TECHNICAL REPORT OF THE
JOINT LEGISLATIVE
AUDIT AND REVIEW COMMISSION ON

Statewide Staffing Standards for the Funding of Clerks of Court

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

HOUSE DOCUMENT NO. 71

COMMONWEALTH OF VIRGINIA
RICHMOND
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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 fourth in a series, addresses staffing standards for circuit court clerks. Other reports in the series address staffing standards for sheriffs, Commonwealth's attorneys, commissioners of revenue, and treasurers. The last report in the series addresses issues related to the funding of the constitutional offices.

The staffing standards for clerks of court developed for this report are based on measures of workload that have clear relationships to the staffing of the clerks' offices. The measures used include locality population, the number of court cases, the number of court days, and many others. 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 61 positions over the current Compensation Board recognized positions.

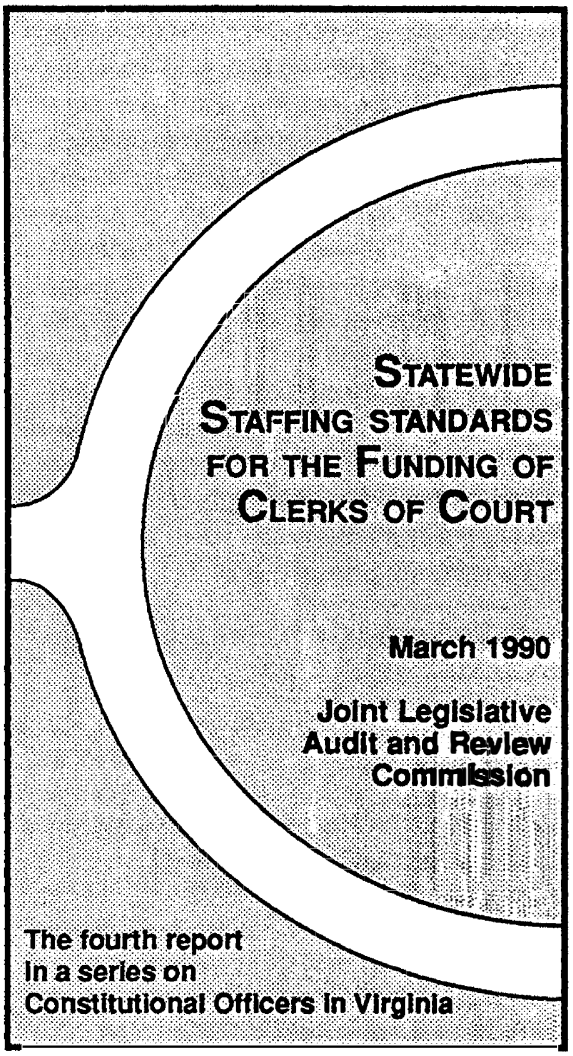
The issues involved in allocating positions to the constitutional officers are complex. Therefore, it will be necessary to review the proposed standards in more detail with the General Assembly, the State Compensation Board, the constitutional officers, and local governments. To begin that process of 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 clerks of court and the staff of the State Compensation Board.

Philip A. Leone
Director

March 26, 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 number of valuable services at the local level, ranging from criminal justice services to the assessment and collection of local taxes.

Item 13 of the 1988 and 1989 Appropriations Acts directed that JLARC study and recommend "workload standards and policies to be utilized for the allocation of positions to the locally elected constitutional officers." This report discusses workload and staffing standards for clerks of the circuit courts. 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 121 circuit court clerk offices.

The Current Process Does Not Result in Equitable Staffing Allocations

The current process for funding clerks of circuit court 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 Compensation Board collects some workload data from the offices, standards are not available to use in making staffing decisions for clerks of court. The Compensation Board considers staffing requests on a case-by-case basis.

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 recognized staff levels but very different workloads.

The table below illustrates inequities in Compensation Board recognized positions for selected circuit court clerk offices, along with the effects of JLARC's proposed staffing standards.

Staffing Standards Have Been Developed to Base Staffing on Actual Workload

In developing staffing standards for clerks of circuit court, 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 clerk offices.

The study approach used to meet the goal of equity was to first identify the total number of full-time equivalent (FTE positions) that were used to perform the work in different service categories, such as the administration of court cases and land and property records. 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.

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.

Examples of Circuit Court Clerk Offices in Which Greater Equity Would Be Achieved by Using Standards

	Measures of Workload					Compensation Board Approved Positions	Proposed Standard-Based Positions
	Population	Circuit Court Cases	Deeds	Wills	Marriage Licenses		
Bristol	17,700	647	1,872	112	353	5.2	4.2
Campbell	46,900	1,350	5,532	140	478	5.5	8.2
Botetourt	25,300	923	4,213	121	197	6.3	5.4
Frederick	39,900	1,281	10,001	131	1,322	6.4	7.4
Prince William	225,300	6,441	57,925	249	1,870	46.2	38.1
Virginia Beach	364,300	12,354	73,151	798	4,768	38.0	57.7

- 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 should recognize 1,070.8 positions for the circuit court clerks. This represents an increase of 61 positions more than are currently recognized by the Compensation Board. A detailed listing of current and proposed positions for each clerk's office can be found on pages 11 and 12 of this report. The ten offices with the largest increases in positions based on the staffing standards are shown in the table below.

Office	Increase in Recognized Positions
Virginia Beach	19.7
Chesterfield	8.4
Henrico	7.6
Arlington	5.8
Rockingham	5.3
Fairfax	4.7
Newport News	3.4
Campbell	2.7
Norfolk	2.6
Richmond City	2.2

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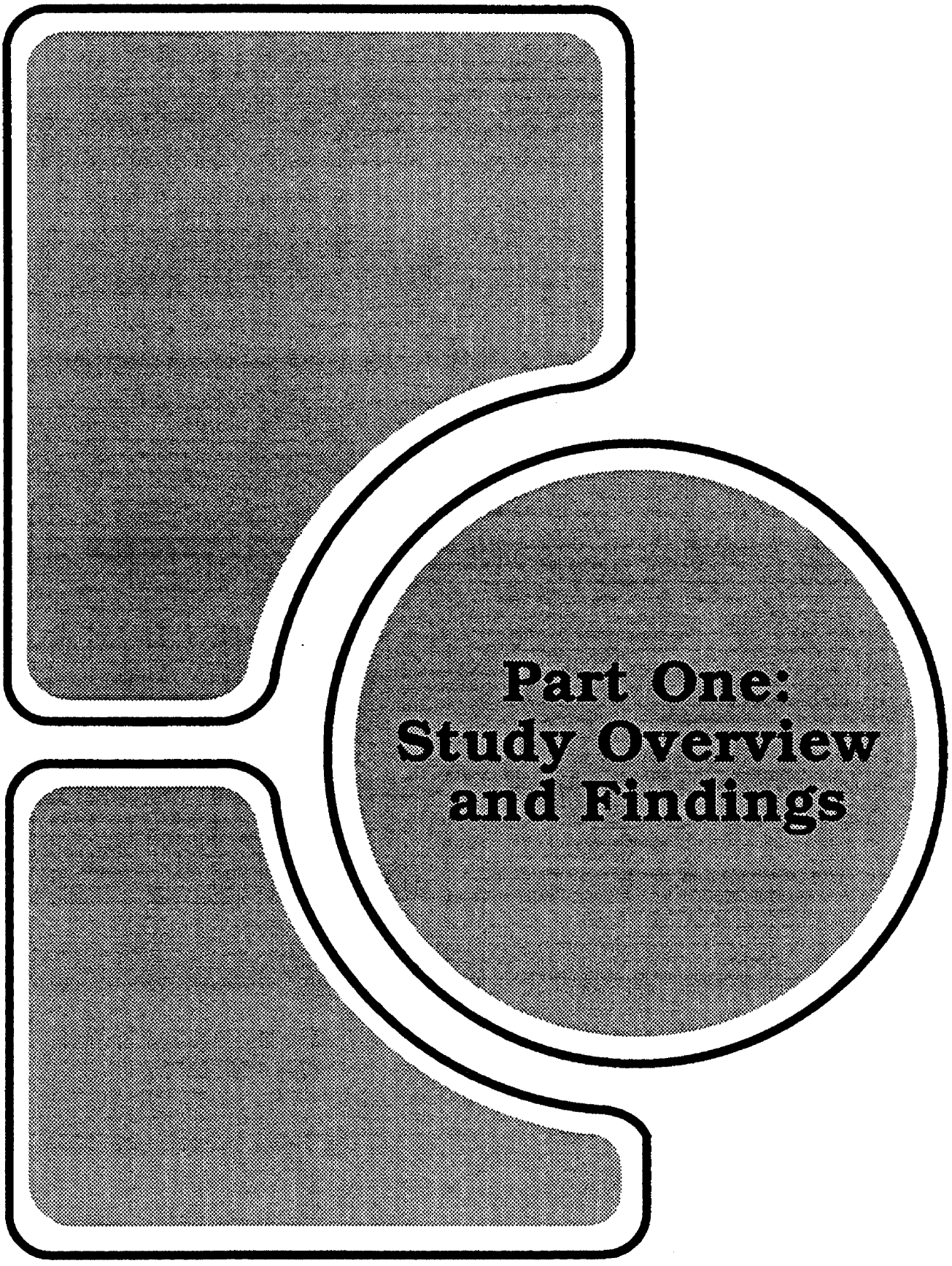
Part One:
Study Overview
and Findings

I. Study Overview

Article VII, Section 4 of the Virginia Constitution provides for five locally elected county and city officers: circuit court clerks, Commonwealth's attorneys, commissioners of revenue, treasurers, 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, circuit court clerks provide court administration services, Commonwealth's attorneys prosecute criminal cases, sheriffs operate the local jails, and commissioners of revenue and treasurers assess and collect taxes.

This report presents an analysis of workload and staffing standards for the circuit court clerks. Workload and staffing standards for the other constitutional offices are discussed in companion reports.

This chapter overviews circuit court clerks 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.

Circuit Court Clerks in Virginia

There are currently 121 circuit court clerks' offices statewide. Each clerk's office is responsible for the administration of one circuit court. There is a circuit court in every county and in several cities in the State. Some cities share a clerk's office with the surrounding county.

Clerks' offices statewide employ 1,073 full-time equivalent personnel (FTEs), 1,010 of which are State recognized full-time equivalent positions. The offices range in size from three to 117 staff. The average staff size is nine personnel.

The basic duties of the clerk's office are detailed in the *Code of Virginia*. In addition, duties may be prescribed by local governments and circuit court judges on a locality-by-locality basis. The major duties performed by clerks, however, are consistent among the offices.

Clerks' offices have two primary responsibilities: (1) administration of circuit court-related matters, and (2) maintenance of public records. Clerks' offices are responsible for administering circuit court cases from the time they are filed to final disposition. Also, the clerk or a deputy clerk is required in the courtroom while cases are being tried. Public records maintained by clerks' offices include real estate transactions, financing statements, judgment liens, wills and administrations, fiduciary accountings, and certain business arrangements such as partnerships.

State and Local Government Support of Constitutional Officers

Under the current structure for funding, the State and local governments provide funding for the circuit court clerks. A substantial portion of the funding for clerks' offices comes from the fees which they collect. 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 circuit court clerks. Recognized positions under the current system are positions that the Compensation Board officially approves for State and/or local government funding.

For the clerks, the State pays 100 percent of the recognized salary costs for the principal officer, and for State-recognized staff. This State contribution for the circuit court clerks includes the fees that the clerks collect. In the offices where the fees collected are not sufficient to cover Compensation Board recognized costs, the State pays for the recognized costs that are not covered by the fees.

Recognition of Positions by the Compensation Board. 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 clerks, 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 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 for clerks. However, local governments may choose to supplement the number of positions or the salaries that are recognized by the Compensation Board. Thus, local governments may provide their clerks of court with locally funded positions that are not recognized by the Compensation Board, and are purely local add-on positions.

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 individual constitutional office.

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

Table 1 provides some examples of circuit court clerks' offices for which there are discrepancies between recognized staffing levels and workload levels. The clerks' offices in Bristol and Campbell County each have about five recognized FTE positions, yet the workload for the Campbell clerk's office is much greater. A comparison of staffing and workload for Botetourt and Frederick counties shows a similar disparity. While Frederick has 58 percent more population, it has the same staffing as Botetourt.

Other workload measures show the same disparity between staffing and workload. A comparison of the Virginia Beach and Prince William clerk offices indicated that Virginia Beach has 62 percent more population than Prince William, and a greater workload in every category. But the Virginia Beach clerk's office has eight FTE positions fewer than the clerk's office in Prince William.

Table 1

Need for Staffing Standards for Circuit Court Clerks

	Measures of Workload					
	Population	Circuit Court Cases	Deeds	Wills	Marriage Licenses	**Current Recognized Positions**
Bristol	17,700	647	1,872	112	353	**5.2**
Campbell	46,900	1,350	5,532	140	478	**5.5**
Botetourt	25,300	923	4,213	121	197	**6.3**
Frederick	39,900	1,281	10,001	131	1,322	**6.4**
Prince William	225,300	6,441	57,925	249	1,870	**46.2**
Virginia Beach	364,300	12,354	73,151	798	4,768	**38.0**

Sources: Compensation Board recognized position data for 1989-90 and workload data for 1988; the University of Virginia's Center for Public Service 1988 provisional population estimates; and Supreme Court data on the number of cases commenced in 1988 in circuit courts.

Clearly, the staffing allocations shown in Table 1 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 seek 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 the funding.

This report focuses on the part of the mandate pertaining to workload and staffing standards for circuit court clerks.

Study Approach

Several research activities were conducted to determine staffing standards for circuit court clerks. 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 staff time and workload indicators for that service. To

collect the data necessary for the analysis, JLARC staff surveyed all the circuit court clerks and obtained data from other State agencies.

Research was also conducted to identify staffing standards from other sources such as professional organizations, and to determine staffing based on the highest productivity levels achieved in Virginia. Most of the organizations contacted for this study did not have staffing standards available. Some staffing standards were identified, but there were problems with applying the standards that were identified to Virginia's circuit court clerks. As a result of these problems, the JLARC staff analysis does not use any professional standards. Instead, the standards developed for this study represent a method for equitably distributing available funds 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 identified relationships between the staffing in circuit court clerk offices 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 13 service categories for clerks of court. 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.

Figure 1 summarizes the factors that are included and excluded as special adjustments in the staffing standards for each of the service categories. Factors that were tested for a service category and are included as a special adjustment are shown with a "check." Factors tested but not included are shown with a "dot" in the service category column. Chapter IV discusses 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 1,071 FTEs are calculated for the clerks' offices (Table 2). This figure approximates the current number of positions in these offices (1,073 FTE positions). As identified in Table 2, the majority of positions required for clerks' offices would be used for court administration and land records.

Table 3 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. The City of Bristol and Campbell County, for example, had approximately the same number of Compensation Board-recognized FTE positions (5.2 and 5.5 recognized positions, respectively). Yet Campbell had more than twice the population of Bristol, two times the number of circuit court cases, three times the number of deeds, and more wills and marriage licenses. When the staffing standards are applied, Campbell receives twice as many positions as Bristol (8.2 in Campbell compared to 4.2 in Bristol), reflecting Campbell's greater workload.

Chapter I also showed that the clerks of court in Botetourt and Frederick counties have approximately the same number of Compensation Board-recognized FTE positions (6.3 and 6.4 recognized positions, respectively). Yet Frederick had 60 percent more population, 40 percent more circuit court cases, more than twice the number of deeds, and more than six times as many marriage licenses. When the

Figure 1

Summary of Workload Factors Examined for Use in Standards for Clerks of Court

Key:

✓ Special Adjustment Made in Staffing Standards

● Tested but No Special Adjustment in Staffing Standards

Not Applicable

	Services												
	Court Administration	Courtroom Work	Land Records	Wills and Estates	State Licenses	Business Records	Military Records	Genealogical Research	Elections Work	Board of Supervisors	Microfilming	Bookkeeping	Office Administration
Factors Included as Special Adjustments in the Standards													
Population*	✓	✓	✓	✓	✓	✓	✓	✓	●		✓	✓	
Population (economy of scale)	●	●	✓	✓	●	✓	✓	✓			✓	✓	✓
Number of court cases filed	✓	●											
Number of appeals cases processed	✓												
Number of jury and non-jury trials	●	✓											
Number of court days		✓											
Number of judges assigned to the court		●											
Number of instruments recorded in deed books			✓										
Number of wills and administrations recorded				✓									
Number of marriage licenses issued					✓								
Number of hunting and fishing licenses sold					✓								
Number of documents microfilmed											✓		
Method of processing microfilm											✓		
Amount of clerk's fees collected												✓	
Non-administrative FTEs													✓
Factors Examined but Excluded as Special Adjustments in the Standards													
Number of garnishments	●												
Presence of Dept. of Corrections and Mental Health, Mental Retardation, & Substance Abuse Facilities within the jurisdiction	●												
Number of concealed weapons permits issued					●								
Number of corporation charters, partnerships, and fictitious names recorded						●							
Office budget size												●	
Extent of automation	●											●	
Number of judgments docketed			●										
Number of financing statements filed			●										
Land area			●										

*Staffing standard is based on staff per capita.

Source: JLARC staff analysis of survey data and data obtained from the Virginia Supreme Court and State Compensation Board.

Table 2

Number of Clerk of Court Positions Based on Staffing Standards

Service Category	Number of FTEs*	Percentage
Court Administration	271.0	25.3%
Land and Property Records	225.1	21.0
Office Administration	108.2	10.1
Courtroom Work	105.4	9.9
Bookkeeping	80.3	7.5
Wills, Estates, and Fiduciaries	76.6	7.2
Microfilming	60.7	5.7
State Licenses	52.7	4.9
Genealogical Research	40.0	3.7
Business Records	34.2	3.2
Elections Work	7.6	0.7
Military Records	6.8	0.6
Local Board of Supervisors	2.2	0.2
TOTAL STATEWIDE STAFFING DERIVED FROM STANDARDS	**1,070.8**	**100.0 %**
COMPENSATION-BOARD RECOGNIZED POSITIONS, FY 1990	1,009.8 **	
CURRENT POSITIONS, STATE AND LOCAL	1,073.3	
POSITIONS OFFICERS WANT	1,159.9 ***	

*Data include the principal officers.

**Data include recognized positions for FY 1990 and the conversion of temporary funds to FTE positions.

***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 3

Greater Equity Can Be Achieved by Using Staffing Standards Based on Workload

	Measures of Workload					Compensation Board Approved Positions	Standard-Based Positions
	Population	Circuit Court Cases	Deeds	Wills	Marriage Licenses		
Bristol	17,700	647	1,872	112	353	5.2	4.2
Campbell	46,900	1,350	5,532	140	478	5.5	8.2
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Sources: Compensation Board recognized position data and temporary funding data for 1989-90, and workload data for 1988; the University of Virginia's Center for Public Service provisional population estimates; and Supreme Court data on the number of cases commenced in 1988 in circuit courts.

staffing standards are applied, the Frederick clerk's office receives more positions than the Botetourt clerks's office (7.4 positions in the Frederick office compared to 5.5 positions in the Botetourt office).

The Virginia Beach clerk's office has 8.2 fewer Compensation Board recognized FTE positions than the Prince William clerk's office (38.0 compared to 46.2), even though the Virginia Beach office serves a population 60 percent greater than the Prince William office. The Virginia Beach office also has almost twice as many circuit court cases, as well as more deeds, wills, and marriage licenses. When the staffing standards are applied, the Virginia Beach office receives one and one-half times as many positions as the Prince William office (57.7 positions compared to 38.1 positions).

Thus, the three sets of examples illustrate that the staffing standards allocate the positions to more equitably reflect workload. Table 4 shows the allocation, using the staffing standards, of positions to each of Virginia's circuit court clerk offices.

Table 4

Current and Proposed State Recognized FTE Positions

Office	State Recognized Positions Current	Proposed	Office	State Recognized Positions Current	Proposed
Accomack	6.000	6.26	Henry	10.000	9.65
Albemarle	9.307	10.40	Highland	2.237	2.33
Alleghany/Covington	5.049	4.61	Isle of Wight	4.148	4.90
Amelia	3.000	3.00	James City/Williamsburg	9.480	8.51
Amherst	5.216	5.03	King and Queen	2.027	2.37
Appomattox	3.239	3.18	King George	3.270	3.29
Arlington/Falls Church	24.254	30.06	King William	3.000	3.07
Augusta	9.231	8.87	Lancaster	3.019	3.27
Bath	3.041	2.81	Lee	5.220	5.03
Bedford/Bedford	8.369	8.42	Loudoun	15.143	14.35
Bland	3.063	3.78	Louisa	4.665	5.09
Botetourt	6.303	5.44	Lunenburg	3.000	3.11
Brunswick	3.631	3.80	Madison	3.125	3.32
Buchanan	8.096	5.66	Mathews	3.112	2.93
Buckingham	3.057	3.12	Mecklenburg	5.197	5.09
Campbell	5.508	8.17	Middlesex	3.000	3.10
Caroline	4.402	4.38	Montgomery	9.361	10.21
Carroll/Galax	5.037	5.36	Nelson	4.039	3.42
Charles City	3.113	2.49	New Kent	2.554	3.29
Charlotte	3.272	2.76	Northampton	3.081	3.57
Chesterfield	22.579	31.02	Northumberland	3.592	3.46
Clark	3.000	3.37	Nottoway	3.000	3.81
Craig	2.109	2.19	Orange	4.354	4.69
Culpeper	5.000	5.19	Page	5.102	4.43
Cumberland	3.000	2.76	Patrick	4.025	4.24
Dickenson	4.409	4.12	Pittsylvania	9.134	9.33
Dinwiddie	3.024	4.43	Powhatan	3.173	3.73
Essex	3.000	2.94	Prince Edward	4.111	3.88
Fairfax/Fairfax	93.186	97.89	Prince George	3.148	4.53
Fauquier	10.474	8.56	Prince William/Manassas	46.170	38.12
Floyd	3.048	3.27	Pulaski	6.255	6.18
Fluvanna	3.108	3.39	Rappahannock	2.339	2.84
Franklin (County)	8.497	8.12	Richmond (County)	2.195	2.57
Frederick	6.442	7.44	Roanoke (County)	10.596	12.57
Giles	4.000	4.22	Rockbridge/Lexington	5.049	4.99
Gloucester	5.048	5.81	Rockingham/Harrisonburg	7.474	12.74
Goochland	4.194	3.87	Russell	4.102	5.13
Grayson/Galax	4.000	4.16	Scott	3.471	5.20
Greene	2.113	3.06	Shenandoah	5.097	5.67
Greensville/Emporia	4.000	3.86	Smyth	5.214	5.40
Halifax/South Boston	6.119	6.11	Southampton/Franklin City	5.007	5.43
Hanover	9.173	9.50	Spotsylvania	9.000	8.48
Henrico	27.153	34.74	Stafford	8.007	10.16

(Continues on next page)

Table 4 (continued)

Current and Proposed State Recognized FTE Positions

Office	State Recognized Positions Current	Proposed
Surry	2.204	2.43
Sussex	3.000	3.02
Tazewell	6.191	8.07
Warren	5.230	5.59
Washington	7.191	7.50
Westmoreland	3.148	3.83
Wise/Norton	8.337	8.75
Wythe	5.398	5.01
York/Poquoson	7.494	8.61
Alexandria	23.011	19.93
Bristol	5.229	4.19
Buena Vista	2.038	2.96
Charlottesville	6.000	7.51
Chesapeake	26.157	22.48
Clifton Forge	2.081	2.22
Colonial Heights	3.234	3.83
Danville	10.554	9.48
Fredericksburg	3.313	4.61
Hampton	20.000	20.41
Hopewell	4.000	4.77
Lynchburg	11.000	11.94
Martinsville	6.000	4.51
Newport News	20.395	23.82
Norfolk	41.263	43.89
Petersburg	9.099	7.61
Portsmouth	22.179	19.71
Radford	2.605	3.33
Richmond (City)	39.351	41.57
Roanoke (City)	21.025	17.43
Salem	5.296	5.11
Staunton	4.222	4.72
Suffolk	9.419	10.13
Virginia Beach	38.000	57.66
Waynesboro	3.544	4.32
Winchester	5.466	4.92
TOTALS	1,009.83	1,070.85

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

Part Two: Technical Analysis Of Staffing Standards

III. General Approach to the Development of Standards

In order to determine staffing standards for circuit court clerks, staffing and workload data 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 the clerks' 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 expenditures 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 0 to 1. 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) accounts 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 clerks' offices. To obtain this data, JLARC staff surveyed all of the circuit court clerks and collected data from a number of secondary sources.

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 circuit court clerks, and most offices do not have records of the staff time spent. Therefore, the clerks 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 clerks, the staff of the Compensation Board, and other individuals knowledgeable about the offices; and a review of circuit court clerks' survey responses to a previous legislative study. For the previous legislative study (House Document 29, 1988), the 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. The purpose of the service categories was to organize the activities into a manageable number of categories, such that the clerks could provide estimates of the staff time spent on the categories.

JLARC staff then developed a comprehensive survey instrument to send to the clerks. The survey instrument 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.

JLARC staff sent pre-test surveys to nine offices. Information from this pre-test was used to modify the final survey before it was sent to all of the State's circuit court clerks. The final survey was sent to all clerks who did not receive the pre-test. The overall response rate for the pre-test and the final survey was 94 percent. After the surveys were returned, JLARC staff contacted the offices as necessary to clarify responses or correct inaccurate data. In addition, telephone calls were made to the clerks who did not return the survey to collect the information that was essential to the completion of the study.

The clerks 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 documents microfilmed). The data collected consisted of 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. First, workload data provided by the clerks to the Compensation Board on the annual budget request forms were obtained. In addition, data collected by the Virginia Supreme Court on caseloads in circuit courts were obtained. Other data collected from State agencies included: population estimates from the University of Virginia's Center for Public Service; correctional facility data from the Department of Corrections; and data on mental health and retardation facilities from the Department of Mental Health, Mental Retardation, and Substance Abuse Services.

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 work per unit, or the number of staff per unit. In most cases, the population of the locality served by the clerk 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. However, all workload indicators were tested using regression analysis.

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 amount of staff time.

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 analysis of the data for all the offices. Regression analysis was applied to identify

the most important 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 exmination 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: 12,000 and below; 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 in almost all circuit court clerks' 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 was 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. Staffing Standards for Circuit Court Clerks

In developing staffing standards for circuit court clerks, JLARC staff research indicated that the specific duties of the clerk's offices could be divided into 13 basic service categories. By separating the clerks' duties into these categories, the standards could be made more precise. The workload indicators match more closely the specific services to be provided. In the analysis, duties were categorized based on their purpose. For example, all duties of the clerks that relate to wills and the administration of estates are grouped together. 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 the circuit court clerks' offices.

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

Because the number of identified workload indicators was manageable for the planned regression analysis, it was not necessary to screen indicators using correlation analysis. Therefore, regression analysis was performed for all of the workload indicators, first using statewide data, and then separating the offices into population groups. The regression analysis was used to determine the staffing standards.

In this chapter, the discussion of the development of staffing standards for the 13 service categories is organized into three groups of related categories. The groups are court related services, non-court related services, and support services.

STAFFING STANDARDS FOR COURT RELATED SERVICES

Two service categories were developed to analyze the court related services provided by clerks' offices: (1) administration of civil and criminal cases, and (2) courtroom work. The "administration of civil and criminal cases" service category includes all the pre- and post-trial court work performed by the clerk's office. The "courtroom work" service category includes only the time and work involved while actually in the courtroom during trials. Separate staffing standards were developed for each of these service categories.

Administration of Civil and Criminal Cases

Circuit court clerks are responsible for all the administrative work involved in processing a case through the Virginia circuit court system. Specific duties include:

- filing new legal suits;
- storing, retrieving, updating, and disposing of case files;
- maintaining the court docket;
- jury management;
- preparing subpoenas, notices, and warrants;
- maintaining all record books related to court cases;
- in some situations, writing the criminal court orders;
- garnishing wages;
- reporting to various State agencies;
- processing materials in cases to be appealed to higher courts;
- collecting appropriate fines, costs, and fees;
- responding to court related questions from the public.

To determine staffing standards for the administration of civil and criminal cases, the relationships between the time spent on the services within this category and certain workload measures were examined. Seven potential workload indicators were tested for possible relationships with the staff time per capita that is devoted to the administration of cases. Two of the factors were included in the standards as a result of the analysis.

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

- the weighted number of court cases filed per capita, and
- the number of appeals to higher courts processed per capita.

The number of court cases filed per capita was weighted based on the average number of documents filed in law, chancery, and criminal cases. Data on the number of court cases filed were obtained from the Supreme Court of Virginia. Data on the average number of documents filed were obtained from the JLARC staff survey of clerks. The average number of documents filed was calculated as a statewide average. The data on the number of appeals to higher courts were also obtained from the JLARC staff survey.

Both court cases filed and appeals were expected to have a positive effect on staffing. The number of court cases filed was consistently mentioned by clerks as having a major impact on their workload and subsequent staffing needs. An increase in caseload size has been used by many clerks as the basis for requests for additional staff. The number of appeals cases processed was also frequently mentioned by clerks as substantially impacting their workload and staffing requirements. Many clerks reported this task as the single most time-consuming activity on a per-task basis that they perform.

In the regression analysis at the statewide level, the weighted number of court cases filed per capita, and the number of appeals per capita, accounted for 9.2 percent of the variation in per-capita staffing. At the sub-group level, these variables explained between 7.4 percent (fourth population stratum) and 25.6 percent (second population stratum) of the variation in per-capita staffing. The variable measuring the number of appeals per capita was excluded from the standards for the first and fourth population strata because the results identified a counterintuitive negative impact on staffing -- that is, the more appeals cases processed per capita, the fewer staff per capita utilized.

Inclusion of the weighted number of court cases filed and the number of appeals cases processed in the final staffing models implies that there are differences in the magnitude of these variables from office to office which cannot be accounted for solely by locality size. The differences, in turn, affect the amount of staffing needed.

Factors Excluded as Special Adjustments. Five additional factors that were examined but not used in the staffing standards include: population as an indicator of economy-of-scale effects; the number of trials per capita (weighted based on the average time involved in jury trials compared to non-jury trials); the number of garnishments processed per capita; the presence of Department of Corrections (DOC) and Department of Mental Health, Mental Retardation and Substance Abuse Services (DMHMRSAS) facilities within the locality; and the presence of an automated case management system.

There was no measurable economy-of-scale effect in the service category. The weighted number of jury and non-jury trials per capita and the presence of DOC and/or DMHMRSAS facilities were also found to have very weak effects on staffing levels. This result is likely due to the impact of these variables already being accounted for through the weighted number of court cases filed per capita. In addition, the number of garnishments processed per capita had a very weak and counterintuitive negative effect on staffing -- that is, the more garnishments processed per capita, the fewer staff per capita utilized.

Finally, the use of an automated case management system was found to have a small negative effect on the per-capita staffing required. However, inclusion of this factor in the standards could produce a disincentive for participation in the Supreme Court's voluntary Courts Automated Information System. The disincentive would be that offices using the system would receive fewer staff under the standards. A disincentive for participation would be undesirable because there are important advantages to having the function automated, aside from staffing efficiencies. Therefore, this workload factor was also excluded as an adjustment factor in the staffing standards.

Courtroom Work

The courtroom work service category encompasses all of the time spent by the clerk and his or her staff while in the courtroom. A representative from the clerk's

office is generally required to attend court whenever it is in session. The staff person present must either be the clerk or a deputy clerk. While in the courtroom, the staff person is responsible for swearing in the jury and all witnesses, marking all exhibits, and maintaining a record of all motions and court rulings on the motions. In certain circumstances the judge may allow the clerk or deputy clerk to leave the courtroom after swearing in the witnesses and jury.

Five workload indicators were tested for a possible relationship with the per-capita staffing that is devoted to courtroom work. Two factors were included as adjustments in the standards as a result of the analysis.

Factors Included as Special Adjustments in the Standards. The two key variables used in the staffing standards for courtroom work were:

- the number of jury and non-jury trials (weighted to reflect the more time-consuming nature of jury trials), and

- the total number of days of circuit court during the year.

The data for the number of jury and non-jury trials was obtained from the Virginia Supreme Court. The weighting for the time required for jury compared to non-jury trials was based on the statewide average time reported by the clerks on the JLARC staff survey. The total number of days circuit court was held was obtained from the Compensation Board.

It was expected that differences existed between offices in the number of trials and court days, even after controlling for the effect of population. In turn, these differences were expected to affect the staffing requirements of the offices. Therefore, on a per-capita basis, offices with more trials than the average office (particularly more jury trials, since they are weighted more heavily than non-jury trials) and those holding more court days than the average office were expected to require more staff.

The assumption was supported by the regression analysis. In the regression analysis at the statewide level, the number of trials and court days per capita accounted for 17.1 percent of the variation in courtroom staffing levels across offices. At the sub-group level, these indicators helped explain between 16.2 percent (first population stratum) and 64.5 percent (fourth population stratum) of the variation in staffing levels. For the third population stratum, there was a counterintuitive association between staffing and the weighted number of trials. Therefore, this indicator was not included in the final staffing standards for this population stratum.

Factors Excluded as Special Adjustments. Three variables were examined but not used in the staffing standards. These variables were: the number of judges assigned to the court per capita, population as an economy-of-scale effect, and the weighted number of court cases filed per capita. The three variables did not help explain the variation in per-capita staffing for courtroom work across the offices.

The number of judges assigned to the court per capita was tested as a workload factor, based on the expectation that the more judges assigned to the court, the greater the clerk's office workload, and hence the greater the need for staff. There are two likely reasons why this relationship did not hold up under analysis. First, the data for the number of judges assigned does not reflect the frequency with which the judges are in court. One locality may have two judges, both of which are assigned full-time to that court. Another locality, however, may also have two judges assigned, but each judge only works out of that court four days a month. Secondly, the effect of judge time on staffing needs is likely already captured in the factor measuring the total number of court days held during the year. The number of court days is affected by both the number of judges and the frequency with which the judges are in court.

There also did not appear to be a measurable economy-of-scale effect for courtroom staffing. This result suggests that any economy-of-scale effect for courtroom work would be fully accounted for through the breakdown of offices into the four population sub-groups.

Finally, in terms of court caseload size per capita, staffing for courtroom work is affected more by the sub-group of cases which actually go to trial, than all cases filed in the court. The result of the regression analysis, in which the number of trials per capita is included as a factor but caseload size is not, appears reasonable. This is because the service category only covers time spent in the courtroom, and would therefore not include time spent on cases that do not go to trial.

STAFFING STANDARDS FOR NON-COURT RELATED SERVICES

Non-court related services performed by clerks can be divided into eight different service categories:

- maintenance of land and property records;
- duties pertaining to wills, estates, and fiduciaries;
- issuance of State licenses;
- maintenance of certain business records;
- maintenance of certain military records;
- helping the public with genealogical research;
- elections work;
- duties performed as clerk to the local board of supervisors.

The following sections first provide a brief description of the duties performed within each service category. Then, the analysis of workload indicators and the staffing standards are discussed for each service category.

Land and Property Records

Clerks are responsible for recording land transfers and other transactions that affect land and/or property. The types of real estate related instruments recorded include deeds, mortgages, certificates of satisfaction, and plats. Additional duties included in this category are: maintaining the financing statement and judgment lien books, preparing reports for State and local agencies, collecting appropriate recordation fees and taxes, and responding to requests and questions which deal with land and property records. Aside from court-related matters, clerks' offices devote more staff resources to the duties within this service category than to any other category.

In developing staffing standards for land and property work, the relationships between staffing per capita for this service category and five potential workload indicators were examined. Two factors were included in the staffing standards as a result of this analysis.

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

- the number of deeds recorded per capita,

- locality population as an economy-of-scale effect, in which per-capita staffing decreases as the population of the locality served increases.

The data for the number of deeds that are recorded by the offices were provided by the Compensation Board. The expectation was that the number of deeds would have a positive effect on per-capita staffing. The clerks have noted the importance of deed recordations on staffing needs. Many clerks reported increases in deed recordations as a rationale when requesting additional staff.

Locality population, serving as an economy-of-scale effect, was expected to have a negative relationship with per-capita staffing. Many of the clerks noted that in the small offices, specialization of duties is not possible. Further, the volume of work is less, and the staff must perform tasks in smaller quantities. For example, a staff person in a small office may only record five or six instruments in the deed book at a time. In larger offices, however, staff are able to specialize and perform tasks, such as deed recordations, in large batches. As a result, efficiencies may be achieved in the larger offices.

The statewide regression analysis indicated that 43 percent of the variance in staffing per capita for this service category can be attributed to the effect of these two variables. At the sub-group level, these two variables explained from 13.4 percent of the variance in staffing levels (third population stratum) to 43.1 percent of the variance (first population stratum). As a result of the strata analysis, the number of deeds per capita and locality population as an economy of scale effect were included in the staffing standards for land record work.

Factors Excluded as Special Adjustments. Three additional factors were examined but not used in the staffing standards: the number of judgment liens filed per capita, the number of financing statements filed per capita, and land area.

The clerks noted in surveys and interviews that the number of financing statements and judgment liens recorded directly impact the need for staff. However, the analysis showed that once the effects of population and deed recordations are taken into account, very little of the variation in staffing levels is attributable to the number of financing statements and judgment liens recorded.

The remaining potential workload indicator tested but not used as an adjustment factor is land area. It was expected that land area would be positively related to staffing levels for this service category on the assumption that the more land a locality had, the more land transfers that need to be recorded. However, this relationship was not supported by the analysis. The absence of this relationship may indicate that greater land area does not necessarily mean more individual plots nor more activity in terms of property transfers.

Wills, Estates, and Fiduciaries

In Virginia, the circuit court clerk presides over probate issues. In many other states, however, only a judge has probate authority. Probate-related duties performed by Virginia's clerks include:

- determining the validity of a will;
- maintaining the will book and other record books;
- preparing lists of heirs;
- appointing executors, administrators, fiduciaries, and guardians;
- preparing orders;
- setting and recording bonds;
- administering oaths of office;
- recording fiduciary accountings received from commissioners of accounts;
- preparing reports for appropriate State agencies;
- responding to probate related requests from the public.

Clerks consistently noted that a great deal of their time in this service category is spent counseling citizens on whether they need to qualify as an administrator.

Both of the potential workload measures that were examined for a relationship with per-capita staffing were included in the staffing standards for this service category. The two factors were population as an economy-of-scale indicator, and the number of wills and administrations recorded per capita. The data for the number of wills and administrations recorded was obtained from the Compensation Board.

The regression analysis for the service category indicated that both population as an economy-of-scale effect and the number of wills and administrations re-

corded per capita had an effect on per-capita staffing for this service category. Statewide, the two variables accounted for 44.2 percent of the variation in probate staff per capita. At the population sub-group level, the indicators explained between one percent of the variation (third population stratum) and 55.1 percent of the variation (fourth population stratum) in staffing levels. Since both variables have such a small impact on staff per capita in the third stratum, the effect of using the two variables in the staffing standard is very minor. In actuality, the estimated staffing level required for each office in the third population stratum will approximate the current average per-capita staffing level for that stratum.

State Licenses

The State licenses service category covers all work related to State licenses and required registrations. Specific duties include:

- issuing marriage licenses,
- selling hunting and fishing and related licenses,
- issuing concealed weapons permits,
- appointing and administering oaths to notaries public,
- processing passport applications,
- preparing reports for appropriate State agencies,
- collecting fees and commissions associated with the licenses,
- responding to public requests regarding State licenses.

Three factors were tested for a possible relationship to the staff time per capita that is devoted to State licenses. A variable measuring the weighted number of hunting and fishing and marriage licenses that were sold per capita was included in the staffing standards. The other two factors, population as an economy-of-scale effect and the number of concealed weapons permits issued per capita, were examined but not included in the staffing standards.

Factors Included as a Special Adjustment in the Standard. Clerks of court issue and collect fees for marriage licenses, and hunting and fishing licenses. The Compensation Board collects data from the clerks of court on the number of licenses that are issued.

There were two potential approaches to treating the data for marriage and hunting and fishing licenses in the analysis. The two types of licenses could be used in the analysis as two separate variables, or they could be combined if an appropriate approach to weighting the factors could be determined.

In conducting the analyses, the measure for the number of hunting and fishing licenses was combined with the number of marriage licenses issued. In the combined variable, marriage licenses are given more weight than hunting and fishing licenses, because clerks' responses to the JLARC survey indicated that marriage licenses on average take longer to process than hunting and fishing licenses.

The regression analysis at the statewide level indicated that the weighted number of licenses issued per capita accounted for 34.2 percent of the variation in per-capita staffing assigned to this service category. Within the four population strata, this workload indicator accounted for between 18.5 percent (third population stratum) and 59.1 percent (first population stratum) of the variation in staffing levels from office to office. As a result of the analysis, the weighted number of licenses per capita was included in the staffing standards for all four population strata.

Factors Excluded as Special Adjustments. Two additional workload factors were tested but not included in the staffing standards. First, there was not a significant economy-of-scale effect between population and per-capita staffing at the strata level, potentially signifying that any economy-of-scale effect that may exist is already accounted for by separating the offices into the four population strata. Second, the number of concealed weapons permits per capita had a weak and counterintuitive negative effect on staffing levels. Therefore, the two factors were not included in the staffing standards.

Business Records

Clerks maintain records regarding partnerships and fictitious names as specified by §50-74 and §50-75 of the *Code of Virginia*. Clerks also maintained records regarding corporation charters until July of 1988. In addition, they process and record information related to business ventures, trademarks, secured transactions, marketing contracts, contracts for agricultural cooperatives, and floating timber brands and marks; collect appropriate fees; and respond to requests from the public regarding the various business records.

To determine staffing standards for the maintenance of these business records, the relationships between per-capita staffing in this service category and two potential workload indicators were examined: population as an economy-of-scale factor, and a factor measuring the number of corporation charters, partnerships, and fictitious names that are recorded. As a result of the regression analysis, population as an economy-of-scale factor was included in the staffing standards, but the indicator of the number of business records per capita recorded was excluded.

Population as an economy-of-scale indicator accounted for 21.4 percent of the statewide variation in staffing levels across offices. At the sub-group level, this factor accounted for between 0.1 percent (second population stratum) and 15.7 percent (first population stratum) of the variation in staff size. Since the economy-of-scale factor has such a small effect on staff size in the second population stratum, the impact of using this variable as an adjustment factor is minimal. In this case, the predicted staff size required for the offices will approximate the current average staff size for the stratum.

The number of corporation charters, partnerships, and fictitious names recorded per capita did not significantly impact per-capita staffing. Since the number of business records recorded in the clerk's office is highly correlated with population ($r = .946$), it seems likely that any effect this variable has on staff size is already being

explained in the model through the standardization of the data by population, and the use of the four population strata.

Military Records

According to §17-84 through §17-92 of the *Code of Virginia*, clerks are required to maintain records on the military inductions and discharges of people who served in the armed services during World War I and World War II. In addition, they are required to record a copy of the discharge certificate and/or the report of separation from active duty for any persons discharged from the United States armed services that so request the recordation. Clerks are required to record these discharges free of charge.

The amount of staff time that is devoted to military records across the State is fairly small. Information on the number of discharges recorded in each clerk's office was not available, and therefore could not be tested as a potential workload indicator for the staffing standards. The variable that was examined in the analysis for a potential relationship with per-capita staffing for this service category was population as an economy-of-scale factor. Based on the results of the analysis, this factor was included in the staffing standards.

Population as an economy-of-scale effect accounted for 26.1 percent of the variation in staffing per capita at the statewide level. Once the offices were divided into the four population sub-groups, the results were fairly weak, however. In fact, the analysis indicated a slight diseconomy-of-scale effect for the first and third population strata. In the absence of a plausible explanation for why a diseconomy of scale would validly occur, it was inappropriate to recognize this potential staffing diseconomy through the staffing standards. Therefore, the average staffing levels per capita for each of these two strata were used as the standards. In the second and fourth population strata, the economy-of-scale indicator accounted for only 2.5 and 0.3 percent of the variance in staff sizes, respectively. Although the economy-of-scale factor was applied in those population strata, its effect on the per-capita staffing level that is calculated is minimal. Most of the effect that was observed at the statewide level was recognized by dividing the offices into population sub-groups.

Genealogical Research

Though not explicitly required in the *Code of Virginia*, almost all clerks reported spending staff time helping citizens conduct genealogical research. Some clerks report that several hours of a day may be spent providing this type of assistance, since many of the researchers are not familiar with the types of records maintained by the clerk nor how the records are organized. Clerks generally referred to this service as part of the public relations work that is expected of elected officials.

Population as an economy-of-scale factor was examined as a potential indicator of per-capita staffing needs for this service category. The statewide regression

analysis indicated that 34.6 percent of the variation in staffing per capita was attributable to the economy-of-scale indicator. At the sub-group level, population as an economy-of-scale factor accounted for between 5.6 percent (second population stratum) and 11.3 percent (first population stratum) of the variation in staff size per capita. As with the results of some of the other service categories, much of the economy-of-scale effect appears to be accounted for through the breakdown of offices into the four population sub-groups.

Elections Work

Clerks are required to perform a variety of duties with regard to public elections. Duties include: publishing notices of elections and referendums, receiving and filing candidacy forms and other required papers, certifying results of elections, storing election ballots and results, preparing and recording any necessary court orders, reporting to appropriate State and local boards, administering oaths of office to locally elected officials, and responding to questions from the public regarding election matters.

On the JLARC staff survey, clerks reported spending between zero and 0.63 FTE positions on this type of work — a small range in staffing levels compared to the other service categories. From further discussions with clerks, it appeared that the amount of work performed for this service category was fairly consistent from office to office, regardless of the size of the locality. As such, it was expected that locality population would not have much effect on staffing assigned to this category.

Correlation analysis confirmed that staffing levels for elections work and population are not highly related. Consequently, there was no need to further analyze the data through regression analysis. Given the relative lack of variation in staffing across offices and the relatively small impact of population on staffing assigned to this category, the average amount of staff time statewide for elections work was deemed appropriate as the staffing standard for all offices.

Clerk to Local Board of Supervisors

Section 15.1-610 of the *Code of Virginia* requires circuit court clerks to act as clerk to the local governing body if the local government requests the service. In recent years, this option has rarely been exercised. Only seven clerks reported spending staff time on duties as clerk to the local governing body. The extent of duties performed by these clerks varies substantially from office to office. The duties range from taking the minutes of board meetings and making copies as requested to administering the local government budget, including preparation of the payroll for all local government employees each payday.

Because the duties performed vary so dramatically from office to office and are subject solely to local determination, no set standards were developed for this

service category. Instead, the reported number of FTE positions required to perform the assigned duties are treated as an add-on to the required staffing levels derived from the standards for all the other service categories. In this way, local governments will have discretion in determining the amount of staff needed to perform the locally mandated services.

STAFFING STANDARDS FOR SUPPORT FUNCTIONS

For purposes of analysis, the support functions performed by clerks were divided into three service categories: (1) microfilming work, (2) bookkeeping, and (3) general office administration. This section of the chapter discusses the duties performed with regard to each category, and how the staffing standards for each were developed.

Microfilming Work

Almost all clerks microfilm some of their records. Records commonly microfilmed include land records, court orders, judgments, and business records. The microfilming performed by clerks is generally divided into two phases. The first phase includes compiling the documents to be microfilmed and putting them into proper order, numbering the pages consecutively, and using a camera to put the documents on film. Almost all clerks perform this first phase of microfilming in their offices. The second phase consists of developing the film. Clerks must also proof the film against the original documents once the film has been processed. The majority of clerks contract out to a private vendor for the second phase. Only 15 clerks process their film in-house.

Three potential workload indicators were tested for a potential relationship with per-capita staffing for microfilming work: population as an economy-of-scale indicator, the number of documents microfilmed per capita, and whether the clerk's office processes the microfilm in-house or sends it away for processing. All three of these measures are included in the staffing standards.

In the regression analysis at the statewide level, all three of the workload indicators were found to explain some of the variation in staffing per capita across offices. Together, the variables accounted for 18.7 percent of the variation in per-capita staffing statewide.

In the analysis of population sub-groups, JLARC staff found there were so few offices in the first three sub-groups processing their microfilm in-house that this variable could not be included in the regression analysis. Therefore, the offices within the first three sub-groups that processed the film in-house were analyzed separately. For these offices, the staffing standard consists of the average staffing level per capita for microfilming.

For offices within the first three sub-groups that sent their film away to be processed, staffing standards could be derived through regression analysis. For these offices, the use of documents microfilmed per capita and population as an economy-of-scale effect accounted for between 2.1 percent (third population stratum) and 8.5 percent (first population stratum) of the variance in staffing levels. In the first population stratum, the number of documents microfilmed per capita showed a counter-intuitive negative relationship with staffing levels and was, therefore, excluded from the staffing standard.

For the fourth population stratum, there was a fairly even distribution between offices that process their microfilm in-house and those that send the film away to be processed. Therefore, the variable measuring the processing method -- whether in-house or out-of-house processing -- could be included in the regression analysis. The results showed that this variable, along with the economy-of-scale factor and the number of documents microfilmed per capita, accounted for 35 percent of the variation in staffing used for microfilm work. All of these variables were, therefore, included as adjustment factors in the staffing standard for the fourth population stratum.

Bookkeeping

Bookkeeping duties required of clerks range from activities that are specific only to this constitutional office to activities that must be performed by all organizations. Since the clerk's office is based on a fee system, one of the primary bookkeeping duties that must be performed consists of maintaining records of all fees received in payment for services. Clerks must report on these fees to the Compensation Board monthly. As of July 1, 1989, clerks are also required to administer the Set Off Debt Collection Act, as outlined in the *Code of Virginia*. Previously, many but not all clerks participated in this program. Further, clerks must administer funds held in trust by the court. Additional bookkeeping duties required of clerks include: paying bills; preparing reports on various financial transactions for State, local, and federal agencies; and preparing the payroll for office personnel.

Four factors were tested for a possible relationship to the staff time per capita that is devoted to bookkeeping work. Two of these factors were included in the standards as a result of the analysis.

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

- the amount of clerk fees collected per capita,
- population as an economy-of-scale effect.

The data for the amount of the fees collected by the clerk offices were obtained from the Compensation Board. Since the fees allowed are set within narrowly prescribed ranges in the *Code of Virginia*, greater amounts of fees should normally mean more bookkeeping entries that must be posted. The amount of fees collected per capita

was therefore expected to positively affect staffing. The expectation for population as an economy-of-scale effect was that staffing needs per capita might decrease when greater volumes of bookkeeping work were performed.

In the statewide regression analysis, the variables measuring an economy-of-scale effect and the amount of clerk's fees collected per capita accounted for 54.2 percent of the variation in staffing per capita across all offices. At the population subgroup level, the two variables accounted for between 3.9 percent (third population stratum) and 49.6 percent (first population stratum) of the variation in staffing per capita. The measure of clerk's fees collected was excluded from the standards for the third population stratum because regression analysis indicated a counterintuitive negative impact on required staffing — that is, the more fees collected per capita, the less staff needed per capita to account for the fees. The economy-of-scale indicator was excluded from the first population stratum since it reflected a diseconomy of scale. In the absence of a plausible explanation for why a diseconomy of scale would validly occur, it was inappropriate to recognize this potential staffing diseconomy through the staffing standards.

Factors Excluded as Special Adjustments. Two additional measures -- office budget size per capita and the presence of an automated financial management system -- were examined but excluded from the staffing standards.

The office budget size was highly related to clerk fees, so that it needed to be examined separately from clerk fees in the regression analysis. Population as an economy-of-scale factor and the automation variables were, therefore, paired first with the amount of clerk's fees collected, and then with the office budget size.

The regression analyses indicated that the amount of clerk's fees collected per capita and the office budget size per capita were both strong indicators of bookkeeping staff per capita. However, the amount of clerk's fees collected per capita was a relatively stronger indicator of bookkeeping staffing per capita than office budget size per capita, both statistically and intuitively. Therefore, this variable was included in the staffing standards, while the office budget size variable was excluded.

While the economy-of-scale factor was a significant indicator of staff size in both sets of regression analyses, the automation variable did not have a measurable impact on bookkeeping staff per capita in either analysis. The results suggest that the presence of an automated financial management system neither saves staffing nor requires more staff for its operation. This is not to say that there is no point to automation. Instead, the benefit of automation centers around advantages other than staff savings.

General Office Administration

As administrators, clerks must spend a portion of their time attending to personnel matters such as determining staffing needs and providing oversight to staff. In addition, they are required to prepare annual budgets for submission to both the

Compensation Board and their local governments. Additional administrative duties required of clerk's office staff include: staff training, opening and sorting mail, drafting correspondence not included in other service categories, screening telephone calls, maintaining general office files, maintaining purchasing and supplies records, and answering general questions from the public regarding the clerk's office.

The office administration activities provide support to the non-administration work that is performed by the office. JLARC staff, therefore, focused the regression analysis on examining the relationship between the time spent on administrative and non-administrative activities.

To examine this relationship, JLARC staff defined the time in FTEs that are used for the non-administrative activities as "line staff" FTEs. The number of line staff FTEs was then used instead of population to standardize the data. Thus, the dependent variable that is used in the analysis is the ratio of administrative staff to line staff. The ratio makes it possible to identify high and low levels of administrative staffing relative to the number of non-administrative staff that are in the offices.

Two variables were then tested for potential relationships with administrative staffing levels: the population served per line staff, and the number of line staff in its unstandardized form. Both of these indicators were included in the staffing standards.

The reason for testing the population served per line staff was the expectation that greater locality population may result in greater workload per line staff, and in turn the greater workload for the line staff will result in greater demand for support staff assistance. The number of line staff in its unstandardized form was also tested, based on an expectation that an economy-of-scale effect might exist. The economy-of-scale effect would be indicated if the ratio of administrative staff to line staff begins to decrease as the number of line staff increases.

In the statewide regression analysis, the economy-of-scale factor and locality population per non-administrative staff accounted for 4.8 percent of the variation in staffing for general office administration. At the sub-group level, these variables accounted for between 1.5 percent (third population stratum) and 19 percent (first population stratum) of the variation in staffing. For the fourth population stratum, a diseconomy of scale was identified by the regression analysis. Therefore, this measure was eliminated as a factor in the staffing standard.

Appendix A

(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.

Appendix A

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Appendix B

JLARC Staff Proposed Staffing Standards

POPULATION STRATA 1: 0-12,000

Localities in Strata

Amelia	Bath	Bland	Buena Vista	Charles City	Charlotte	Clarke	Clifton Forge
Craig	Cumberland	Essex	Floyd	Greene	Highland	King & Queen	King William
Lancaster	Madison	Mathews	Middlesex	New Kent	Northumberland	Rappahannock	Richmond
Surry	Sussex						

Court Administration: [-.000003334 + (.0001074 x Weighted Number of Court Cases Filed Per Capita)] x Population

Courtroom Work: [.000007552 + (.000005534 x Weighted Number of Jury/Non-Jury Trials Per Capita) + (.003241 x Number of Court Days Per Capita)] x Population

Land Records: [.00010750 + (-.000000007306 x Population) + (.0001688 x Number of Instruments Recorded in Deed Books Per Capita)] x Population

Wills, Estates and Fiduciaries: [.00006714 + (-.000000004246 x Population) + (.0001094 x Number of Wills and Administrations Per Capita)] x Population

State Licenses: [.00001132 + (.000007804 x Weighted Number of Marriage, Hunting and Fishing Licenses Per Capita)] x Population

Business Records: [.00003246 + (-.000000001922 x Population)] x Population

Military Records: (.000003738 x Population)

Elections Work: .06320 FTEs

Genealogical Research: [.00003699 + (-.000000001964 x Population)] x Population

Microfilm Work: If out-of-house processing
[.00003582 + (-.000000001700 x Population)] x Population
If in-house processing
(.00001309 x Population)

Bookkeeping: [-.00001859 + (.000005645 x Amount of Clerk's Fees Per Capita)] x Population

Office Administration: [.1883 + (-.06055 x Number of Non-Administrative Staff Proposed Under Staffing Standards) + (.00003560 x Population Per Non-Administrative Staff)] x Number of Non-Administrative Staff Proposed Under Staffing Standards

Appendix B (continued)

POPULATION STRATUM 2: 12,001-26,000

Localities in Stratum

Alleghany	Appomattox	Botetourt	Bristol	Brunswick	Buckingham	Caroline	Colonial Heights
Culpeper	Dickenson	Dinwiddie	Fluvanna	Fredericksburg	Giles	Goochland	Grayson
Greensville	Hopewell	Isle of Wight	King George	Lee	Louisa	Lunenburg	Martinsville
Nelson	Northampton	Nottoway	Orange	Page	Patrick	Powhatan	Prince Edward
Radford	Rockbridge	Salem	Scott	Southampton	Staunton	Warren	Waynesboro
Westmoreland	Winchester	Wythe					

Court Administration: [00002456 + (00001728 x Weighted Number of Court Cases Filed Per Capita) + (.01378 x Number of Appeals to Higher Courts Per Capita)] x Population

Courtroom Work: [000006484 + (0004070 x Weighted Number of Jury/Non-Jury Trials Per Capita) + (.0005874 x Number of Court Days Per Capita)] x Population

Land Records: [00006185 + (-.000000001807 x Population) + (.0001244 x Number of Instruments Recorded in Deed Books Per Capita)] x Population

Wills, Estates and Fiduciaries: [00001719 + (-.0000000002101 x Population) + (.0009994 x Number of Wills and Administrations Per Capita)] x Population

State Licenses: [000007693 + (.000006741 x Weighted Number of Marriage, Hunting and Fishing Licenses Per Capita)] x Population

Business Records: [00001158 + (- 00000000006573 x Population)] x Population

Military Records: [.000003825 + (-.00000000008729 x Population)] x Population

Elections Work: 06320 FTEs

Genealogical Research: [.00002402 + (-.0000000004981 x Population)] x Population

Microfilm Work: If out-of-house processing
.00001950 + (-.0000000003247 x Population) + (.000005914 x Number of Documents Microfilmed Per Capita)] x Population
If in-house processing
(.00001309 x Population)

Bookkeeping: 00003382 + (-.0000000007086 x Population) + (.0000002273 x Amount of Clerk's Fees Per Capita)] x Population

Office Administration: [2228 + (- 03830 x Number of Non-Administrative Staff Proposed Under Staffing Standards) + (00001193 x Population Per Non-Administrative Staff)] x Number of Non-Administrative Staff Proposed Under Staffing Standards

Appendix B (continued)

POPULATION STRATUM 3: 26,001-100,000

Localities in Stratum

Accomack	Albemarle	Amherst	Augusta	Bedford	Buchanan	Campbell	Carroll
Charlottesville	Danville	Fauquier	Franklin	Frederick	Gloucester	Halifax	Hanover
Henry	James City	Loudoun	Lynchburg	Mecklenburg	Montgomery	Petersburg	Pittsylvania
Prince George	Pulaski	Roanoke City	Roanoke Cnty.	Rockingham	Russell	Shenandoah	Smyth
Spotsylvania	Stafford	Suffolk	Tazewell	Washington	Wise	York	

Court Administration: [.000009895 + (.00003644 x Weighted Number of Court Cases Filed Per Capita) + (.01011 x Number of Appeals to Higher Courts Per Capita)] x Population

Courtroom Work: [.0000003981 + (.003338 x Number of Court Days Per Capita)] x Population

Land Records: [.00002776 + (-.00000000001108 x Population) + (.00007661 x Number of Instruments Recorded in Deed Books Per Capita)] x Population

Wills, Estates and Fiduciaries: [.00001488 + (-.00000000001188 x Population) + (.0002373 x Number of Wills and Administrations Per Capita)] x Population

State Licenses: [.000004827 + (.00001436 x Weighted Number of Marriage, Hunting and Fishing Licenses Per Capita)] x Population

Business Records: [.00001176 + (-.0000000001028 x Population)] x Population

Military Records: (.0000006802 x Population)

Elections Work: .06320 FTEs

Genealogical Research: [.00001635 + (-.0000000001349 x Population)] x Population

Microfilm Work: If out-of-house processing
[.00001081 + (-.00000000004778 x Population) + (.000005194 x Number of Documents Microfilmed Per Capita)] x Population
If in-house processing
(.00001309 x Population)

Bookkeeping: [.00001805 + (-.00000000007450 x Population)] x Population

Office Administration: [.09871 + (-.001250 x Number of Non-Administrative Staff Proposed Under Staffing Standards) + (.000003420 x Population Per Non-Administrative Staff)] x Number of Non-Administrative Staff Proposed Under Staffing Standards

Appendix B (continued)

POPULATION STRATUM 4: 100,001+

Localities in Stratum

Alexandria	Arlington	Chesapeake	Chesterfield	Fairfax	Hampton	Henrico	Newport News
Norfolk	Portsmouth	Prince William	Richmond	Virginia Beach			

Court Administration: [.00003446 + (.00002156 x Weighted Number of Court Cases Filed Per Capita)] x Population

Courtroom Work: [.000003129 + (.00003542 x Weighted Number of Jury and Non-Jury Trials Per Capita) + (.003700 x Number of Court Days Per Capita)] x Population

Land Records: [.00001740 + (-.00000000002808 x Population) + (.0001283 x Number of Instruments Recorded in Deed Books Per Capita)] x Population

Wills, Estates and Fiduciaries: [.000002665 + (-.000000000007354 x Population) + (.002364 x Number of Wills and Administrations Per Capita)] x Population

State Licenses: [-.000001759 + (.00004347 x Weighted Number of Marriage, Hunting and Fishing Licenses Per Capita)] x Population

Business Records: [.000005988 + (-.000000000006890 x Population)] x Population

Military Records: [.000001070 + (-.0000000000002976 x Population)] x Population

Elections Work: .06320 FTEs

Genealogical Research: [.000003808 + (-.000000000003998 x Population)] x Population

Microfilm Work: [.000003898 + (-.000000000001686 x Population) + (.000005028 x Number of Documents Microfilmed Per Capita) + (.03723 x Method of Processing)] x Population

Bookkeeping: [.00000005061 + (-.000000000008802 x Population) + (.000002223 x Amount of Clerk's Fees Per Capita)] x Population

Office Administration: [.08087 + (.000002925 x Population Per Non-Administrative Staff)] x Number of Non-administrative Staff Proposed Under Staffing Standards

JLARC Staff

RESEARCH STAFF

Director

Philip A. Leone

Deputy Director

R. Kirk Jonas

Division Chiefs

Barbara A. Newlin
● Glen S. Tittermary

Section Managers

John W. Long, Publications & Graphics
Gregory J. Rest, Research Methods

Project Team Leaders

Stephen A. Horan
Charlotte A. Kerr
Susan E. Massart
● Robert B. Rotz
Wayne M. Turnage

Project Team Staff

Teresa A. Atkinson
● Linda E. Bacon
James P. Bonevac
Craig M. Burns
Andrew D. Campbell
Kimberly J. Echelberger
Stephen P. Fox
Laura J. McCarty
Barbara W. Reese
Phoebe A. Roaf
E. Kim Snead

ADMINISTRATIVE STAFF

Section Manager

Joan M. Irby, Business Management & Office Services

Administrative Services

Charlotte Mary

Secretarial Services

Bonnie A. Bowles
Betsy M. Jackson

SUPPORT STAFF

Technical Services

Kim S. Hunt, Associate Methodologist
Desiree Asche, Computer Resources

Interns

Leslie Little
Tracy A. Stefanko
Kimberly S. Williams

● *Indicates staff with primary assignments to this project*

Recent JLARC Reports

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An Assessment of the Roles of Boards and Commissions in the Commonwealth of Virginia, January 1984
Organization of the Executive Branch in Virginia: A Summary Report, January 1984
1984 Follow-up Report on the Virginia Department of Highways and Transportation, January 1984
Interim Report: Central and Regional Staffing in the Department of Corrections, May 1984
Equity of Current Provisions for Allocating Highway and Transportation Funds in Virginia, June 1984
Special Education in Virginia's Training Centers for the Mentally Retarded, November 1984
Special Education in Virginia's Mental Health Facilities, November 1984
Special Report: ADP Contracting at the State Corporation Commission, November 1984
Special Report: The Virginia State Library's Contract with The Computer Company, November 1984
Special Report: The Virginia Tech Library System, November 1984
Special Report: Patent and Copyright Issues in Virginia State Government, March 1985
Virginia's Correctional System: Population Forecasting and Capacity, April 1985
The Community Diversion Incentive Program of the Virginia Department of Corrections, April 1985
Security Staffing and Procedures in Virginia's Prisons, July 1985
Towns in Virginia, July 1985
Local Fiscal Stress and State Aid: A Follow-up, August 1985
1985 Report to the General Assembly, September 1985
The Virginia Housing Development Authority, October 1985
Special Report: Cousteau Ocean Center, January 1986
Staff and Facility Utilization by the Department of Correctional Education, February 1986
Funding the Standards of Quality - Part I: Assessing SOQ Costs, February 1986
Proceedings of the Conference on Legislative Oversight, June 1986
Staffing of Virginia's Adult Prisons and Field Units, August 1986
Deinstitutionalization and Community Services, October 1986
The Capital Outlay Planning Process and Prison Design in the Department of Corrections, December 1986
Organization and Management of The State Corporation Commission, December 1986
Local Jail Capacity and Population Forecast, December 1986
Correctional Issues in Virginia: Final Summary Report, December 1986
Special Report: Collection of Southeastern Americana at the University of Virginia's Alderman Library, May 1987
An Assessment of Eligibility for State Police Officers Retirement System Benefits, June 1987
Review of Information Technology in Virginia State Government, August 1987
1987 Report to the General Assembly, September 1987
Internal Service Funds Within the Department of General Services, December 1987
Funding the State and Local Hospitalization Program, December 1987
Funding the Cooperative Health Department Program, December 1987
Funds Held in Trust by Circuit Courts, December 1987
Follow-up Review of the Virginia Department of Transportation, January 1988
Funding the Standards of Quality - Part II: SOQ Costs and Distribution, January 1988
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Technical Report: The State Salary Survey Methodology, October 1988
Review of the Division of Crime Victims' Compensation, December 1988
Review of Community Action in Virginia, January 1989
Progress Report: Regulation of Child Day Care in Virginia, January 1989
Interim Report: Status of Part-Time Commonwealth's Attorneys, January 1989
Regulation and Provision of Child Day Care in Virginia, September 1989
1989 Report to the General Assembly, September 1989
Security Staffing in the Capitol Area, November 1989
Interim Report: Economic Development in Virginia, January 1990
Review of the Virginia Department of Workers' Compensation, February 1990
Technical Report: Statewide Staffing Standards for the Funding of Sheriffs, February 1990
Technical Report: Statewide Staffing Standards for the Funding of Commonwealth's Attorneys, March 1990
Technical Report: Statewide Staffing Standards for the Funding of Clerks of Court, March 1990