that has characteristics reasonably close to the sample states used for the American Retail Federation study, namely, Arizona, California, Illinois, Maryland, Missouri, New York, and Pennsylvania. Our discussion in Section IV shows that, while exact cost differentials vary by state, it is almost always true that small retailers have higher compliance costs than large retailers.

If a particular state has an unusual tax law or retailer characteristics that vary greatly from the average of the states used in this study, a separate detailed analysis must be performed to determine more accurately the cost differentials between small and large retailers.