TECHNICAL REPORT OF THE
JOINT LEGISLATIVE
AUDIT AND REVIEW COMMISSION ON

Statewide Staffing Standards for the Funding of Financial Officers

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

HOUSE DOCUMENT NO. 75

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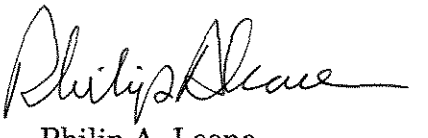
Preface

Item 13 of the 1988 and 1989 Appropriations Acts directed JLARC to review staffing standards and funding for constitutional officers in Virginia. This report, the fifth in a series, addresses staffing standards for financial officers: comissioners of revenue, treasurers, and directors of finance. Other reports in the series address staffing standards for sheriffs, Commonwealth's attorneys, and clerks of court. The last report in the series addresses issues related to the funding of the constitutional offices.

The staffing standards for financial officers developed for this report are based on measures of workload that have clear relationships to the staffing of the offices. The measures used include locality population and various measures of the workload for tax assessments and revenue collection. The proposed standards can be used by the Compensation Board to more equitably allocate positions statewide. Application of these standards results in a statewide increase of 905 positions over the current Compensation Board-recognized positions. If the Department of Taxation provided all State income tax processing, and financial officers provided State income taxpayer assistance only, then the increase would be reduced to 542 recognized positions.

The issues involved in allocating positions to the constitutional officers are complex. Therefore, it will be necessary to review the proposed standards in more detail with the General Assembly, the State Compensation Board, the constitutional officers, and local governments. To begin that process of review, Senate Bill 248 was introduced in the 1990 Session of the General Assembly. This legislation, which puts into effect a new funding method, can be the starting point for discussions on the staff proposals.

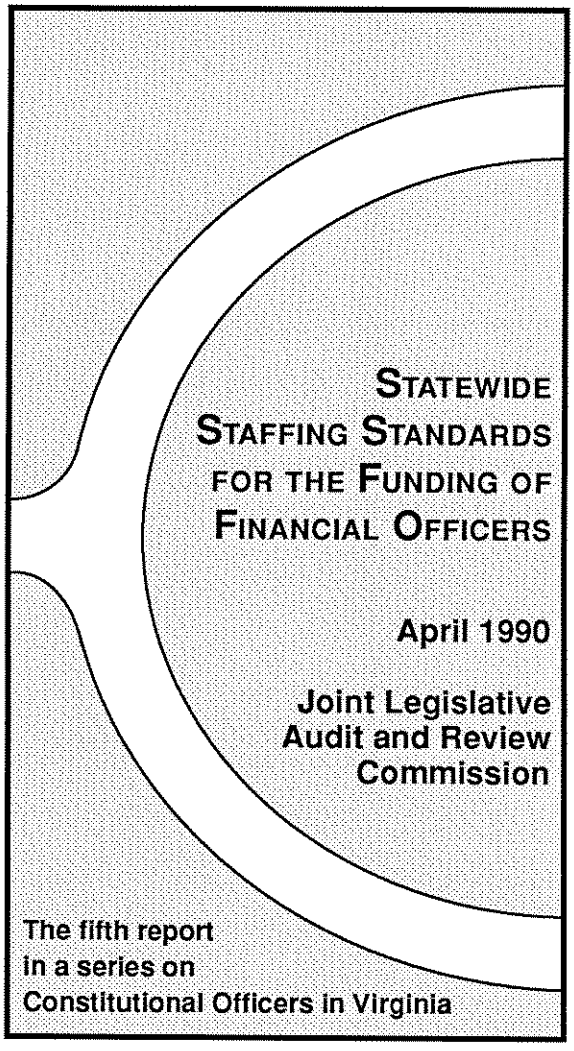
We would like to express our appreciation for the cooperation and assistance extended to us by Virginia's commissioners of revenue, treasurers, and directors of finance; the staff of the State Department of Taxation; and the staff of the State Compensation Board.



Philip A. Leone
Director

April 23, 1990

JLARC Report Summary



Article VII, Section 4 of the Virginia Constitution provides for five locally elected county and city officers. These officers are commonly referred to as "constitutional officers." The constitutional officers provide a variety of services at the local level, including criminal justice services, maintenance of land and other records, and the assessment and collection of State and local taxes.

Item 13 of the 1988 and 1989 Appropriations Acts directed that the Joint Legislative Audit and Reveiew Commission (JLARC) study and recommend staffing standards to be utilized for allocating positions to the offices of locally elected constitutional officers. This report discusses workload and staffing standards for commissioners of revenue, treasurers, and the five directors of finance recognized as constitutional officers. The workload and staffing of the other offices, and the funding of all constitutional officers, are discussed in companion JLARC reports.

It is important to note that the proposed standards were prepared as the first part of a larger effort focused on the development of a more systematic and equitable method for funding the constitutional officers. The standards were not developed as a method for measuring total need. Rather, they represent a method for equitably distributing available funds based on observed differences in workload across the offices of the commissioners, treasurers, and directors of finance.

The Current Process Does Not Result in Equitable Staffing Allocations

The current process for funding commissioners of revenue and treasurers is a traditional budgeting and reimbursement process. As a result, the allocation of resources is based primarily on the staffing requests that are submitted by each individual officer. Although the State Compensation Board collects some workload data from the offices, standards are not available to use in making staffing decisions for the financial officers.

As a result of the lack of staffing standards, there are significant discrepancies between Compensation Board recognized positions and the workload levels in many offices. Compensation Board recognized positions are the positions that the State officially approves for State and or local government support. Some offices with substantially higher workload levels than others receive fewer recognized positions. Other offices have similar staff levels but very different workloads.

The table below illustrates inequities in Compensation Board recognized positions for selected commissioner of revenue offices, along with the effects of the proposed staffing standards. Similar inequities exist for treasurers and directors of finance.

Standards Have Been Developed to Base Staffing on Actual Workload

In developing staffing standards for commissioners of revenue and treasurers, two primary goals were considered: (1) equity and (2) efficiency. The goal of equity can be promoted through the use of standards which are based on relative differences in the actual workload of the various offices. The goal of efficiency can be met through the use of a system which allows the State to easily apply the staffing standards across all commissioner and treasurer offices.

The study approach used to meet the goal of equity was to first identify the total number of full time equivalent positions (FTEs) that were committed to performing the work in different service categories, such as the assessment of real property taxes. For each of these service categories, a statistical analysis was used to examine the relationship between the reported FTE positions for these categories and various workload indicators. Based on the results of this analysis, JLARC staff were able to select the set of indicators that best explained variation in staffing levels, and then use these quantified measures as the staffing standards for the relevant service category.

Examples of Commissioner of Revenue Offices in Which Greater Equity Would Be Achieved by Using Standards

(Offices that are compared do not handle general reassessments)

	Illustrative Measures of Workload					
	Population	Personal Property Tax Revenues	Revenue Miscellaneous Taxes	Locally Filed State Returns	**Compensation Board Approved FTEs**	**Proposed Standard Based FTEs**
Appomattox	12,400	$ 521,972	$ 480,023	4,593	**4.3**	**3.9**
Culpeper	25,800	1,615,147	2,723,621	9,034	**4.2**	**6.9**
Giles	17,100	876,714	1,899,137	5,245	**5.0**	**5.0**
Amherst	28,900	1,092,859	2,231,256	8,725	**5.0**	**7.1**
Page	20,600	573,767	1,350,933	5,706	**6.3**	**5.5**
James City	32,800	3,155,426	6,919,709	11,412	**6.2**	**9.5**

Once these standards were identified, the goal of efficiency was promoted through the use of the standards to establish the staffing level for each office in the State. The advantages of this approach over the current process are:

- The standards are based on the impact of measurable workload indicators on current staffing levels and can be consistently applied across all offices based on differences in workload. This promotes equity in the allocation of resources.

- The standards can be easily applied across the offices, thereby promoting efficiency in the allocation of resources.

- The standards can be used by the State to readily document the basis for its staffing decisions.

- The standards take into account the most important factors affecting workload without requiring collection of data at too burdensome a level of detail. Much of the data required to implement the standards are already collected on an on-going basis.

The staffing standards would change the number of positions that are recognized by the State across all offices, and in the individual offices. Statewide, the standards indicate that the Compensation Board would recognize 1,332 positions for commissioners of revenue, 1,156 positions for treasurers, and 409 positions for directors of finance. A detailed listing of current and proposed recognized positions for each financial officer can be found on pages 14, 20, and 22 of this report. The ten commissioner and treasurer offices with the largest increases in positions based on the staffing standards are shown in the table below.

Offices With the Largest Increases in State Recognized Positions

COMMISSIONERS OF REVENUE

Office	Increase in Recognized FTEs
Fairfax County	154.3
Virginia Beach	51.6
Arlington	20.1
Chesterfield	13.8
Norfolk	11.7
Chesapeake	11.1
Newport News	10.8
Hampton	7.3
Stafford	4.4
Washington	3.8

TREASURERS

Office	Increase in Recognized FTEs
Fairfax County	80.2
Virginia Beach	47.4
Arlington	17.7
Chesapeake	15.3
Chesterfield	14.5
Stafford	8.4
Portsmouth	7.4
Norfolk	6.8
Charlottesville	5.6
Hanover	4.5

Staffing Economies Could Be Achieved Through State Processing of All State Income Tax Returns

Currently, constitutional officers provide State income taxpayer assistance, and process State income tax returns. The processing work includes opening, sorting, screening, and coding returns, as well as separating and depositing checks for taxes due. In calendar year 1989, the Department of Taxation (DOT) processed 1,579,506 returns filed directly (55 percent of all returns), while commissioners of revenue processed 1,274,359 returns (45 percent of all returns). The data collected by JLARC staff for the study indicate that an estimated 363 positions are used by the local offices to process State income tax returns.

The processing of State income tax returns at the local level is an unusual, outmoded, and inefficient practice. JLARC staff surveyed the 17 states in the northeastern and southeastern region of the country that have State income taxes, and found that none of the states have local processing of returns. To minimize the inefficiency and duplication of effort in Virginia, the Department of Taxation discourages commissioners of revenue from checking returns for errors, as the data from all returns are entered by DOT onto a computer system and checked.

The Virginia Department of Taxation estimates that it would require 97 positions at the department to handle the processing work that is performed by the 363 positions at the local level. If all the processing were performed directly by the department, the savings would be 266 positions each year. The estimated staffing savings for the 1990-1992 biennium alone range from $8.7 to $14.8 million, depending on the State and local staffing levels approved by the General Assembly.

The staffing savings would be achieved just by eliminating processing work at the local level. Taxpayer assistance services and the commissioner of revenue office positions needed for these services would not be affected by the change.

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Part One: Study Overview and Findings

I. Study Overview

Article VII, Section 4 of the Virginia Constitution provides for five locally elected county and city officers: commissioners of revenue, treasurers, Commonwealth's attorneys, circuit court clerks, and sheriffs. These officers, because of their reference in the State constitution, are commonly referred to as "constitutional officers." The constitutional officers provide a variety of services at the local level. For example, among other services, commissioners of revenue and treasurers assess and collect taxes, circuit court clerks provide court administration services, and sheriffs operate the local jails.

This report presents an analysis of workload and staffing standards for the local financial officers. Workload and staffing standards for the other constitutional officers are discussed in companion reports.

This chapter overviews financial officers in Virginia, describes the need for staffing standards, and discusses the study origin and approach. Chapter II provides study findings and conclusions. Following Chapter II, the technical analysis which led to the study findings is presented.

Local Financial Officers in Virginia

In this report, commissioners of revenue and treasurers are referred to as "financial officers." The term "financial officers" is used because the focus of these offices is on the assessment and collection of taxes, and the handling of public funds at the local level. Additionally, in five Virginia localities a director of finance is recognized as a constitutional officer. In each of these localities, the director of finance office substitutes for a commissioner of revenue office, a treasurer office, or both. These director of finance offices are also classified and discussed in this report as financial officers.

Commissioners of Revenue. Commissioners of revenue are the chief tax-assessing officers in Virginia localities. Currently, there are 131 commissioner of revenue offices, employing 1,373 full-time equivalent (FTE) personnel. Commissioners of revenue assess a wide variety of local taxes. Examples include real property taxes, personal property taxes, business license fees, consumer utility taxes, machinery and tools taxes, and merchants' capital taxes. In addition to assessing the taxes, the commissioners' offices provide assistance to taxpayers by answering tax questions.

Many commissioners of revenue offices also spend a substantial amount of time working on State income taxes. Commissioner of revenue offices may be involved in either filling out the returns for taxpayers, performing the initial processing of returns before the returns go to the State Department of Taxation, or assisting State income taxpayers with questions.

Treasurers. There are currently 132 local treasurer offices statewide. These offices employ 1,159 FTE personnel. The treasurers' primary responsibilities are the receipt and collection of public funds, the custody and accounting of public funds, and the disbursement of public funds. In most localities, the treasurers collect all local taxes assessed by the commissioners of revenue including real property taxes, tangible personal property taxes, and other miscellaneous taxes and fees such as business license taxes and fees for motor vehicle decals.

Additionally, the treasurers may collect certain State revenues including State income taxes, revenue from unclaimed property, and clerk of court and sheriff fees. The treasurers are required to disburse local funds upon receiving legally issued warrants. The treasurers must keep an accurate record of all funds received and disbursed. Besides the primary functions already mentioned, the treasurers may be required to invest local funds and may provide information or assistance to local government officials and State agencies.

Directors of Finance. There are five localities in Virginia which have directors of finance that are recognized by the State as constitutional officers. These localities are: Albemarle County, Henrico County, Prince William County, Alexandria, and the City of Richmond. In all of these localities except for the City of Richmond, there are no commissioners of revenue or treasurers, and the directors of finance provide these functions. The City of Richmond has a director of finance and a treasurer that are both recognized by the State as constitutional officers. The treasurer's office, however, is small, and its function is mostly limited to State income tax work.

The five directors of finance perform the tax assessment function that commissioners of revenue provide in other localities, and they perform the tax collection duties that treasurers provide in other localities. In addition, the five offices are expected to supply budgeting and finance support to their local governments. Such functions are not typically the responsibilities of commissioners of revenue or treasurers.

State and Local Government Support of Constitutional Officers

Under the current structure for funding, the State and local governments provide funding for the financial officers. State funding support for these offices is provided by general fund appropriations, and is administered by the State Compensation Board. The Compensation Board is a three-member board, consisting of a chairman appointed by the Governor, the Auditor of Public Accounts, and the State Tax Commissioner. The Compensation Board also has ten approved staff positions.

State Role in Funding Positions. Section 14.1-51 of the *Code of Virginia* establishes the duty of the State Compensation Board to fix the salaries and expenses for constitutional officers. To fulfill its duty to fix office expenses, the Compensation Board must first determine the costs it will "recognize" in each office. A major component of the Board's determination of recognized costs pertains to the staff positions that the Compensation Board will recognize for the financial officers. "Recog-

nized" positions under the current system are positions that the Compensation Board officially approves for State and/or local government funding.

For the financial officers, the salary costs of Compensation Board "recognized" positions are not completely State-funded, because there is a local share. There are local shares for the salary costs of the principal officers, and for the salary costs of State recognized staff positions. The State currently pays approximately 80 percent of the recognized salary costs for the principal officers statewide. The State also provides a 50 percent share of the funding for the recognized salary costs of the staff positions of commissioners of revenue, treasurers, and directors of finance.

Recognition of Positions by the Compensation Board. Since 1984, the number of State-recognized positions for the financial officers has increased by about seven percent. The Compensation Board has used some standards in making decisions about the recognition of staff positions for sheriffs, but not for any of the other constitutional officers. For the financial officers, the Compensation Board states that factors such as the budget requests of the officers and population are considered. The Compensation Board also states that final staffing decisions have been constrained by the availability of State funds.

In 1988, the Compensation Board began to collect workload data from the circuit court clerks, commissioners of revenue, treasurers, and directors of finance. From these offices, data for certain workload indicators have been collected by the Compensation Board for calendar years 1987 and 1988.

Local Government Role in Funding Positions There is no local government share for the State recognized salary costs of the recognized positions of sheriffs, Commonwealth's attorneys, or circuit court clerks. However, for the State-recognized positions of the financial officers, there is a local government contribution for staffing costs. For the principal officers, the local governments provide contributions to the salary costs that are capped at the dollar amounts each paid in FY 1980. Thus, the actual local contribution in each locality varies. Statewide, however, local governments provide funding for approximately 20 percent of the recognized salary costs for commissioners and treasurers. Local governments also provide funding for 50 percent of the salary costs of the State-recognized staff positions. In addition, local governments may also choose to supplement the number of positions or the salaries that are recognized by the Compensation Board, as purely local add-on positions or funding.

The Need for Staffing Standards

The current process for funding the constitutional officers is a budgeting and reimbursement process. As a result, the allocation of resources is based primarily on requests for staffing which are submitted by each constitutional office.

Staffing standards are not currently used in the process of determining the recognition of staff positions for financial officers. Because of a lack of standards, there are significant discrepancies between Compensation Board recognized staffing levels and workload levels in many offices.

Tables 1 and 2 provide some examples of offices for which there are discrepancies between recognized staffing levels and workload levels. Table 1 shows examples for the commissioners of revenue, and Table 2 shows examples for treasurers. In some of the comparisons, the offices shown have the same number of positions, but substantially different workload levels. In other comparisons, the offices with fewer recognized positions have greater workloads.

For the commissioners of revenue, for example, Appomattox and Culpeper have approximately the same number of Compensation Board recognized positions (4.3 and 4.2 recognized positions respectively). Yet Culpeper had about two times the population, three times the personal property tax revenues, more than five times the miscellaneous tax revenues, and twice the locally filed State income tax returns.

In the second comparison, Giles and Amherst counties have the same number of Compensation Board-recognized positions (5.0). Yet, Amherst has 69 percent more population, 25 percent more personal property tax revenues, 17 percent more miscellaneous tax revenues, and 66 percent more locally filed State income tax returns.

Table 1

Need for Staffing Standards for Commissioners of Revenue

(Offices that are compared do not handle general reassessments)

	Illustrative Measures of Workload				
	Population	Personal Property Tax Revenues	Revenue Miscellaneous Taxes	Locally Filed State Returns	**Compensation Board Approved FTEs**
Appomattox	12,400	$ 521,972	$ 480,023	4,593	**4.3**
Culpeper	25,800	1,615,147	2,723,621	9,034	**4.2**
Giles	17,100	876,714	1,899,137	5,245	**5.0**
Amherst	28,900	1,092,859	2,231,256	8,725	**5.0**
Page	20,600	573,767	1,350,933	5,706	**6.3**
James City	32,800	3,155,426	6,919,709	11,412	**6.2**

Sources: The University of Virginia's Center for Public Service 1988 provisional population estimates; Auditor of Public Accounts and Commissioner on Local Government data on local revenues; Department of Taxation data on State income tax locally filed returns; and Compensation Board recognized position and temporary funding data for 1989-90.

Table 2

Need for Staffing Standards for Treasurers

	Illustrative Measures of Workload				
	Population	Number of Parcels Billed	Penalties Collected and Interest (dollars)	Tax Due Returns Filed Locally	**Compensation Board Approved FTEs**
Richmond County	7,400	5,901	$ 33,209	336	**3.1**
Orange	20,900	14,488	67,519	1,042	**3.4**
Falls Church	10,100	3,600	74,688	694	**4.1**
Fredericksburg	21,500	6,127	91,867	949	**3.3**
Newport News	162,800	44,130	447,305	5,386	**25.0**
Chesterfield	187,100	83,070	1,102,723	6,739	**24.9**

Sources: The University of Virginia's Center for Public Service 1988 provisional population estimates; Auditor of Public Accounts and Commissioner on Local Government data on local revenues; Department of Taxation data on State income tax locally filed returns for which taxes were owed; and Compensation Board recognized position and temporary funding data for 1989-90.

James City County and Page County also have almost the same Compensation Board recognized positions. Yet James City has 59 percent more population, more than five times the personal property tax revenues, five times the miscellaneous tax revenues, and twice as many locally-filed State income tax returns.

Similar inconsistencies between staffing and workload were seen for treasurers' offices. Richmond County and Orange County, for example, have approximately the same number of Compensation Board-recognized positions (3.1 and 3.4 recognized positions respectively). Yet Orange had almost three times the population, more than twice the number of parcels billed, two times the penalty dollars collected with interest, and three times the tax due returns filed locally.

In the second example for treasurers, Falls Church had more Compensation Board-recognized positions than Fredericksburg (4.1 in Falls Church, 3.3 in Fredericksburg). Yet, Fredericksburg had twice the population, 70 percent more parcels billed, 23 percent more penalty dollars collected with interest, and 37 percent more tax due returns filed locally.

In the final example, Newport News and Chesterfield have similar Compensation Board-recognized positions (25.0 and 24.9 positions respectively). However, Chesterfield has 15 percent more population, about twice the number of parcels billed, two and a half times the penalty dollars collected with interest, and 25 percent more tax due returns filed locally.

Clearly, the staffing allocations shown in Tables 1 and 2 raise questions about the equity of the current process for recognizing positions. The current staffing allocations are not consistent with the levels of workload.

The use of staffing standards in determining staffing levels can address this problem. Staffing standards can be applied objectively and consistently across the offices. When staffing standards are used, the State can readily document the basis for its staffing decisions. It can be demonstrated that staffing allocation decisions are not based on subjective perceptions of need, or on the persistence with which offices have sought additional positions. The purpose of this report is to provide staffing standards that the State can use in making equitable State funding decisions.

Study Mandate

In 1988, the Joint Subcommittee on the Compensation Board and State Support of Constitutional Offices completed its review of State financial support for the constitutional officers (House Document 29, 1988). As a result of concerns raised in House Document 29, the General Assembly directed the Joint Legislative Audit and Review Commission (JLARC) to conduct a more detailed review of the staffing and funding of constitutional officers.

The study mandate (Appendix A), contained in Item 13 of the 1988 and 1989 Appropriations Acts, reflects a recognition by the General Assembly that the current process for determining staffing and funding could be more systematic and equitable. Item 13 requires a JLARC study of constitutional officer staffing and funding, and has four major components, including:

- workload standards and policies to be used in allocating positions;
- the status of part-time Commonwealth's attorneys in Virginia;
- the level of State and local participation in funding positions;
- an analysis of alternative methods and agencies for administering funding.

This report focuses on the part of the mandate pertaining to workload and staffing standards for financial officers. In addition, this report addresses the issue of potential staff savings from the transfer of income tax processing functions from the local financial officers to the Department of Taxation.

Study Approach

Several research activities were conducted to determine staffing standards for financial officers. Each financial officer provides a variety of services. The study approach to developing standards was to identify the staff time that is spent by the offices in providing each type of service, and to analyze the relationships between the staff time and workload indicators for that service. The data necessary for the analyses were collected by surveying all of the financial officers and by obtaining data from other State agencies.

Research was also conducted to identify staffing standards from other sources such as professional organizations. Most of the organizations contacted for this study did not have staffing standards available. Some standards were identified, but no empirically tested standards were available that could be applied to Virginia's financial officers. As a result, the JLARC staff analysis does not use any professional standards. Instead, the standards developed for this study represent a method for equitably distributing available resources based on observed differences in actual workload across the offices.

Regression analysis and another standard statistical technique called correlation analysis — discussed in Chapter III — were used to examine the relationships between staff time and different workload indicators. Regression analysis is a research technique that has been used by such agencies as the Administrative Office of the U.S. Courts and the Center for Public Service at the University of Virginia. This technique provided the basis for the staffing standards developed by JLARC staff. The technique was used to quantify the relationships between staff time and the workload indicators that were best related to staffing.

II. Study Findings and Conclusions

The analysis for this study — which is detailed in Part Two — identified relationships between the staffing in the offices of commissioners of revenue, treasurers, and directors of finance, and the workload of the offices. By using the results of the statistical analysis of these relationships, staffing standards have been developed and proposed for each of the service categories for commissioners of revenue and treasurers. The standards can be used to determine staffing levels for the offices that the State can use in making its funding decisions. The standards recognize the number of positions in each office that would be equitable relative to the other offices, based on the workload indicators examined.

In addition, staffing economies can be achieved by transferring the State income tax processing functions of the local financial officers to the Department of Taxation. This action could result in savings of more than $14 million.

RESULTS OF THE STAFFING ANALYSIS FOR COMMISSIONERS OF REVENUE

Figure 1 summarizes the factors that are included and excluded as special adjustments in the staffing standards for each of the service categories for commissioners of revenue. Factors that were tested for a service category and included as a special adjustment are shown with a "check." Factor tested but not included are shown with a "dot" in the service category column. Chapter III discussed the statistical rationale for including and excluding these factors.

Although certain workload indicators were excluded from the staffing standards, the staff time spent on all activities is still captured by the standards. This is because the total time that is spent on all activities in each service category are allocated through the regression equations to the workload indicators that are included in the staffing standards.

The regression equations that are used as the staffing standards are shown in Appendix B. Based on the staffing standards, a total of 1,332.3 FTEs are calculated for the commissioner of revenue offices (Table 3). This number is 40.6 positions less than the current number of FTEs in the offices, but 397.3 positions more than the number of FTEs recognized by the Compensation Board.

Table 4 shows the ability of staffing standards to improve equity in the distribution of positions when these standards are applied to the same offices used in illustrations in Chapter I. Appomattox and Culpeper, for example, have approximately the same number of Compensation Board-recognized FTE positions (4.3 and 4.2 recognized positions, respectively). Yet Culpeper had about two times the popula-

Figure 1

Summary of Workload Factors Examined for Use in Commissioner of Revenue Office Staffing Standards

Key:

- ✓ Special Adjustment Made in Staffing Standards
- ● Tested but No Special Adjustment in Staffing Standards
- ☐ Not Applicable

Factors Included as Special Adjustments in the Standards	Real Property Taxes	Personal Property Taxes	Miscellaneous Taxes, Fees	State Income Taxes	Providing Assistance to Local Government	Providing Assistance to State Agencies	Office Administration
	Services						
Population*	✓	✓	✓	✓	✓	✓	
Population (economy-of-scale effect)		✓		✓	✓	✓	
Appraisal responsibility	✓						
Assessment responsibility	✓						
Maintain land records	✓						
Personal property tax revenue		✓					
Proration of personal property		✓					
Revenue from miscellaneous taxes			✓				
Number of business licenses issued			✓				
Number of returns filed locally				✓			
Non-administrative staff							✓

*Staffing standard is based on staff per capita.

Source: JLARC staff analysis of survey data and data from secondary sources.

Figure 1 (Continued)

Summary of Workload Factors Examined for Use in Commissioner of Revenue Office Staffing Standards

Key:

- ✓ Special Adjustments Made in Staffing Standards
- ● Tested but No Special Adjustment in Staffing Standards
- ☐ Not Applicable

Factors Examined but Excluded as Special Adjustments in the Standards	Services						
	Real Property Taxes	Personal Property Taxes	Miscellaneous Taxes, Fees	State Income Taxes	Providing Assistance to Local Government	Providing Assistance to State Agencies	Office Administration
Mapping updates done by office	●						
Reassessment Responsibility	●						
Responsibility for reassessment appeals	●						
Real property tax revenue	●						
Number of parcels of land	●						
New construction appraisals	●						
Number of real estate transfers	●						
Applications processed for tax relief	●						
Applications processed for land use		●					
Investigation for unreported property		●					
Selling motor vehicle decals		●					
Motor vehicle license tax revenue		●					
Number of registered motor vehicles		●					
Number of personal property returns		●					
Number of machinery and tools assessments			●				
Number of businesses assessed for meals and lodging taxes			●				
Locality has utility tax			●				
Locality has merchant's capital tax			●				
Number of declarations of estimated income forms filled out				●			
Number of returns filled out				●			
Percentage of returns screened with mistakes				●			
Number of returns processed				●			
Number of tax due returns processed				●			
Number of taxpayers assisted				●			
Number of assessments of estimated income taxpayers				●			
Use of Automation					●	●	

*Staffing standard is based on staff per capita.

Source: JLARC staff analysis of survey data and data from secondary sources.

tion, three times the personal property tax revenues, more than five times the miscellaneous tax revenues, and twice the locally-filed State income tax returns. When the staffing standards are applied, Culpeper receives 1.8 times as many positions as Appomattox (6.9 in Culpeper compared to 3.9 in Appomattox), reflecting Culpeper's greater workload. The ratio under the proposed standards for Culpeper compared to Appomattox is not higher than 1.8 due to the effects of economies of scale.

Table 3

Number of Commissioner of Revenue Positions Based on Staffing Standards

Service Category	Number of FTEs*	Percentage of Total Positions
Assessing Personal Property	437.7	32.8%
Assessing Real Property	280.5	21.1
State Income Taxes	283.2	21.3
Assessing Miscellaneous Local Taxes	205.1	15.4
Office Administration	83.6	6.3
Assistance to Local Official	26.0	1.9
Assistance to State Agencies	16.2	1.2
TOTAL STATEWIDE STAFFING DERIVED FROM STANDARDS	**1,332.3**	**100.0%**
COMPENSATION BOARD RECOGNIZED POSITIONS, FY 1990	935.0	
CURRENT POSITIONS, STATE AND LOCAL	1,372.9	
FTE POSITIONS OFFICERS WANT**	1,462.2	

*Data include the principal officers.

**Data based on current State and local positions plus additional positions identified by the offices responding to the JLARC survey.

Table 4

Examples of Improved Allocation of Recognized Positions for Commissioner of Revenue Offices

(Offices that are compared do not handle general reassessments)

	Illustrative Measures of Workload					
	Population	Personal Property Tax Revenues	Revenue Miscellaneous Taxes	Locally Filed State Returns	**Compensation Board Approved FTEs**	**Proposed Standard Based Positions**
Appomattox	12,400	$ 521,972	$ 480,023	4,593	**4.3**	**3.9**
Culpeper	25,800	1,615,147	2,723,621	9,034	**4.2**	**6.9**
Giles	17,100	876,714	1,899,137	5,245	**5.0**	**5.0**
Amherst	28,900	1,092,859	2,231,256	8,725	**5.0**	**7.1**
Page	20,600	573,767	1,350,933	5,706	**6.3**	**5.5**
James City	32,800	3,155,426	6,919,709	11,412	**6.2**	**9.5**

Sources: The University of Virginia's Center for Public Service 1988 provisional population estimates; Auditor of Public Accounts and Commissioner on Local Government data on local revenues; Department of Taxation data on State income tax locally filed returns; Compensation Board recognized position data for 1989-90; and JLARC proposed staffing standards.

Chapter I also showed that Giles and Amherst counties have the same number of Compensation Board recognized FTE positions (5.0). Yet, Amherst has 69 percent more population, 25 percent more personal property tax revenues, 17 percent more miscellaneous tax revenues, and 66 percent more locally-filed State income tax returns. When the staffing standards are applied, Amherst receives 1.4 times as many positions as Giles (7.1 positions in Amherst compared to 5.0 positions in Giles).

The James City commissioner office has 6.2 Compensation Board-recognized positions, and the Page commissioner office has 6.3 Compensation Board-recognized positions. Yet James City has 59 percent more population, more than five times the personal property tax revenues, five times the miscellaneous tax revenues, and twice as many locally-filed State income tax returns. When the staffing standards are applied, James City receives 1.7 times the positions as Page (9.5 positions in James City compared to 5.5 positions in Page).

Table 5 shows the allocation of positions using the staffing standards to each of the commissioner of revenue offices in the State.

Table 5

Current and Proposed State Recognized FTE Positions for Commissioner of Revenue Offices

Office	State Recognized FTE Positions Current	Proposed	Office	State Recognized FTE Positions Current	Proposed
Accomack	4.130	6.493	Isle of Wight	4.339	6.942
Alleghany	6.000	4.202	James City	6.178	9.463
Amelia	3.000	3.024	King and Queen	3.000	2.512
Amherst	5.044	7.084	King George	4.182	4.085
Appomattox	4.337	3.911	King William	3.091	3.320
Arlington	31.000	51.147	Lancaster	4.000	3.302
Augusta	11.109	12.743	Lee	4.372	5.991
Bath	3.156	2.260	Loudoun	13.907	17.051
Bedford (County)	7.555	9.187	Louisa	4.055	5.119
Bland	2.451	2.387	Lunenburg	3.000	3.577
Botetourt	3.000	5.650	Madison	2.052	2.759
Brunswick	3.132	4.627	Mathews	3.000	3.057
Buchanan	4.689	8.235	Mecklenburg	5.568	6.915
Buckingham	3.436	3.743	Middlesex	3.244	3.177
Campbell	8.996	10.731	Montgomery	10.168	13.105
Caroline	5.923	5.389	Nelson	3.109	3.757
Carroll	4.831	5.480	New Kent	3.055	3.069
Charles City	2.311	2.855	Northampton	4.324	4.332
Charlotte	3.052	2.954	Northumberland	3.161	3.091
Chesterfield	24.732	38.549	Nottoway	3.055	4.282
Clark	3.266	3.310	Orange	4.000	5.921
Craig	2.061	1.804	Page	6.268	5.456
Culpeper	4.156	6.908	Patrick	4.583	5.152
Cumberland	2.116	2.376	Pittsylvania	7.960	11.493
Dickenson	5.216	5.294	Powhatan	3.311	4.371
Dinwiddie	3.601	6.081	Prince Edward	4.000	4.674
Essex	3.114	3.249	Prince George	3.499	4.654
Fairfax (County)	99.648	253.919	Pulaski	6.135	7.827
Fauquier	10.232	11.281	Rappahannock	2.224	2.595
Floyd	2.279	2.253	Richmond (County)	2.321	2.937
Fluvanna	3.055	3.023	Roanoke (County)	11.364	13.257
Franklin (County)	7.000	8.637	Rockbridge	4.162	5.138
Frederick	8.145	10.203	Rockingham	10.426	12.228
Giles	5.000	4.972	Russell	5.276	7.175
Gloucester	6.709	8.088	Scott	3.190	5.014
Goochland	2.475	4.395	Shenandoah	5.171	6.705
Grayson	4.156	3.352	Smyth	5.127	7.216
Greene	2.130	3.032	Southampton	3.218	4.656
Greensville	3.601	3.567	Spotsylvania	8.768	11.860
Halifax	5.000	6.900	Stafford	7.724	12.167
Hanover	11.166	14.186	Surry	3.058	2.699
Henry	10.000	13.380	Sussex	3.078	3.533
Highland	2.000	1.324	Tazewell	7.290	10.587

(Continues on next page)

Table 5 (Continued)

Current and Proposed State Recognized FTE Positions for Commissioner of Revenue Offices

Office	State Recognized FTE Positions Current	Proposed	Office	State Recognized FTE Positions Current	Proposed
Warren	6.412	6.959	Hopewell	5.128	5.199
Washington	6.389	10.022	Lexington	2.027	2.948
Westmoreland	5.242	4.528	Lynchburg	9.377	13.155
Wise	9.000	9.648	Manassas	5.000	5.942
Wythe	4.402	6.138	Manassas Park	3.026	2.750
York	9.695	11.347	Martinsville	6.000	6.266
Bedford (City)	2.281	2.714	Newport News	23.677	34.489
Bristol	4.809	7.219	Norfolk	38.607	50.293
Buena Vista	2.055	2.793	Norton	2.000	2.264
Charlottesville	9.487	8.546	Petersburg	8.100	7.703
Chesapeake	21.448	32.508	Poquoson	3.111	3.237
Clifton Forge	2.417	2.360	Portsmouth	23.312	21.987
Colonial Heights	4.100	4.707	Radford	3.000	4.373
Covington	3.116	3.036	Roanoke (City)	15.546	18.095
Danville	10.399	10.345	Salem	5.311	5.399
Emporia	2.321	2.912	South Boston	2.101	2.702
Fairfax (City)	6.213	5.474	Staunton	6.156	5.580
Falls Church	5.000	4.448	Suffolk	8.000	9.096
Franklin (City)	2.194	3.415	Virginia Beach	41.946	93.546
Fredericksburg	5.918	7.433	Waynesboro	4.000	4.706
Galax	2.104	2.863	Williamsburg	3.193	3.274
Hampton	17.927	25.238	Winchester	6.139	7.957
Harrisonburg	6.282	8.202			
			State	934.991	1,332.222

Sources: Compensation Board recognized position and temporary funding data for 1989-90, and JLARC staff analysis of workload and staffing data.

RESULTS OF THE STAFFING ANALYSIS FOR TREASURERS

Figure 2 summarizes the factors that are included and excluded as special adjustments in the staffing standards for each of the service categories for treasurers. Factors that were tested for a service category and included in the standards are shown with a "check." Factors which were not included are shown with a "dot" in the service category column. Chapter IV discussed the statistical rationale for including or excluding these factors.

Although certain workload indicators were excluded from the staffing standards, the staff time spent on all activities is still captured by the standards. This is because the total time that is spent on all activities in each service category are allocated through the regression equations to the workload indicators that are included in the staffing standards.

The regression equations that are used as the staffing standards are shown in Appendix B. Based on the staffing standards, a total of 1,155.9 FTEs are calculated for the treasurer offices (Table 6). This figure is 3.6 positions less than the current number of FTEs in the treasurer offices, but is an increase of 302.0 positions over the current Compensation Board-recognized positions. As shown in Table 6, the majority of treasurer time (67.5 percent) is spent on the collection and custody of local funds.

Table 7 shows the ability of staffing standards to improve equity in the distribution of positions when these standards are applied to the same offices used as illustrations in Chapter I. Richmond County and Orange County, for example, have approximately the same number of Compensation Board-recognized FTE positions (3.1 and 3.4 recognized positions respectively). Yet Orange had almost three times the population, more than twice the number of parcels billed, two times the penalty dollars collected with interest, and three times the tax due returns filed locally. When the staffing standards are applied, Orange receives more positions than Richmond County (4.6 in Orange compared to 2.9 in Richmond County), reflecting Orange's greater workload.

Chapter I also showed that Falls Church had more Compensation Board-recognized positions than Fredericksburg (4.1 in Falls Church, 3.3 in Fredericksburg). Yet Fredericksburg had twice the population, 70 percent more parcels billed, 23 percent more penalty dollars collected with interest, and 37 percent tax due returns filed locally. When the staffing standards are applied, Fredericksburg receives 1.6 times as many positions as Falls Church (5.6 positions in Fredericksburg compared to 3.5 positions in Falls Church).

Newport News and Chesterfield have similar Compensation Board recognized FTE positions (25.0 and 24.9 positions respectively). However, Chesterfield has 15 percent more population, almost twice the number of parcels billed, two and a half

Figure 2

Summary of Workload Factors Examined for Use in Treasurer's Staffing Standards

Key:

- ✓ Tested and Included in Staffing Standards
- ● Tested and Excluded from Staffing Standards
- ☐ Not Applicable

	Services					
	Collection and Custody of Local Funds	State Income Taxes	Other State Revenues	Assistance to Local Officials	Assistance to State Agencies	Office Administration
Factors Included as Special Admustments in the Standards						
Population*	✓	✓	✓	✓	✓	
Population (economy of scale)	✓	✓	✓	✓	✓	
Number of parcels billed	✓					
Penalties and interest collected	✓					
Number of utility bills collected	✓					
Total local revenues	✓					
Tax-due returns filed locally		✓				
Number of estimated income tax accounts maintained		✓				
Factors Examined but Excluded as Special Adjustments in the Standards						
Number of businesses, license tax collected	●					
Revenue figures for various local taxes	●					
Parcels in relief, or in land use	●					
Personal property returns	●					
Proration	●					
Motor vehicle licenses sold	●					
Motor vehicles registered	●					
Treasurer sells auto decals	●					
Locality has BPOL	●					
Locality has merchant's capital	●					
Parking fines collected	●					
Interest on property taxes	●					
Number of delinquent taxpayers	●					
Court actions initiated on unpaid bills	●					
Treasurer prints, mails bills	●					
Accounts in debt set-off		●				
Number tax returns collected		●				
Estimated returns collected		●				
Tax returns filed locally		●				
Treasurer mails out tax package		●				
Non-administrative staff						●
Use of Automation				●		

* Staffing standard is based on staff per capita.

Source: JLARC staff analysis of survey data and data from secondary sources.

Table 6

Number of Treasurer Positions Based on Staffing Standards

Service Category	Number of FTEs*	Percentage of Total Positions
Collection and Custody of Local Funds	780.3	67.5%
State Income Taxes	144.9	12.5
Office Administration	130.3	11.3
Assistance to Local Officials	55.3	4.8
Other State Revenues	23.8	2.1
Assistance to State Agencies	21.3	1.8
TOTAL STATEWIDE STAFFING DERIVED FROM STANDARDS	**1,155.9**	**100.0%**
COMPENSATION-BOARD RECOGNIZED POSITIONS, FY 1990	853.9	
CURRENT POSITIONS, STATE AND LOCAL	1,159.5	
FTE POSITIONS OFFICERS WANT**	1,252.0	

*Data include the principal officers.

**Data based on current State and local positions plus additional positions identified by the offices responding to the JLARC survey.

Source: JLARC staff analysis of staffing data.

Table 7

Examples of Improved Allocation of Recognized Positions for Treasurer Offices

	Illustrative Measures of Workload					
	Population	Number of Parcels Billed	Penalties Collected and Interest (dollars)	Tax Due Returns Filed Locally	**Compensation Board Approved FTEs**	**Proposed Standard Based Positions**
Richmond County	7,400	5,901	$ 33,209	336	**3.1**	**2.9**
Orange	20,900	14,488	67,519	1,042	**3.4**	**4.6**
Falls Church	10,100	3,600	74,688	694	**4.1**	**3.5**
Fredericksburg	21,500	6,127	91,867	949	**3.3**	**5.6**
Newport News	162,800	44,130	447,305	5,386	**25.0**	**27.9**
Chesterfield	187,100	83,070	1,102,723	6,739	**24.9**	**39.4**

Sources: The University of Virginia's Center for Public Service 1988 provisional population estimates; Auditor of Public Accounts and Commissioner on Local Government data on local revenues; Department of Taxation data on State income tax locally filed returns for which taxes were owed; Compensation Board recognized position and temporary funding data for 1989-90; and JLARC proposed staffing standards.

times the penalty dollars collected with interest, and 25 percent more tax due returns filed locally. When the staffing standards are applied, Chesterfield receives 1.4 times the positions as Newport News (39.4 positions compared to 27.9 positions).

Table 8 shows the allocation of positions using the staffing standards to each of the treasurer offices in Virginia.

Table 8

Current and Proposed State Recognized FTE Positions for Treasurers

Office	State Recognized FTE Positions Current	Proposed	Office	State Recognized FTE Positions Current	Proposed
Accomack	5.112	7.71	Isle of Wight	5.586	6.46
Alleghany	5.281	4.55	James City	6.059	7.91
Amelia	2.158	3.02	King and Queen	2.000	2.81
Amherst	3.199	4.70	King George	4.123	4.14
Appomattox	4.245	3.38	King William	2.552	3.11
Arlington	42.184	59.91	Lancaster	4.235	3.80
Augusta	6.368	8.97	Lee	4.197	4.08
Bath	3.000	2.69	Loudoun	13.084	16.19
Bedford (County)	5.264	7.60	Louisa	4.192	5.21
Bland	2.187	2.62	Lunenburg	2.180	3.19
Botetourt	4.083	4.07	Madison	2.112	3.09
Brunswick	4.032	4.10	Mathews	3.092	3.61
Buchanan	6.525	6.45	Mecklenburg	4.593	5.71
Buckingham	4.056	3.47	Middlesex	3.056	3.56
Campbell	5.050	7.59	Montgomery	11.227	12.82
Caroline	5.118	5.63	Nelson	3.110	4.07
Carroll	5.459	5.37	New Kent	3.123	3.54
Charles City	2.511	2.73	Northampton	4.080	3.79
Charlotte	3.042	3.37	Northumberland	3.660	4.36
Chesterfield	24.886	39.38	Nottoway	3.232	3.60
Clark	3.056	3.26	Orange	3.354	4.64
Craig	2.059	2.04	Page	4.158	4.72
Culpeper	4.000	4.80	Patrick	3.316	4.55
Cumberland	2.246	3.05	Pittsylvania	6.554	8.96
Dickenson	4.468	4.50	Powhatan	3.474	3.42
Dinwiddie	3.281	4.32	Prince Edward	3.450	3.41
Essex	3.179	3.31	Prince George	4.169	4.57
Fairfax (County)	50.884	131.12	Pulaski	6.079	6.25
Fauquier	5.099	8.76	Rappahannock	2.225	2.72
Floyd	2.272	3.37	Richmond (County)	3.067	2.92
Fluvanna	3.246	3.77	Roanoke (County)	10.354	14.04
Franklin (County)	4.553	6.76	Rockbridge	4.158	4.29
Frederick	4.842	8.85	Rockingham	7.290	10.90
Giles	4.079	4.14	Russell	4.689	5.10
Gloucester	6.562	5.49	Scott	4.046	3.38
Goochland	3.000	4.10	Shenandoah	5.084	6.02
Grayson	3.300	3.70	Smyth	4.501	4.91
Greene	3.031	3.09	Southampton	4.000	4.55
Greensville	3.283	3.12	Spotsylvania	8.780	12.82
Halifax	5.198	5.30	Stafford	7.736	16.11
Hanover	9.260	13.81	Surry	3.212	2.91
Henry	9.502	9.51	Sussex	3.103	3.19
Highland	2.000	1.53	Tazewell	6.598	8.65

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Table 8 (Continued)

Current and Proposed State Recognized FTE Positions for Treasurers

Office	State Recognized FTE Positions Current	Proposed	Office	State Recognized FTE Positions Current	Proposed
Warren	3.525	4.94	Lexington	2.307	2.77
Washington	6.132	8.88	Lynchburg	3.000	2.67
Westmoreland	4.623	6.86	Manassas	5.402	8.29
Wise	8.123	7.74	Manassas Park	3.027	3.24
Wythe	4.089	3.45	Martinsville	4.000	6.78
York	10.394	8.56	Newport News	25.000	27.91
Bedford (City)	3.154	4.31	Norfolk	37.910	44.71
Bristol	3.219	4.53	Norton	2.000	2.63
Buena Vista	3.000	3.17	Petersburg	8.000	9.66
Charlottesville	7.450	13.03	Poquoson	4.073	3.23
Chesapeake	25.523	40.79	Portsmouth	18.674	26.11
Clifton Forge	2.105	2.53	Radford	3.000	4.78
Colonial Heights	4.342	4.73	Richmond (City)	6.000	6.02
Covington	3.212	3.66	Roanoke (City)	16.250	19.24
Danville	5.464	5.35	Salem	4.636	4.60
Emporia	2.326	2.98	South Boston	3.032	3.42
Fairfax (City)	6.045	6.80	Staunton	5.159	5.76
Falls Church	4.109	3.51	Suffolk	9.522	8.42
Franklin (City)	3.065	4.26	Virginia Beach	47.084	94.47
Fredericksburg	3.265	5.64	Waynesboro	4.163	6.29
Galax	2.000	0.74	Williamsburg	2.058	1.69
Hampton	19.162	22.73	Winchester	5.173	5.72
Harrisonburg	5.645	6.77			
Hopewell	5.376	4.49	State	853.868	1,155.84

Sources: Compensation Board recognized position and temporary funding data for 1989-90, and JLARC staff analysis of workload and staffing data.

RESULTS OF THE STAFFING ANALYSIS FOR DIRECTORS OF FINANCE

Through the regression analysis, the impact of potential workload factors on staffing levels in each service category for directors of finance were tested, and the most important factors identified. Based on this analysis, JLARC staff derived a set of standards for use in determining the number of FTE positions that the State should recognize in each director of finance office. Appendix B provides the staffing standards for each population stratum.

A comparison of the results of the staffing standards with current Compensation Board recognized FTE positions is shown for each office in Table 9. Based on the staffing standards, total statewide staffing for director of finance offices would be 409 FTE positions (Table 10).

The total number of positions for directors of finance using the staffing standards is 80.3 positions less than the current number of FTEs in the offices. The staffing standards that were developed were designed to provide treatment for directors of finance that would be equitable with commissioners of revenue and treasurers. Therefore, the positions that are calculated do not include positions that may be needed in these offices to meet local government expectations for services that go beyond those services which commissioners of revenue and treasurers typically provide. The need for additional positions to meet the additional demands of local governments is an issue appropriately resolved by the local governments and the directors of finance.

Table 9

Current and Proposed State Recognized FTE Positions for Directors of Finance

Office	State Recognized Positions Current	Proposed
Albemarle	26.000	27.758
Henrico	56.669	98.755
Prince William	29.341	91.975
Alexandria	39.000	79.827
Richmond	60.000	118.050
State	211.010	416.365

Sources: Compensation Board recognized position and temporary funding data for 1989-90, and JLARC staff analysis of workload and staffing data.

Table 10

Number of Director of Finance Positions Based on Staffing Standards

Service Category	Number of FTEs*	Percentage of Total Positions
Collection and Custody of Local Funds	176.5	43.1%
Assessing Personal Property	5.5	18.5
Assessing Miscellaneous Local Taxes	43.2	10.5
Assessing Real Property	40.9	10.0
Office Administration	37.3	9.1
State Income Taxes	16.6	4.1
Assistance to Local Officials	12.8	3.1
Assistance to State Agencies	3.1	0.8
Other State Revenues	3.1	0.8
TOTAL STATEWIDE STAFFING DERIVED FROM STANDARDS	**409.0**	**100.0%**
COMPENSATION BOARD RECOGNIZED POSITIONS, FY 1990	211.0	
CURRENT POSITIONS, STATE AND LOCAL	489.3	
FTE POSITIONS OFFICERS WANT**	512.8	

*Data include the principal officers.

**Data based on current State and local positions plus additional positions identified by the offices responding to the JLARC survey.

STAFFING ECONOMIES COULD BE ACHIEVED THROUGH STATE PROCESSING OF STATE INCOME TAX RETURNS

The staffing standards for commissioners, treasurers, and directors of finance, and the FTE positions that have been shown for those offices, are based on the inclusion of State income tax processing and assistance work. However, data indicate that the processing of State income taxes at the local level is not efficient, and position savings are possible if the processing function is performed completely by the Department of Taxation. The taxpayer assistance role of the commissioner of revenue would not change.

Current Roles in Virginia's State Income Tax Administration

The State's Department of Taxation and the local financial officers are both currently involved in the administration of the State income tax. In calendar year 1989, 1,579,506 State income tax returns (55 percent) were sent directly to the Department of Taxation, and 1,274,359 State income tax returns (45 percent) were filed locally with commissioners of revenue.

The *Code of Virginia* provides for commissioner and treasurer involvement in the administration of State income taxes. For example, §58.1-305 requires that "each commissioner of the revenue shall obtain an income tax return for every individual or fiduciary within his jurisdiction who is liable under the law to file such a return with him." Section 58.1-306 indicates that individuals or fiduciaries may file with the Department of Taxation and the department may then assess the tax, but:

> in every such case the Department, however, shall advise the appropriate commissioner of the revenue of such action. The Department shall not by any means whatsoever, either directly or indirectly, in its bulletins, instructions, publications or otherwise, request, promote or solicit, in any local jurisdiction, unless requested by the commissioner of the revenue or assessing officer thereof on or before September 1 of each year, the filing of such state income tax return with the Department.

Commissioners of revenue open, sort, screen, and code returns before sending the returns to the Department of Taxation. In addition, they may mail out the tax packets at the beginning of the year (57 offices do this), fill out the returns at the taxpayer's request, and/or answer taxpayer questions.

When there are checks attached to the returns, the commissioners transmit the checks to the local treasurer. To do this, the commissioner of revenue must prepare and transmit the appropriate paperwork.

The local treasurers have the responsibility for depositing the checks in State accounts. The treasurers must prepare the paperwork that is necessary for this transaction. Treasurers are also involved in some collection work for State income tax payments.

Uniqueness of Virginia's Local Participation in Processing Returns

The participation of local officials in Virginia in the administration of the State income tax is unique. A JLARC staff survey of northeastern and southeastern states indicated that of the 17 states contacted that had a State income tax, none had local officials involved in the administration of the tax. The most common approach in other states was to have regional offices for providing taxpayer assistance or tax enforcement assistance, and to have the central office perform all processing work and some tax assistance.

Staffing Economies Achievable Through Central Processing

Substantial resources at the local level are devoted to State income tax work. Statewide, the constitutional officers estimate that 445 FTEs in commissioner of revenue, treasurer, and director of finance offices are spent on State income tax work (14.7 percent of all local financial office FTEs). There are 82 FTEs involved in taxpayer assistance, such as answering questions or filling out returns for the taxpayer. The remaining 363 FTEs are involved in the processing of returns.

JLARC staff requested the Department of Taxation to provide an estimate of the number of FTEs which would be required for the department to assume the processing work that is currently done at the local level. The department's estimate is that 97 FTEs would be required for the department to assume the processing and collections work.

Thus, an estimated 266 FTE positions could be saved through central processing. This estimate is derived by taking the 363 positions performing the work in the field, and subtracting the 97 FTEs that the department estimates would be required to process the locally-filed returns.

Benefits of Eliminating Local Processing of Returns

The estimated savings from transferring the local processing of State income tax returns to the State are considerable. It is estimated that the savings for staffing in the next biennium could range from $8.7 to $14.8 million, depending on the State and local staffing levels finally approved by the General Assembly.

Central processing of all returns would eliminate the duplication of effort involved when the department needs to rescreen returns. Due to differences in the volumes of returns handled, the department can achieve economies of scale in the processing work that commissioners cannot achieve. The mailing of returns directly

processing work that commissioners cannot achieve. The mailing of returns directly means that the checks for tax balances due go directly to the State also, eliminating the need for local treasurers to spend time in trips to the bank and paperwork to account for the transactions. Local treasurers currently devote 157 FTEs to this work, that is only required because the returns are locally filed.

There are additional benefits besides the substantial cost savings. The mailing of returns directly would eliminate the delay in the depositing of the checks to State accounts. Delays in the deposits of the checks that are received locally can occur when there is a delay in the transmittal of the checks from the commissioner to the treasurer office. And there may be an additional delay if the local treasurer receives the check but does not deposit it promptly in a State account.

Also, with the amount and redundancy of paperwork that is currently required to handle the transactions locally, some offices at the local level are turning to the development of automated systems that will be expensive, and would not be needed if returns were processed centrally. For example, Chesterfield County has recently completed a feasibility study of the automation of their State income tax work. The commissioner of revenue, the treasurer, and the local government are currently considering a computer system that would cost approximately $500,000 in local money. Automation at the local level which duplicates the capability of the Department of Taxation would not be necessary if all returns were processed centrally.

While in the past there have been concerns that centralized processing would result in a decreased level of service for taxpayers that file returns locally, the benefits of filing locally appear to have been overstated. To minimize the inefficiency and duplication of effort, the Department of Taxation already discourages commissioners of revenue from checking returns for errors, as the data from all returns are entered by DOT onto a computer system and checked for errors. Some commissioner of revenue offices check the returns for errors anyway, and some do not. Department of Taxation analysis indicates an error rate of 14 percent for the locally filed returns received by the department from the commissioners of revenue (the error rate is 23 percent for the returns it receives directly). The 14 percent error rate indicates the extent to which commissioner of revenue offices do not check the returns for errors, or check the returns incorrectly.

Conclusion

Commissioners of revenue should continue to be involved in taxpayer assistance activities. This arrangement appears to be a reasonable alternative to performing the work through local or regional offices of the Department of Taxation. However, commissioners and treasurers should not be involved in the processing of returns. The local officials report devoting 363 full-time equivalent positions to processing returns, a workload which the Department of Taxation estimates could be handled by only 97 full-time equivalent positions at the State level. The estimated cost savings of centralized processing would be 266 full-time equivalent positions, or net cost savings of between $8.7 and $14.8 million in 1990-1992.

Part Two: Technical Analysis Of Staffing Standards

III. General Approach to the Development of Standards

In order to determine staffing standards for financial officers, data on staffing and workload were subjected to rigorous statistical analyses to determine their interrelationships. Correlation and regression analyses — standard statistical techniques — were used to determine the workload indicators which were most closely related to the staffing of financial offices, so that these indicators could be used in developing staffing standards.

This chapter describes in general terms the technical approach used, beginning with some basic definitions of correlation and regression analysis, and moving to a discussion of how these techniques were applied. The next chapter will discuss in more specific terms how the analysis was used to derive staffing standards within the different service categories.

Overview of Correlation and Regression Analyses

In a staffing analysis, it can generally be expected that the greater the amount of work, the greater the amount of staff time that is required. This expectation illustrates the difference between an independent and a dependent variable. The amount of staff time is the dependent variable, because it is expected that the staff time that is required depends on, or is an outcome of, the amount of work that is performed. On the other hand, the amount of work is the independent variable, because it is not dependent on the staff time required.

Correlation and regression analyses are commonly used statistical techniques for measuring the relationships between factors, such as the number of staff and workload. Correlation analysis is a standard statistical technique which measures the strength and direction of the relationship between two variables. It can be used to measure the strength of the relationships between all possible pairings of the factors under study. It can show whether there is a positive relationship between the variables (as the one variable increases, the other variable increases); whether there is a negative or inverse relationship between the variables (as the one variable increases, the other variable decreases); or whether there is no measurable relationship between the variables.

Regression analysis is a standard statistical technique which can be used to further analyze the relationship between a dependent variable and one or more independent variables. It has been used as a technique to determine staffing or funding formulas at various levels of government. For example:

- The Administrative Office of the U.S. Courts uses regression analysis to produce staffing formulas for clerks of court in the U.S. District Courts.

- The State uses regression analysis to determine law enforcement funding under Title 14.1, Article 10 of the *Code of Virginia*.

- The Center for Public Service at the University of Virginia uses regression analysis to produce population estimates, which in turn are used in State funding formulas such as the composite index for education.

Regression analysis produces an equation which best summarizes how much impact the independent variables have in increasing or decreasing the dependent variable. The equation contains a "constant," which represents the value of the dependent variable when all the independent variables are equal to zero. The equation also contains "coefficients" for each independent variable. The coefficients indicate the weight that each independent variable has in causing the dependent variable to increase or decrease.

In addition to the equation that is produced, regression analysis provides a measure of the strength of the relationship between the dependent variable and the independent variables. This measure is designated as the R^2, a statistic which can range from zero to one. The statistic indicates the percentage of the variation in the dependent variable which is explained by the independent variables, based on the regression equation. For example, if a staffing regression equation has an R^2 of .40, it means that the combination of independent variables (workload indicators) account for 40 percent of the difference that can be observed in the dependent variable (staffing) from one locality to the next.

The objective of using regression analysis in a staffing study is to include in the regression model the workload factors that explain variations in the staffing levels. There are factors other than workload factors that may explain variations in staffing, such as the effectiveness of offices in gaining positions from the Compensation Board, or the levels of service that offices choose to provide. These are factors that affect current staffing, but should not be part of staffing standards. Thus, the objective of the regression analysis is not to capture 100 percent of the variation in staffing between the offices. Such a model would continue staffing exactly as it is. The objective of the regression analysis is to capture the variation that is related to the workload performed.

Collection of Staffing and Workload Data for the Analysis

The first step in developing staffing standards was to collect data on staff time and workload of the financial officers. To obtain this data, JLARC staff collected data from a number of secondary sources and surveyed all of the financial officers.

Survey Data. To develop staffing standards, data were needed on how time is spent in the offices, and on workload. The State does not collect time allocation data from financial officers, and most officers do not have records of the staff time spent. Therefore, the commissioners, treasurers, and directors of finance were requested to provide estimates of the proportion of their time and their staff's time that is spent providing different services.

JLARC staff developed detailed listings of office activities, through reviews of the Code of Virginia; interviews with financial officers, the staff of the Compensation Board, and other individuals knowledgeable about the offices; and a review of financial officers' survey responses to a previous legislative study. For the previous legislative study (House Document 29, 1988), the financial officers provided information on a wide range of activities that they perform.

The detailed listings of activities developed by JLARC staff were organized by the staff into "service categories." The service categories were groupings of similar activities. A purpose of the service categories was to organize the activities into a manageable number of categories, such that the financial officers could provide estimates of the staff time spent on the categories.

JLARC staff then developed a comprehensive survey instrument to send to the financial officers. Separate survey instruments were developed for commissioners of revenue, treasurers, and directors of finance. The survey instruments requested time estimates for the service categories. To obtain greater consistency in responses, detailed listings of examples of the activities that should be included in each service category were provided as part of the survey. Before sending the survey to all of the offices, JLARC staff pre-tested the instrument with 20 financial officers.

The financial officers were asked to report on the survey the staff time of all positions, both State and locally funded, in their offices so that total staff performing the work could be taken into account. The principal officers were asked to allocate to the service categories their own time, the time of their full-time staff, the time of part-time employees, the time of temporary help, and compensated overtime.

As part of the survey, JLARC staff also collected data on workload in terms of units of work produced (such as the number of motor vehicle decals sold or the number of accelerated refund forms screened). The data collected consisted of the potential workload indicators that were not already collected by other State agencies.

Workload Data Obtained from Other Sources. Data from many different State agencies were relevant to the study. Workload data provided by the officers to the Compensation Board on annual budget request forms were obtained for all of the financial officers. Other data obtained from State agencies included: population estimates from the University of Virginia's Center for Public Service; data on local revenues from the Auditor of Public Accounts and the Department of Taxation; and data on State income tax returns from the Department of Taxation.

Use of Staffing and Workload Data to Develop Standards

There were several components to the analysis of staffing standards. First, the data in almost all service categories were standardized. Standardization of the data involved transforming the workload and staffing data into "rates," such as workload per unit, or the number of staff per unit. In most cases, the population of the locality served by the financial officer was used as the standardizing unit.

After standardizing by population, the relationships could be examined between the amount of workload per capita and the staff time spent per capita. Some workload indicators had a stronger intuitive basis for their expected relationship with per-capita staffing than others. All workload indicators with a compelling intuitive basis were tested using regression analysis. Most workload indicators with a weaker conceptual basis were also tested by regression analysis. The exception was in service categories where there were large numbers of these weaker indicators. Correlation results on the standardized data were used as a screen in this situation. When the screen was applied, a workload indicator was identified for use in the regression analysis if it had a correlation with per-capita staffing in the hypothesized direction, and if it had a correlation coefficient that was greater than .2 or less than -.2.

Assessing Potential Standardizing Units. In examining the impact of different workload indicators on staffing, it is useful to control for the effect that size alone has on workload and on staffing. By using a factor to control for size, it is possible to identify for each workload indicator the effect that a high, moderate, or low amount of workload per unit has on the staffing per unit.

There should be an intuitive link between a factor that is selected to control for size, and the workload that is generated. In addition, correlation analysis can be used to help assess a standardizing factor, by providing a statistical measure of the strength and direction of the relationship between the potential standardizing factor and the staff time that is spent.

Correlation analysis indicated that for most service categories, the population of the locality had a fairly strong statistical correlation with staffing, and with the other workload indicators as well. The population of the locality that is served also had a strong intuitive link with the workload of the offices. These correlations appear intuitively correct: the demand for the services of the offices largely comes from the locality's population.

Thus, locality population was used to control for size in almost all of the service categories. This was done by dividing locality population into the number of full-time equivalent (FTE) staff (the dependent variable), and into all other potential workload indicators (the independent variables).

The correlation analysis was not used in the final selection of workload indicators for use in the staffing standards. Changes in the relationship of workload indicators to staffing can occur when several variables are tested simultaneously. A regression analysis, using the data in its standardized form, was applied to examine combinations of indicators, and to determine the staffing standards.

Examining Workload Indicators at the Statewide Level. After standardizing the data, the next step was to identify the most important workload indicators, based on an analysis of the data for all the offices. Correlation analysis was used in service categories with many indicators in order to screen some of the variables with weaker conceptual hypotheses and weaker statistical associations. Regression analysis was

then applied to further narrow the list of indicators. Logarithmic transformations of the data were performed to accommodate for the skewness of the data.

Two criteria were applied in selecting workload indicators for further examination. One criterion was that the direction of the regression coefficients had to indicate a meaningful association with staffing levels, when controlling for other selected workload indicators. For example, if a potential indicator was expected to have a positive effect on staffing levels, and the regression coefficient was indeed positive, then the indicator met the criterion. On the other hand, if the regression coefficient for the indicator was negative, producing a counterintuitive result, then the workload indicator was not examined further because it did not appear to show a meaningful relationship with staffing levels.

The second criterion was the strength of the association between the potential workload indicator and staffing levels, when controlling for other selected workload indicators. The strength of this association was measured by the change in the R^2 statistic when the potential indicator was added to the regression model. For example, if a potential workload indicator appeared to show at least a marginal association with staffing levels (that is, if it increased the R^2 by .02 or more) when controlling for other selected indicators, then it was examined further. Conversely, if an indicator showed a very weak association with staffing levels (with an increase in the R^2 of less than .02), this indicator did not help explain the differences in staffing levels, beyond using the other selected workload indicators. Therefore, this weak factor was not selected for further examination at the population strata level.

Examining Workload Indicators by Population Strata. The next step in the analysis was to examine how the remaining indicators performed once the offices were placed into smaller comparison groups. The offices were stratified into four groups, according to the size of the population in the locality served. The four groups were: 1 to 12,000; 12,001 to 26,000; 26,001 to 100,000; and more than 100,000. The selection of the four groups was based on the distribution of the localities in Virginia by population. The localities with populations of more than 100,000 represented a logical grouping at the high end of the distribution. The boundaries defining the other three population groups were chosen based on the population levels that would divide the remaining localities into three groups of roughly equal size. The use of four strata was considered appropriate to capture meaningful differences between offices based on size while maintaining enough localities within each group to allow for statistical analysis.

In each of the comparison groups, a separate regression equation was estimated. Within the comparison groups, the regression analyses that were performed were linear rather than logarithmic. At the stratum level, there is substantially less difference between linear and logarithmic regression results. This occurs because the spread of the data within each group is less than the spread in the data statewide. For each group, a linear regression can be used to quantify a linear relationship that is tailored for that group.

Based on the regression analysis, if a potential workload indicator showed counterintuitive effects across most strata (such as negative regression coefficients

that were expected to be positive), then there was reason to doubt how stable and reliable an indicator it would be for adjusting staffing levels. These indicators were not used. However, if a potential indicator showed a strong, intuitive effect in two or more strata, yet showed a counterintuitive effect in the remaining one or two strata, then the indicator was handled as a special case. Such an indicator was included in the strata in which it had an intuitive association, but dropped from each stratum in which it exhibited a counterintuitive association.

Examining Economy-of-Scale Effects. Regression analysis was used to test for the existence of economy-of-scale effects for all financial officer service categories. The expected economy-of-scale effect is that offices which handle greater volumes of work may use less staff per work unit than offices that handle smaller volumes of work. Thus, an economy-of-scale effect is expected to show a negative relationship between the work volume and the staff required per work unit.

In the regression analysis, the most frequently used method of examining economy-of-scale effects involved the use of population. There were two steps. First, as was generally done throughout the analysis, the number of staff was standardized by population. This was done so that per-capita staffing could be examined as the dependent variable. Then population was used as an independent variable, to examine the relationship between population and per-capita staffing. The presence of an economy-of-scale effect was indicated if per-capita staffing decreased as population increased.

Use of Regression Equations as Staffing Standards. As a result of the statistical analysis, JLARC staff were able to select the workload indicators with meaningful and intuitive relationships to staffing. The values of the regression coefficients in the regression equations, derived from stratifying the offices into the four comparison groups, quantify the relationship between the selected workload indicators and staffing levels. The regression equations are used in the study as the staffing standards.

Some workload indicators were excluded from the staffing standards for a service category, yet they represented activities that are performed in the offices. It is important to understand that this does not mean that the staffing standards fail to include staff time for these activities. The total time that is spent on all activities in the service category are allocated through the regression equation to those workload indicators that are included in the staffing standards.

IV. Developing Staffing Standards for Commissioners of Revenue

To develop staffing standards for the commissioners of revenue an analysis was conducted to determine the relationship between the number of full-time equivalent positions (FTEs) working in the offices and various workload indicators. To ensure that the workload measures were matched to the appropriate office staff, the analysis was conducted for separate groups of services.

JLARC staff research indicated that the specific duties of the commissioners of revenue could be divided into seven basic service categories. Data were collected for the staff time spent by the offices in these service categories, and for measures of workload that might affect staff time in the service categories. The service category data were then used in developing staffing standards for funding commissioners of revenue.

Data were collected from the commissioners of revenue on the time that is spent in the offices on seven service categories. The seven service categories were:

- real property taxes,
- personal property taxes,
- miscellaneous taxes and fees,
- State income taxes,
- providing assistance to local government,
- providing assistance to State agencies,
- office administration.

Relationships were then examined in each service category between staff time per capita and various workload indicators.

In developing the standards, population was used to standardize the workload and staffing data for almost all service categories. The selection of population was based on the strength of the intuitive relationship between population and staffing, and was also based on the strength of the statistical correlation between population and staffing.

Due to the large number of identified workload indicators in some service categories, a correlation analysis of the standardized data was used to screen the weaker intuitive indicators. After this screening, regression analysis was performed, first using statewide data, and then separating the offices into population groups. The regression analysis was used to determine the staffing standards.

Real Property Taxes

Real property taxes are assessed on land, buildings, and improvements to residences, commercial and industrial properties, agricultural properties, and public service corporation properties. Real property taxes provide approximately 43 percent of local revenues statewide.

With regard to real property taxes, the following activities are performed on a periodic basis in each locality: real estate appraisals, real estate assessments, and real estate reassessments. Real estate appraisal involves the attachment of a dollar value to a property for the purposes of computing taxes owed. Appraisal activities include site visits to verify the condition and other physical characteristics of the property, and the monitoring of sales of similar properties so that the fair market value of the property can be determined.

Real estate assessment and real estate reassessment involve computing the tax that is owed (by multiplying the appraised value of the property by the real estate tax rate), and levying those taxes on the property owner. The term "real estate reassessment" is used to refer to the computation of taxes for the years in which there is a general appraisal of all property in the locality. The term "real estate assessment" is used to refer to the computation of taxes in years that there is not a general appraisal of all property (although appraisals may be conducted of new construction or improvements).

There is diversity statewide in the responsibilities of commissioners for real property. For example, seven commissioner offices conduct reassessments, appraise property between reassessments, assess the taxes, and maintain the locality land records. Eighty-nine commissioner offices appraise property between reassessments, assess the taxes, and maintain the land records, but do not have responsibility for reassessments. Ten commissioner offices assess the taxes and maintain the land records, but do not have responsibility for reassessments and do not appraise property between reassessments. Four commissioner offices just maintain the land records; and 21 commissioner offices do not have real property responsibilities, with the exception of processing tax relief applications in some of these offices.

The Department of Taxation has indicated that due to the diversity of real estate responsibilities, the most equitable treatment for real property is for the State not to recognize real property positions. This is an option that is available to the State. However, for the purposes of the analysis, JLARC staff developed staffing standards to indicate differences in staffing that can result from differences in real property responsibilities. This was done for all types of real property responsibility except reassessment work, which was excluded.

JLARC staff used regression analysis to examine the relationships between different factors and per-capita staffing for real property tax work. The analysis indicated that the level of responsibility for real property was the primary factor that

needed to be taken into account. This factor was used in the staffing standards, by stratifying the offices based on real property responsibility rather than by population groups. The staffing standards that were developed were the mean per-capita staffing levels in each stratum. Other factors that were examined were not used in the staffing standards.

Stratification by Level of Real Property Responsibility. Major differences in the level of the commissioner of revenue offices' real property responsibility can be indicated by whether or not the offices are involved with the following: reassessments, appraisals, assessments, and maintaining land records. JLARC regression analysis at the statewide level showed that there is a strong relationship between real estate responsibilities and staff per capita.

In the regression analysis, the use of a variable identifying whether or not the office appraises real property explained 39 percent of the variation in per capita staffing for real property. The addition of a variable identifying whether or not the office performs the assessment of the taxes on real property provided a model explaining 52 percent of the variation. Adding a variable on whether or not the office maintains the land records produced a model explaining 64 percent of the variation; and adding a variable for whether or not the office reassesses produced a model explaining 67 percent of the variation.

The variables reflecting differences in real property responsibility were used to stratify the offices. The stratification based on real property responsibility controlled for differences between the commissioner's offices in their levels of responsibility. The stratification was not done based on locality population. In this case, the level of real property responsibility appeared to be a more fundamental difference between the offices than differences in locality size. For the strata of offices that performed reassessments, however, the staffing standard for the offices that perform appraisal work was used, so that the State's standards do not recognize reassessment work.

Factors Excluded from Special Adjustment in the Standards. Many factors other than those used to stratify based on real property responsibility were considered but were not used in the staffing standards. Some of the factors were rejected based on the screening using correlation analysis of the standardized data. Among these factors were: population as an economy-of-scale effect, real property revenues per capita, the responsibility for reassessment appeals, the number of applications for tax relief per capita, and the number of applications processed for land use per capita.

Other factors were rejected based on the regression results. These factors were tested at both the statewide level and using the real property responsibility strata. The factors that were rejected based on the regression analysis included: whether or not the office performed its own mapping; the number of reassessment appeals handled per capita; the true value of real property per capita; the number of parcels of land in the locality per capita; the number of property transfers per capita; and the number of new construction appraisals per capita.

Analysis of these variables at the stratum level indicated that none could be confidently applied in a staffing model. They were either too weakly related to per-capita staffing, or produced counterintuitive results.

The true value of property, the number of parcels, and the number of new construction sites were considered as alternative approaches for measuring the amount of assessment and appraisal workload in the localities. The regression analysis indicated that new construction had some strength when measured in the stratum in which the offices perform reassessments and appraisals; and true value, parcels, and new construction had some strength in the stratum in which the offices perform appraisals. However, when results were obtained showing that these variables had at least marginal (and in some cases stronger) relationships in the stratum for offices that do not perform appraisals, there was doubt as to the quality of the data for these variables. The general study approach of using caution in including variables in the staffing standards meant that these variables should be excluded. Thus, these variables were not used to adjust the mean per-capita staffing figures for each stratum.

Land transfers per capita were considered as a measure of the record-keeping activity that is associated with real property work. This variable was not used when the regression analysis produced counterintuitive results in which the variable was weakly related to staffing per capita for the stratum performing appraisals, negatively related to staffing per capita in the stratum performing assessments, and negatively related to staffing per capita in the stratum maintaining land records only.

Personal Property Taxes

Virginia localities impose taxes on personal property, such as automobiles, motorcycles, boats, mobile homes, and aircraft. Commissioners of revenue are responsible for assessing these taxes.

Factors Included as Special Adjustments in the Standards. The three key variables used in the staffing standards were:

- personal property revenues per capita,
- whether the locality prorates personal property taxes, meaning that the assessment of the tax is based on the length of time that the taxpayer owned the property in the jurisdiction,
- population as an economy-of-scale effect.

Data used for personal property revenues were data from the Auditor of Public Accounts. The expectation was that a larger personal property revenue tax base per capita would indicate a greater workload and increase personal property staffing per capita.

The use of proration in a locality was also expected to have a positive effect on staffing for personal property work. Some localities tax personal property on the basis of whether or not the taxpayers owned the property on a particular date. Other localities prorate, or assess the tax based on the length of time that the taxpayer owned the property in the jurisdiction. Proration was expected to have a positive effect on staffing because additional work is required to obtain the information that is necessary to implement proration, and the assessments that are made are more complex.

Population as an economy-of-scale effect was expected to have a negative effect. The expectation was that per-capita staffing would decrease as the population of the locality served increases.

At the statewide level, the regression analysis indicated that property revenues per capita, population as an economy-of-scale effect, and a variable indicating the presence of proration were all related to per-capita staffing. The three factors together explained 35.5 percent of the variation in per-capita staffing, and the standardized coefficient for each of the variables was strong.

The factors were then considered in regression analyses by population strata (1-12,000, 12,001-26,000, 26,001-100,000, and greater than 100,000). At the stratum level, property revenues per capita and population as an economy-of-scale effect were consistently related to per-capita staffing in the expected directions, and were used in the model for each stratum. The results for proration were more complex. In the first stratum, proration had a counterintuitive negative effect, and was not used in the model. In the second stratum, there are no localities that prorate, so the variable did not apply. For the third stratum, proration had a strong relationship in the expected direction, so the variable was included in the model. In the fourth stratum, all localities use proration, so the variable is not needed because the effect of proration is already captured in the data.

The models that resulted for the four strata explained 49.8 percent, 4.7 percent, 35.7 percent, and 67.9 percent, respectively, of the variation in per-capita staffing.

Factors Excluded as Special Adjustments. Many variables were examined but excluded from the staffing standards. Among these factors were: the number of registered motor vehicles, the amount of motor vehicle license tax revenue, the number of personal property returns, the selling of motor vehicle decals, and the amount of time spent on investigations for unreported property.

Based on the results of the correlation analysis, the number of registered motor vehicles was identified for further examination in the regression analysis at the statewide level. Because motor vehicles are a major property category that is subject to the personal property tax, the number of registered motor vehicles per capita was expected to have a positive effect on staffing per capita.

However, when the number of registered motor vehicles was added to the regression model with personal property revenues per capita, proration, and population as an economy-of-scale effect, it had a very weak effect. Motor vehicles explained only an additional 0.6 percent of the variation in per-capita staffing, and the standardized coefficient of the variable was weak. Therefore, it was not included in the staffing standards.

Miscellaneous Local Taxes

In addition to real and personal property taxes, commissioners of revenue assess many other miscellaneous local taxes. Examples of these miscellaneous taxes include: business license fees, consumer utility taxes, machinery and tools taxes, merchants' capital taxes, meals and lodging taxes, admissions taxes, and others. The mix of miscellaneous taxes that are assessed by commissioners varies from locality to locality.

Based on a correlation analysis that explored many variables potentially related to staffing of this service, three variables were identified for further examination: total miscellaneous local revenues, the number of businesses upon which a license tax is assessed, and the number of establishments assessed for meals and lodging taxes.

To obtain data that could be used for the number of businesses upon which a license tax is assessed, the workload information reported by the commissioners to the Compensation Board was compared with State reports of the Department of Taxation and the Center for Public Service on the use of a business license tax in the locality. Mistakenly-reported business license data in localities without the tax were set to zero.

In the regression analyses at the statewide level, total miscellaneous local revenues and the number of business licenses had the strongest relationship with per-capita staffing. These two factors accounted for 42.0 percent of the variation in per-capita staffing, and the standardized coefficient for each variable was strong. When the number of establishments assessed for meals and lodging taxes was added with these factors, it was found to have a counterintuitive negative effect, so it was excluded.

At the stratum level, total miscellaneous revenues and the number of businesses upon which a business license tax is assessed, had strong relationships in almost all cases. In the first stratum, the number of businesses assessed for license taxes had a counterintuitive negative effect and was not used, but total miscellaneous revenues alone accounted for 50.8 percent of the variation in per-capita staffing. In the second stratum, both variables had intuitive relationships and strong standardized coefficients, and explained 60.2 percent of the variation. In the third stratum, both variables were used and they explained 78.0 percent of the variation. Finally, in the fourth stratum, the two variables explained 80.8 percent of the variation.

Providing Assistance to Local Government

Commissioners of revenue may provide various types of assistance to local government. Such assistance may include preparing financial reports for local government officials, or providing information about revenue assessments for county or city budgeting.

JLARC staff tested automation and population as an economy-of-scale factor to further explain per-capita staffing in this category. Both indicators were expected to have a negative effect.

In collecting data for the study, JLARC staff found that there was a diversity of opinion among commissioners of revenue about the impact of automation on efficiency. Many commissioners indicated that time saved by automation in locating information is offset, or more than offset, by the time that is spent preparing the databases.

For the variables measuring the extent of automation, some had a fairly weak negative association, and others had a fairly weak positive association. The automation variables were dropped from further consideration. In the final analysis, it was decided that the inclusion of automation as a factor in the staffing standards could be a disincentive to the use of automation in the offices.

At the statewide level, locality population had the expected negative effect, and explained 27 percent of the variation in per-capita staffing. In all four population strata, population was also found to have the expected negative effect. The model was strongest in the first three strata, explaining 9.7 percent, 8.8 percent, and 3.9 percent of the variation respectively. In the fourth stratum, only 1.2 percent of the variation in per-capita staffing was explained.

State Income Taxes

Commissioners of revenue are involved to varying degrees in the processing of State income taxes, and in providing assistance to State income taxpayers. Processing activities that may be performed by commissioner offices include: mailing out the tax packets to the taxpayers and opening, sorting, screening, and coding returns. Assistance activities that may be performed by commissioner offices include answering taxpayer questions, corresponding with the taxpayer or the Department of Taxation about taxpayer problems, and helping taxpayers fill out forms.

JLARC staff reviewed many workload measures that were expected to have a relationship to commissioner office staff time for processing and providing assistance. Based on the correlation analysis, the following factors were given additional consideration in regression analyses at the statewide level: the number of tax returns filed locally, the number of tax due returns filed locally, the number of accelerated refund returns screened, the number of declarations of estimated income, the number of

actual forms completed for taxpayers by the commissioner's office, the number of taxpayers assisted, and local population as an economy-of-scale effect.

In the statewide regression analysis, the number of locally filed returns and local population as an economy-of-scale effect explained 48.7 percent of the variation. JLARC staff also found that the number of declarations of estimated income and the number of actual forms completed for taxpayers had an effect, increasing the percentage of the variation explained to 57.4 percent when they were added to the model. However, it was decided that the extent of the variation that would be explained by their inclusion was not substantial enough to offset problems with their inclusion. The two variables reduced the impact of the number of locally filed returns in the model, a variable for which there was greater confidence in the quality of the data. Also, it was impossible to obtain a functional model in the fourth population stratum, because a large locality that needed to be part of the standard-setting population did not provide data on the number of forms completed.

The number of locally filed returns and population as an economy-of-scale effect were examined at the stratum level. The results were intuitive and substantial in all four strata. The two variables explained 37.6 percent, 26.3 percent, 28.2 percent, and 42.3 of the variation in per-capita staffing.

Providing Assistance to State Agencies

Commissioners of revenue provide information about local revenues to several State agencies. For the service category of assistance to State agencies, the commissioners were requested on the JLARC survey to include the time their offices spend in providing assistance to State agencies other than the Compensation Board and the Department of Taxation. The commissioners were asked to report the time spent in addressing Compensation Board matters under office administration, and the time spent in providing tax data to the Department of Taxation under one of the tax service categories, based on the type of tax involved.

JLARC staff tested population as an economy-of-scale factor and automation for an effect on per-capita staffing. The expectation was that population and presence of automation would be negatively related. Correlation analysis indicated that population as an economy-of-scale factor did have a strong negative association with per-capita staffing. The variables measuring the extent of automation had a weaker negative effect. The automation variables were dropped from further consideration because their use would provide a disincentive for automation in the offices.

At the statewide level, locality population as an economy-of-scale effect explained 41 percent of the variation in per-capita staffing. In the regression analysis at the stratum level, locality population as an economy-of-scale effect was found to have the expected negative effect in three of the four strata. The variable explained 4.0 percent, 9.3 percent, and 9.9 percent of the variation in these strata, respectively. In the fourth stratum, the effect was in a counterintuitive positive direction, so the variable was not included.

Office Administration

Certain personnel in the commissioners' offices must devote time to office administration activities. The office administration service category includes time spent on personnel matters, budgeting, training, providing general supervision, and other administrative activities.

The administrative activities provide support to the non-administrative work that is performed by the office. JLARC staff defined the staff for the non-administrative activities as "line staff." To determine relatively high or low administrative staffing levels, a ratio of administrative staff per line staff was calculated. The ratio of administrative staff to line staff became the dependent variable in the regression analysis.

The next step in the analysis was to use regression to identify whether there was an economy-of-scale effect in administrative staffing. To test for an economy-of-scale effect, the number of line staff was used as the independent variable. The expectation for the economy-of-scale effect was that as the number of line staff (the independent variable) increased, the ratio of administrative staff per line staff (the dependent variable) would decrease. Thus, the relationship was expected to be negative.

The analysis indicated that there is an economy-of-scale effect. Larger offices tend to have lower ratios of administrative staff to line staff. The effect that was measured was negative in all four strata. The effect was strong in all of the strata but the second, explaining 9.4 percent, 0.1 percent, 6.9 percent, and 10.7 percent, respectively, of the variation in staffing.

Therefore, the staffing standards that are used for office administration reflect the average ratios of administrative staff per line staff as measured by the regression model, with adjustments for an economy-of-scale effect based on the number of line staff.

V. Developing Staffing Standards for Treasurers and Directors of Finance

To develop staffing standards for the treasurers and directors of finance, analyses were conducted to determine the relationship between the number of full-time equivalent positions working in the offices and various workload indicators. To ensure that the workload measures were matched to the appropriate office staff, the analysis was conducted for separate groups of services.

JLARC staff research on the treasurers' offices indicated that the specific duties of the treasurers could be divided into six basic service categories. Director of finance activities were divided into 10 service categories. Data were collected for the staff time spent by the offices in the service categories, and for measures of workload that might affect staff time in the service categories. The service category data were then used in developing staffing standards for funding treasurers and directors of finance.

To develop staffing standards, population was used to standardize the workload and staffing data for almost all service categories. The selection of population was based on the strength of the intuitive relationship between population and staffing, and also based on the strength of the statistical correlation between population and staffing.

Due to the large number of identified workload indicators in some service categories, a correlation analysis of the standardized data was used to screen the weaker intuitive indicators. After this screening, regression analysis was performed, first using statewide data, and then separating the offices into population groups. The regression analysis was used to determine the staffing standards.

STAFFING STANDARDS FOR TREASURER SERVICES

Data were collected from the treasurers on the time that is spent in the offices on six service categories. The six service categories were:

- collecting local taxes and fees, and the custody, accounting, and disbursement of local revenues,
- providing information or assistance to local government,
- collecting and accounting of State income taxes (estimated and actual returns),
- collecting and accounting of State revenue other than State income taxes,

- providing information and assistance to State agencies or State institutions excluding the Department of Taxation and the State Compensation Board,

- office administration.

The service categories were defined to encompass all services provided by the treasurer offices and to be mutually exclusive. Treasurers were asked to include the time they spent assisting or providing information to the Department of Taxation in regard to local revenues under the service category "custody, accounting, and disbursement of local revenues." Similarly, they were asked to report the time they spent assisting or providing information to the Department of Taxation in regard to State income taxes under the service category "collecting and accounting of State income taxes." Time spent assisting the State Compensation Board was reported under the category "office administration."

Relationships were then examined in each service category between staff time per capita and various workload indicators. Staffing standards were developed based on the strongest indicators.

Collection, Custody, Accounting, and Disbursement of Local Revenues

A substantial portion of the work performed by local treasurer offices involves the collection, custody, accounting, and disbursement of local revenues. Specific duties encompassed by this service category include:

- printing and mailing tax bills,

- collecting real property taxes, tangible personal property taxes, and miscellaneous taxes,

- collecting utility fees, dog license fees, bingo and raffle fees, and auto decal fees,

- maintaining a warrant book and disbursing local revenues upon receiving legally drawn warrants,

- disbursing school funds,

- providing receipts for paid taxes,

- determining penalties and interest due on delinquent taxes,

- mailing delinquent tax notices,

- certifying unpaid taxes for local escheat inquests,

- initiating tax liens,

- investing funds,

- responding to questions from the public regarding local taxes.

JLARC staff examined the relationship between the time spent by the treasurer offices on the duties within this service category and various indicators of workload. Through correlation and regression analyses, five of these variables were chosen for use in the standards for local revenue work.

Factors Included as Special Adjustments in Standards. The five key variables used in the staffing standards were:

- the number of parcels of land per capita upon which real property taxes were billed,

- the dollars per capita of penalties and interest payments on all types of property taxes,

- locality population as an economy-of-scale effect,

- the number of utility billings per capita,

- dollars of local revenue collected per capita.

A major component of local revenue work involves the collection of real estate taxes. Therefore, JLARC staff examined several workload indicators associated with real property. Of the real property variables examined, the variable which provided the best explanation of the differences which exist in staffing levels for local revenue work was the number of parcels of land per capita for which taxes are billed. The data on parcels that were used in the analysis were collected by the Compensation Board.

In the regression analysis at the statewide level, parcels per capita explained approximately seven percent of the variation in per-capita staffing for local revenue work. At the strata level, the number of real estate parcels per capita continued to show a strong positive association with staff per capita for all of the population strata except the fourth — those localities with a population greater than 100,000 persons. In the fourth stratum, the number of parcels had a counterintuitive, negative association with staffing. Thus, the variable "parcels" was dropped from the staffing standard for those localities with a population greater than 100,000 persons.

Another major component of local revenue work involves collecting delinquent taxes. JLARC staff expected that as delinquency rates increase, staffing needs increase. Several proxies for delinquency rates were examined. The proxy which explained the most variation in staffing per capita was total dollars per capita of penalty and interest payments on all types of property taxes. Penalties are charged by the treasurers on a flat rate basis if a tax is not paid by the due date. Interest is then accrued on the total amount due until the tax is paid.

In the regression analysis at the statewide level, penalties and interest per capita explained six percent of the variation in staffing levels when controlling for parcels per capita. The two factors together explained 13 percent of the variation.

At the strata level, penalties and interest continued to show a significant positive association with staffing levels in all strata, except for the first population stratum — those localities with a population less than or equal to 12,000. In the first population stratum the standardized coefficient for penalties and interest indicated a negative association. For this reason, the variable "penalties and interests" was not included in the staffing standard for those localities with a population equal to or less than 12,000.

The variable local population was examined for the local revenue service category to determine if an economy-of-scale effect was present such that offices in larger localities have lower per-capita staffing levels. At the statewide level, a bivariate regression between population and staff per capita showed a substantial negative association. After controlling for land parcels and penalties and interest in the regression model, local population explained an additional two percent of the variation in per capita staffing. The three variables together explained 15 percent of the variation.

At the strata level, local population continued to show a significant negative association with staffing levels per capita, except in the third population stratum — those localities with between 26,000 and 100,000 persons. Because the standardized coefficient for local population in the third stratum indicated a positive association with the dependent variable, population as an economy-of-scale factor was not included in the final staffing standards for those localities with a population between 26,000 and 100,000 persons.

In some localities the treasurer's office is responsible for collecting various utility bills. To examine whether or not the treasurer's collection responsibilities in regard to utility bills increases staffing needs, two workload variables were tested: whether or not the treasurer's office collects utility bills and the number of utility bills collected per capita. Both variables showed a significant positive correlation with the number of staff per capita. However, the number of utility bills per capita explained a greater amount of the variation in staffing levels than the variable indicating whether or not utility bills are collected by the treasurer office. Therefore, the number of utility bills was chosen for inclusion in the staffing standards.

Statewide, the number of utility bills collected explained an additional 37 percent of the variation in staffing levels when controlling for the other variables thus far included in the standards (parcels, penalties and interest, and local population). The total variation explained by this model was 52 percent. At the strata level, the number of utility bills collected per capita was positively associated with the staff per capita in all of the population strata.

Various local revenue figures were examined under the assumption that as the volume of local revenues collected increases staffing needs increase. The variable which showed the strongest relationship with staffing was total local revenues.

When total local revenues per capita was added as a factor in the regression model already containing the number of parcels, penalties and interest, local population, and utility bills, the explanatory power of the regression equation was increased by approximately five percent. The total variation explained by the regression was 57 percent.

At the strata level, total local revenue showed a substantial positive association with per-capita staffing in all of the population strata except the third — those localities with populations between 26,000 and 100,000. For the third population stratum the standardized coefficient was negative, indicating that as the volume of local revenues increases staffing levels per capita decrease. Because this association is counterintuitive, the variable "total local revenues" was excluded from the final staffing standards for those localities with populations between 26,000 and 100,000.

Factors Excluded as Special Adjustments in the Standards. Workload indicators were excluded from use in the staffing standards for one of three reasons: the observed association was weak, the observed association was counterintuitive, or the variable was redundant. Variables which showed very weak associations to per-capita staffing for local revenue work included: the number of times personal property is billed each year, the presence of a local director of finance office, whether or not the treasurer's office is responsible for printing and mailing the tax bills, the number of parking fines collected, the number of motor vehicle decals sold, and the number of registered motor vehicles.

JLARC staff expected that these variables would have an impact on staffing levels based on background research and site visits completed during the initial phase of the study. However, on a statewide basis, the data did not support this expectation. For example, one assumption tested was whether the presence of a local director of finance would reduce the need for staffing in the treasurer's office, since the director of finance may perform some duties which are typically the responsibility of the local treasurer. Although a negative association with per-capita staffing was observed, the association was not strong enough to warrant including the variable in the staffing standards.

Counterintuitive associations were observed for several workload indicators. For example, local treasurers indicated that prorating taxes is a very labor intensive process and requires additional staff, which leads to the expectation that those localities which prorate taxes would have higher per-capita staffing levels for the tax collection service category. However, correlation results revealed that the treasurers in localities which prorate taxes have fewer staff per capita than treasurers in localities which do not prorate taxes.

The following workload indicators were also expected to be positively associated with staffing levels: the number of parcels in a land use program; the number of parcels in a tax relief program for the elderly or handicapped; the number of personal property returns for which taxes were billed; whether or not the locality has a utility tax; and whether or not the locality has a merchant's capital tax. However, slight negative associations were observed, meaning that the variables were not meaningful indicators for adjusting staffing standards.

The only variable excluded due to redundancy was the number of businesses for which license taxes were collected. Without controlling for other variables, business license taxes collected explained four percent of the variation in staffing levels. However, when the business license taxes variable was considered simultaneously with the number of parcels, total penalties and interest, local population, utility bills, and total local revenues in the regression analysis, its standardized coefficient became very weak. Business license taxes did not explain any additional variation not already explained by the other variables.

Providing Information or Assistance to Local Government

Local officials may request that the treasurer help prepare the city or county budget. The treasurer may also be required to prepare monthly financial statements for the local governing body, regarding the status of various accounts and investments.

A separate service category was defined for these services. As with the other service categories, the treasurers were asked how much of their office time was allocated to this service category. JLARC staff then examined the relationship between the staff time reported and local population, to determine if an economy of scale effect was present. Regression results suggest that an economy of scale effect does exist.

At the statewide level, population and per-capita staffing were negatively related, indicating that the larger offices provide this service with less staff per capita. Local population as an economy-of-scale effect explained 14 percent of the variation in staffing levels. At the strata level, staffing levels and local population were negatively associated in all the population strata except the fourth — those localities with a population over 100,000. The standardized coefficient for local population in the fourth stratum indicated a very weak positive association with staffing levels. Thus, the staffing standard for the fourth stratum was based on the mean staff per capita instead of a regression equation.

Several other variables which reflect the degree to which the offices are automated were also examined, but were excluded from the staffing standard for this service category. JLARC staff expected that offices which were fully automated would be able to access and summarize information more quickly; therefore, less staff time would be required to supply the information requested. The automation variables examined did show negative associations with staffing levels; however, the associa-

tions observed were too weak to justify inclusion in the standards. Additionally, because the observed associations were negative, the number of recognized positions would be adjusted downward for those localities who are automated. Making downward adjustments might discourage those localities who are not yet automated from computerizing their records.

State Income Taxes

In Virginia, State income tax revenues are in part collected by the local treasurer offices. This collection work may involve any of the following activities:

- receiving checks for State income tax payments through the commissioner of revenue office, and depositing these checks in State bank accounts,
- receiving quarterly payments from estimated income taxes,
- following up on "bad" checks,
- assessing late penalties,
- preparing and mailing "tax tickets" for delinquent income taxes,
- collecting delinquent income taxes until the close of the calendar year.

The degree of involvement of the local treasurers in State income tax work varies from locality to locality, depending on whether State tax returns are filed locally, the number of accounts maintained for estimated income taxpayers, and how actively the treasurer pursues delinquent income taxpayers.

Six workload indicators were tested for a possible relationship with the staff per capita devoted to state income tax work. Three of these indicators were included in the staffing standards as a result of the analysis.

Factors Included as Special Adjustments in the Standards. The three variables used in the staffing standards are:

- the number of State income tax returns filed locally for which taxes are owed (tax due returns),
- local population as an economy-of-scale effect,
- the number of estimated income tax accounts maintained.

A major component of State income tax work involves handling and depositing the checks that accompany returns sent to the commissioners of revenue. Because the returns are accompanied by a payment for taxes that are owed, the returns are referred to as tax due returns. Data on locally filed returns with taxes due were

obtained from the State Department of Taxation. JLARC staff expected that as the number of tax due returns increased, staffing needs would increase due to the work associated with depositing and transferring the payments received.

To test this expectation, regression analysis was used to examine the relationship between per-capita staffing and the number of tax due returns per capita. The resulting correlation was positive. By itself, the number of tax due returns per capita explains approximately 10 percent of the variation in staffing levels for State income tax work. At the strata level, the number of tax due returns per capita showed a positive association with staffing levels for all of the population strata.

The second variable accepted for inclusion in a staffing model for State income tax work was local population. JLARC staff expected that economies of scale could be achieved by larger offices which handle a larger volume of income tax related work, on a more routine basis. At the statewide level, a regression analysis of local population and staff per capita produced a correlation coefficient of -.54, suggesting that economies can be achieved in the larger offices. When included in a regression model with tax due returns, local population explained an additional 23 percent of the variation in staffing levels not previously explained by tax due returns per capita. The total variation explained by the two variables was 33 percent.

At the strata level, local population showed a negative association with staff per capita in all the population strata. A very weak negative association was observed for those localities with populations between 26,000 and 100,000, while a very strong negative association was observed for those localities with populations in excess of 100,000.

The third variable tested and accepted for inclusion in the staffing standard for State income tax work was the number of estimated income tax accounts maintained per capita. Self-employed individuals, or individuals who earn income from sources which are not taxed, are required to estimate the amount owed on their untaxed earnings. Ninety percent of their tax liability must be paid throughout the year in quarterly installments. Payments may be mailed directly to the State Department of Taxation or they may be paid locally at the treasurers' offices. For the taxpayers who choose to pay their taxes locally, the treasurers must prepare and mail notices of installments due, maintain an account of the income taxes paid to date, and transfer the payments received to State accounts.

Data for this variable were obtained from the Compensation Board. Because of the work associated with estimated income tax accounts, JLARC staff expected that as the number of estimated income accounts increase, staffing needs increase. When controlling for the other variables thus far included in the staffing standards, the number of estimated income tax accounts showed a substantial positive association with per-capita staffing and explained an additional three percent of the variation in staffing levels not already explained by the number of tax due returns and local population. The total variation in per-capita staffing explained by the three factors at the statewide level was 36 percent.

At the strata level, the number of estimated income tax accounts was included in the final staffing standards for the second and third population strata (those localities with populations between 12,000 and 100,000 persons) and was excluded from the first and fourth population strata (those localities with populations less than 12,000 persons or greater than 100,000 persons). In strata two and three, substantial positive associations between the number of accounts and staffing were observed. In strata one and four, counterintuitive negative associations were observed, so the factor was not used.

Factors Excluded as Special Adjustments. Three other workload indicators were tested but excluded from the final staffing standards for State income tax work. Although the three variables showed substantial positive correlations with per-capita staffing, they were excluded for one of two reasons: either they were highly correlated with a variable already in the staffing model, or the quality of the data was a concern.

The number of returns filed locally (data from the Department of Taxation) was highly correlated with the number of tax due returns filed locally (r=.93). Thus, if included in a staffing model which already contains tax due returns, the number of returns filed locally would be redundant. In other words, almost all of the variation in per-capita staffing explained by the variable "returns filed locally" is already explained by the variable "tax due returns."

The remaining two workload indicators, the number of State tax returns collected and the number of estimated tax returns collected, were excluded because the quality of the data obtained by the Compensation Board was a concern, due to problems with the terminology used to collect the data.
Collecting State Revenues Other Than State Income Taxes

Collecting State revenues Other than State Income Taxes

Treasurers handle some State revenues other than State income taxes. For example, the treasurers are responsible for depositing one-third of the excess fees received from the local clerk's offices into the appropriate State account. The treasurers are also required to deposit into a State account the fees received from the local sheriff's offices. In addition to clerk's and sheriff's fees, treasurers must report and send to the State any profit from the sale of unclaimed property. Some treasurers also reported handling ABC profits and wine taxes, medical examiner fees, motor vehicle carrier taxes, and wholesale cigarette stamps.

A separate service category was defined for State revenue work other than income tax collections. This service category does not include duties related to distributing money received from the State to various local programs. Instead, treasurers were asked to report any time spent acting as a fiscal agent for local programs under the service category "Custody, accounting, and disbursements, of local revenues." Additionally, treasurers were to consider any time spent on estimated income taxes as "State income tax work," not "other State revenue work."

The amount of time treasurers reported spending on other State revenues did not vary greatly from locality to locality. Because of the relatively constant nature of the staffing data, JLARC staff expected that an economy-of-scale effect would be present. At the statewide level, a bivariate regression of per-capita staffing for other State revenue work and local population produced a standardized coefficient of -.417, indicating that an economy of scale effect was present. At the strata level, a strong negative association was observed between local population and per-capita staffing for all of the population strata. Thus the staffing standards that are used for "other State revenue work" reflect the average ratios of staff per capita (for State revenue work) as measured by the regression analysis, with adjustments for an economy-of-scale effect based on population.

Providing Information or Assistance to State Agencies

Treasurers are often asked to provide information or assistance to State agencies. When asked whom they assisted and what type of information was requested, treasurers responded that they:

- report revenues, expenditures, and fund balances to the Auditor of Public Accounts,
- report address changes of motor vehicle owners to the Department of Motor Vehicles,
- provide client eligibility information to the Department of Social Services,
- prepare Jury Service Reports and Felony Witness Reports and write] juror checks,
- answer surveys or questionnaires from State universities and State agencies.

A service category was defined and a staffing standard was developed for work which involves providing information or assistance to State agencies or institutions. Because State agencies or institutions typically request the same information from each locality, regardless of population size, JLARC staff expected that there would be an economy-of-scale effect — staffing per capita would be lower in larger localities because workload is being spread over a larger population base.

At the statewide level, local population as an economy-of-scale effect had a standardized coefficient of -.356 in the regression with per-capita staffing, indicating that a scale effect does exist. At the strata level, local population was negatively associated with staff per capita for all of the population strata except the second — those localities with a population between 12,000 and 26,000. Thus for the second population stratum the staffing standard is based on the mean staff per capita instead of a regression equation.

Office Administration

A certain amount of the treasurers' time or their staffs' time must be spent on administrative tasks. Therefore, an office administration service category was defined which includes duties related to recruiting and training employees, general supervision, preparing the office payroll, general computer system upkeep, inventory, preparing the annual budget request or reimbursement paperwork for the State Compensation Board, preparing employee benefit reports, and preparing financial reports.

In developing a staffing standard for this service category, a different approach to standardizing the data was necessary. Unlike the previous service categories examined, workload for "office administration" is largely driven by the number of non-administrative personnel. For instance, as the number of non-administrative personnel increases, more people must be supervised, payroll duties increase, and training responsibilities increase; therefore, staffing needs for office administration also increase. Because of the high degree of association between non-administrative staff (or "line staff") and office administration staff, the dependent variable was standardized by the number of line staff instead of population for this service category.

The next step in the analysis was to determine whether an economy-of-scale effect was present. The expectation was that as the number of line staff increased, the ratio of the administrative staff per line staff would decrease. To test for an economy-of-scale effect, the number of line staff was used as the independent variable and administrative staff per line staff was the dependent variable. Correlation results indicated that an economy-of-scale effect is not present (r=.019). Thus the staffing standards that are used for office administration are based on the average ratios of administrative staff to line staff with no adjustments for an economy-of-scale effect.

STAFFING STANDARDS FOR DIRECTORS OF FINANCE

In the analysis of staffing for commissioners and treasurers, the data for directors of finance office were not used to calculate the standards. This was because director of finance offices are expected by local government to perform a broader range of activities than are expected in commissioner and treasurer offices.

In the analysis of staffing for directors of finance, the data for director of finance offices were included with comparable data for commissioners of revenue and treasurers to set the standards. The director of finance offices were included, because in setting standards for offices, the offices affected should be part of the standard-setting group of offices. The commissioner and treasurer offices were also included, however, so that the State recognition of positions for director of finance offices would be equitably related to the recognition of positions for commissioner and treasurer offices.

There were 10 service categories that were used in the analysis of directors of finance. These service categories were a combination of the commissioner of revenue and treasurer service categories. Thus, tax assessment and tax collection duties were included in the director of finance service categories.

For a service category such as assistance to local government, the time in the director of finance office could be spent on tax assessment duties (commissioner duties) or tax collection duties (treasurer duties). Therefore, when commissioners and treasurers were used in the standard-setting group for directors of finance, the data for the time spent in this service category by commissioners and treasurers were combined in each locality. This approach provided a more equal basis for comparison between the commissioner and treasurer data, and the director of finance data.

The purpose of the regression analysis was to measure, based on the standard-setting group of offices for directors of finance, the relationship between workload variables and staff time in the service categories. The same variables that were used for commissioner and treasurer offices were used to set staffing standards for directors of finance. However, the constants and the weights of the staffing standards for directors of finance were different than the staffing standards for commissioners and treasurers, because all three offices were used in determining the standards for directors of finance.

Appendixes

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Appendix A:
Study Mandate

(Language in Item 13 of the Appropriations Act mandating a study of Constitutional Officers is shown below).

1989 Appropriations Act Language

The Joint Legislative Audit and Review Commission shall conduct a study of state support for locally elected constitutional officers. Such study shall include, but not necessarily be limited to: (i) the status of part-time Commonwealth's Attorneys, as requested by SJR 55 (1988); (ii) workload standards and policies to be utilized for the allocation of positions to the locally elected constitutional officers funded through Items 70, 71, 72, 73, 74 and 75 of this Act, (iii) the level of state and local participation in the funding of positions allocated through these items, and (iv) an analysis of alternative methods and agencies for administering these items. In evaluating proposed staffing standards for Sheriffs, the Commission shall consider jail staffing separately from law enforcement and courtroom security requirements. When formulating its recommendations with regard to the level of state and local participation, the Commission shall consider the relative benefit derived from the services provided, the financial ability of the localities to provide support and the relative differences in salary levels in northern Virginia. The Commission shall report on its progress to the 1989 Session of the General Assembly and complete its work no later than November 15, 1989. Further, the Commission shall submit its recommendations, if any, to the 1990 Session of the General Assembly. In carrying out this review, the Compensation Board, Department of Corrections, Department of Personnel and Training, and the Department of Planning and Budget shall cooperate as requested and shall make available records, information and resources necessary for the completion of the work of the Commission and its staff.

COMMISSIONER OF REVENUE STAFFING STANDARDS

NOTE: For the "real property" service category, the offices were stratified based on the nature of their real estate responsiblities rather than by population. For the other service categories the offices were stratified based on population.

REAL PROPERTY SERVICE CATEGORY:

Real Property Strata 1: Reassess, Appraise, Assess, and Maintain Land Records
Standard: .00008503 x Population

Real Property Strata 2: Appraise, Assess, and Maintain Land Records
Standard: .00008503 x Population

Real Property Strata 3: Assess and Maintain Land Records
Standard: .00005563 x Population

Real Property Strata 4: Maintain Land Records Only
Standard: .00003921 x Population

Real Property Strata 5: No Real Property Responsibility, Except Processing of Tax Relief Applications
Standard: .000004706 x Population

OTHER COMMISSIONER OF REVENUE SERVICE CATEGORIES (Stratified By Population)

POPULATION STRATA 1: 0-12,000

Tangible Personal Property Taxes: [(.0001385 + .0000006569 x Tangible Personal Property Tax Revenue - .000000009741 x Population) x Population]

Miscellaneous Local Taxes and Fees: [(-.000007849 + .0000003039 x Revenue From Miscellaneous Taxes) x Population]

State Income Taxes: [(.0001584 + .0002022 x Number of State Income Tax Returns Filed Locally - .00000001248 x Population) x Population]

Assistance to Local Officials: [(.00002391 - .000000001411 x Population) x Population]

Assistance to State Agencies or Institutions: [(.00001922 - .0000000009096 x Population) x Population]

Office Administration: [(.1269 - .01709 x Predicted Number of Line Staff) x Predicted Number of Line Staff]

POPULATION STRATA 2: 12,001-26,000

Tangible Personal Property Taxes: [(.00007383 + .0000001753 x Tangible Personal Property Tax Revenue - .0000000007493 x Population) x Population]

Miscellaneous Local Taxes and Fees: [(.000006079 + .00000005039 x Revenue From Miscellaneous Taxes + .0004282 x Number of Business Licenses Issued) x Population]

State Income Taxes: [(.00006775 + .0001817 x Number of State Income Tax Returns Filed Locally - .000000001947 x Population) x Population]

Assistance to Local Officials: [(.00001667 - .0000000004517 x Population) x Population]

Assistance to State Agencies or Institutions: [(.00001381 - .0000000004034 x Population) x Population]

Office Administration: [(.06860 - .0005772 x Predicted Number of Line Staff) x Predicted Number of Line Staff]

POPULATION STRATA 3: 26,001-100,000

Tangible Personal Property Taxes (for localities that prorate personal property taxes): [(.00004741 + .0000003884 x Tangible Personal Property Tax Revenue - .0000000001722 x Population + .00002764 x 1) x Population]

Tangible Personal Property Taxes (for localities that do not prorate personal property taxes): [(.00004741 + .0000003884 x Tangible Personal Property Tax Revenue - .0000000001722 x Population) x Population]

Miscellaneous Local Taxes and Fees: [(.000002372 + .00000005320 x Revenue From Miscellaneous Taxes) + .0004091 x Number of Business Licenses Issued) x Population]

State Income Taxes: [(.00005782 + .00005266 x Number of State Income Tax Returns Filed Locally - .0000000004749 x Population) x Population]

Assistance to Local Officials: [(.00001139 - .0000000001016 x Population) x Population]

Assistance to State Agencies or Institutions: [(.000006861 - .00000000007274 x Population) x Population]

Office Administration: [(.07441 - .001899 x Predicted Number of Line Staff) x Predicted Number of Line Staff]

POPULATION STRATA 4: 100,000+

Tangible Personal Property Taxes: [(-.00001765 + .000001070 x Tangible Personal Property Tax Revenue - .00000000002664 x Population) x Population]

Miscellaneous Local Taxes and Fees: [(-.00003673 + .0000002110 x Revenue From Miscellaneous Taxes + .0006488 x Number of Business Licenses Issued) x Population]

State Income Taxes: [(.00002872 + .00009052 x Number of State Income Tax Returns Filed Locally - .00000006064 x Population/10000) x Population]

Assistance to Local Officials: [(.000002646 - .000000000001276 x Population) x Population]

Assistance to State Agencies or Institutions: (.0000009883 x Population)

Office Administration: [(.09896 - .0001954 x Predicted Number of Line Staff) x Predicted Number of Line Staff]

TREASURER STAFFING STANDARDS

POPULATION STRATA 1: 0-12,000

Collection/Custody of Local Funds: [(.0002031 + .0001187 x Number of Taxable Parcels of Land - .00000001088 x Population + .00002355 x Number of Utility Bills collected + .00000005867 x Total Local Revenue) x Population]

Assistance to Local Officials: [(.00003716 - .000000002281 x Population) x Population]

Collecting/Accounting of State Income Taxes: [(.0001211 - .000000007001 x Population + .0001166 x Number of Tax Returns With a Balance Due Filed Locally) x Population]

Collecting/Accounting of Other State Revenue: [(.00002160 - .000000001454 x Population) x Population]

Assistance to State Agencies or Institutions: [(.00001785 - .000000001193 x Population) x Population]

Office Administration: (.1145 x Predicted Number of Line Staff)

POPULATION STRATA 2: 12,001-26,000

Collection/Custody of Local Funds: [(.0001174 + .0001164 x Number of Taxable Parcels of Land + .000005805 x (Total Penalties Collected + Interest Collected) - .000000005422 x Population + .00002138 x Number of Utility Bills collected + .00000009454 x Total Local Revenue) x Population]

Assistance to Local Officials: [(.00002151 - .0000000005274 x Population) x Population]

Collecting/Accounting of State Income Taxes: [(.00003584 - .0000000008900 x Population + .0001589 x Number of Tax Returns Filed Locally With a Balance Due + .0004259 x Number of Accounts Maintained for Estimated State Income Tax Payers) x Population]

Collecting/Accounting of Other State Revenue: [(.00001193 - .0000000002920 x Population) x Population]

Assistance to State Agencies or Institutions: (.0000057/5 x Population)

Office Administration: (.1030 x Predicted Number of Line Staff)

POPULATION STRATA 3: 26,001-100,000

Collection/Custody of Local Funds: [(.00004197 + .00007391 x Number of Taxable Parcels of Land + .00001106 x (Total Penalties Collected + Interest Collected) + .00002567 x Number of Utility Bills collected) x Population]

Assistance to Local Officials: [(.000008735 - .00000000002955 x Population) x Population]

Collecting/Accounting of State Income Taxes: [(.00001514 - .000000000007618 x Population + .0002446 x Number of Tax Returns With a Balance Due Filed Locally + .0001032 x Number of Accounts Maintained for Estimated State Income Tax Payers) x Population]

Collecting/Accounting of Other State Revenue: [(.000006932 - .00000000006276 x Population) x Population]

Assistance to State Agencies or Institutions: [(.000006379 - .00000000005044 x Population) x Population]

Office Administration: (.0890 x Predicted Number of Line Staff)

POPULATION STRATA 4: 100,001+

Collection/Custody of Local Funds: [(.000002997 + .00001045 x (Total Penalties Collected + Interest Collected) - .00000000007153 x Population + .00005113 x Number of Utility Bills collected + .0000001099 x Total Local Revenue) x Population]

Assistance to Local Officials: (Population x .00001232)

Collecting/Accounting of State Income Taxes: (e^z x Population) where,

e = 2.718

z = [-.3631 + .11002 x (Log (Number of Tax Returns With a Balance Due Filed Locally) - .8116 x (Log (Population)]*

Collecting/Accounting of Other State Revenue: [(.000006235 - .000000000006576 x Population) x Population]

Assistance to State Agencies or Institutions: [(.000004053 - .000000000002911 x Population) x Population]

Office Administration: (.1689 x Predicted Number of Line Staff)

* Logged Regression Model was used for this standard.

DIRECTOR OF FINANCE STAFFING STANDARDS

NOTE: For the "real property" service category, the offices were stratified based on the nature of their real estate responsiblities rather than by population. For the other service categories the offices were stratified based on population.

REAL PROPERTY SERVICE CATEGORY:

Real Property Strata 1: Reassess, Appraise, Assess, and Maintain Land Records

Standard: .00008503 x Population

Real Property Strata 5: No Real Property Responsibility, Except Processing of Tax Relief Applications

Standard: .000004575 x Population

OTHER DIRECTOR OF FINANCE SERVICE CATEGORIES (Stratified By Population)

POPULATION STRATA 3: 26,001-100,000

Tangible Personal Property Taxes (for localities that prorate personal property taxes): [(.00004591 + .0000004085 x Tangible Personal Property Tax Revenue - .0000000001512 x Population + .00002629 x 1) x Population]

Tangible Personal Property Taxes (for localities that do not prorate personal property taxes): [(.00004591 + .0000004085 x Tangible Personal Property Tax Revenue - .0000000001512 x Population) x Population]

Miscellaneous Local Taxes and Fees: [(.000002392 + .00000005364 x Revenue From Miscellaneous Taxes +.0004165 x Number of Business Licenses Issued) x Population]

Collection and Custody of Local Revenues: [(.00005065 + .00005936 x Number of Taxable Parcels of Land + .00001192 x (Total Penalties Collected + Interest Collected) + .00002310 x Number of Utility Bills Collected) x Population]

State Income Taxes: [(.00006959 + .00005924 x Number of State Income Tax Returns Filed Locally - .0000000005105 x Population) + .0002872 x Number of State Income Tax Returns With a Balance Due Filed Locally + .0001348 x Number of Accounts Maintained on Estimated State Tax Returns) x Population]

Collecting/Accounting of Other State Revenue: [(.000006073 - .00000000003521 x Population) x Population]

Assistance to Local Officials: [(.00001828 - .00000000007675 x Population) x Population]

Assistance to State Agencies or Institutions: [(.00001090 - .00000000005683 x Population) x Population]

Office Administration: [(.06893 - .00006408 x Predicted Number of Line Staff) x Predicted Number of Line Staff]

POPULATION STRATA 4: 100,001+

Tangible Personal Property Taxes: [(-.000006682 + .0000009295 x Tangible Personal Property Tax Revenue - .000000000009932 x Population) x Population]

Miscellaneous Local Taxes and Fees: [(.0000005264 + .00000005323 x Revenue From Miscellaneous Taxes +.0006893 x Number of Business Licenses Issued) x Population]

Collection and Custody of Local Revenues: [(-.00001184 + .00001097 x (Total Penalties Collected + Interest Collected) - .0000000001391 x Population + .00005228 x Number of Utility Bills Collected + .0000001737 x Total Local Revenue) x Population]

State Income Taxes: [(.00001879 + .0001672 x Number of State Income Tax Returns Filed Locally - .000000000002754 x Population) + .0004962 x Number of State Income Tax Returns With a Balance Due Filed Locally) x Population]

Collecting/Accounting of Other State Revenue: [(.000004665 - .00000003983 x Population/10000) x Population]

Assistance to Local Officials: [(.00001676 - .0000000000009211 x Population) x Population]

Assistance to State Agencies or Institutions: [(.000003992 - .000000000001491 x Population) x Population]

Office Administration: [(.1027 - .0000009479 x Predicted Number of Line Staff) x Predicted Number of Line Staff]

Appendix C:
Agency Response

As part of an extensive data validation process, each State agency involved in a JLARC assessment effort is given the opportunity to comment on an exposure draft of the report. This appendix contains the response by the Department of Taxation.

Appropriate technical corrections resulting from the written comments have been made in this version of the report. Page references in the agency response relate to an earlier exposure draft and may not correspond to page numbers in this version of the report.

COMMONWEALTH of VIRGINIA

Department of Taxation
Richmond, Virginia 23282

April 9, 1990

Philip A. Leone, Director
Joint Legislative Audit and Review Commission
Suite 1100, General Assembly Building
Capitol Square
Richmond, Virginia 23219

Dear Phil:

I have only a few comments for the record concerning the JLARC Exposure Draft on Statewide Staffing Standards for Funding of Financial Officers, March 1990.

Since there are so many variations in the manner local governments assess real property and new construction, I suggest you consider taking out all property tax assessment functions from the standards. This would leave the land book preparation, tax bill printing and collection process in the factors. This would eliminate the potential impact of recognizing new construction assessment factors for Fairfax County but not for Richmond, Chesterfield and others.

Concerning the processing of returns, the following points should be considered:

1. On page "vi" of the summary, several sentences need rewording as they may be misleading:

    a. All returns (approximately 2.9 million) are processed by the Tax Department. Of these, 1.3 million are filed locally where they are opened, screened, coded, and shipped to Richmond to complete processing.

    b. I suggest the sentence concerning the 14 percent error rate be eliminated. We do not track screening errors made by localities. However, we do check all local shipments for quality. Some localities do an excellent job, some need more extensive review. We often call local offices to explain errors, etc., we do not however rescreen all returns from the Commissioners.

c. The sentence "...local processing appears to provide little benefit in terms of improved processing..." is not accurate. We feel certain that our overall error rate is significantly lower due to the screening and processing done locally.

2. As a comment, I hope that the 363 FTE estimate does not include any significant portion of the local assistance function. The number seems high.

3. The department would have significant costs other than the personnel costs, such as leased space, remittance processing equipment, postage, etc. I assume these were accounted for in the potential savings estimate.

4. If legislation is enacted to transfer processing to the Tax Department, processing could be effective the following January, subject of course to the appropriate funding.

I understand that the Compensation Board may reply to all the "standards" documents independently.

W. H. Forst
Tax Commissioner

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