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Order Number 9414199

The relationship between a locality's fiscal capacity and its per pupil expenditure in the Commonwealth of Virginia as a result of the 1988 funding formula change

Mehaffey, Mary Messer, Ed.D.

The College of William and Mary, 1993

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THE RELATIONSHIP BETWEEN A LOCALITY'S FISCAL CAPACITY AND ITS PER PUPIL EXPENDITURE IN THE COMMONWEALTH OF VIRGINIA AS A RESULT OF THE 1988 FUNDING FORMULA CHANGE

A Dissertation

Presented to

The Faculty of the School of Education

The College of William and Mary in Virginia

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Education

---

by

Mary Messer Mehaffey

December, 1993

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THE RELATIONSHIP BETWEEN A LOCALITY'S FISCAL CAPACITY AND ITS PER PUPIL EXPENDITURE IN THE COMMONWEALTH OF VIRGINIA AS A RESULT OF THE 1988 FUNDING FORMULA CHANGE

by

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DEDICATION

This dissertation is dedicated to my husband, Walt, and to my children, Sean and Erin, without whose support and encouragement I would not have succeeded in this doctoral pursuit, to my loving mother who early in life instilled in me the importance of setting goals, of striving to achieve them, and of seeing projects through to the very end, and to my friends and colleagues who kept telling me that I could finish even when I doubted it myself.

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TABLE OF CONTENTS

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A final thanks is extended to my family and my friends, including my dear four-legged companion of fourteen years. Thank you, Shadow, for spending time at my feet while I tapped away on the computer keys until the wee hours of morning. Those gentle nudges from you made the difference.

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LIST OF TABLES

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LIST OF TABLES (CONT.)

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LIST OF TABLES (CONT.)

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LIST OF FIGURES

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LIST OF FIGURES (CONT.)

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THE RELATIONSHIP BETWEEN A LOCALITY'S FISCAL CAPACITY AND ITS PER PUPIL EXPENDITURE IN THE COMMONWEALTH OF VIRGINIA AS A RESULT OF THE 1988 FUNDING FORMULA CHANGE

For the first time in 15 years in the Commonwealth of Virginia, a major restructuring in the elementary and secondary education finance formula was enacted during the 1988 General Assembly and revenue for education was increased by $576 million for the upcoming biennium. The overriding purpose of these modifications was to reduce disparities between more and less affluent school systems. The problem of educational disparity is not unique to Virginia. Over the last 20 years, between 60 and 70 individual pieces of litigation have been filed, contesting the constitutionality of public school finance systems in 41 of the United States. In 1990 alone, state courts found three states' education funding formulae to be in violation of those states' constitutions, and the state of Kentucky called for the restructuring of the entire system of public education. The Coalition for Equity in Education Funding filed suit against the Commonwealth of Virginia in the circuit court for the city of Richmond on June 12, 1992. The suit, which was filed on behalf of 31 local school boards and students in those school divisions, asked the court for a judgment declaring that the current system of funding public elementary and secondary schools to be declared unconstitutional because it denies children from less affluent school divisions an educational opportunity that is equal

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to that of children who attend public school in wealthier divisions in the Commonwealth of Virginia.

The purpose of this study is to analyze the Virginia school finance system in order to determine: (1) whether disparities in revenue for education have been reduced between pupils in high and low fiscal capacity school divisions as a result of the 1988 changes in the financing system in education, and (2) if the relationship between a locality's fiscal capacity and its educational expenditure has changed subsequent to the 1988 Virginia General Assembly's restructuring of the school financing system.

Five research questions were investigated using a correlational methodology. Upon analyzing the data, the following are some of the conclusions drawn: 1) When range was used, the disparity increased between 1988 and 1992; 2) a high positive correlation does exist between ability-to-pay as measured by the composite index and total per pupil expenditure; and 3) A high positive correlation does exist between per pupil expenditure from local funds and total per pupil expenditure. Recommendations are made for future research.

MARY MESSER MEHAFFEY

PROGRAM IN EDUCATIONAL ADMINISTRATION

THE COLLEGE OF WILLIAM AND MARY IN VIRGINIA

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Chapter 1

The Problem

Introduction

In the last 20 years, between 60 and 70 individual pieces of litigation have been filed, contesting the constitutionality of public school finance systems in 41 of the United States . No estimate of the cost and manpower spent in these court cases has ever been made, but it is certain to be substantial (Hickrod, Hines, Anthony, Dively, & Pruyne, 1992).

According to Riddle (1990), a substantial variation in expenditures per pupil for public elementary and secondary education exists in almost all the states in the United States. He continues to say that national interest in these variations is increasing, largely because of decisions by a number of State Supreme Courts--such as those of Texas, Kentucky, and New Jersey--that local expenditure disparities under their school finance systems violate State constitutions. In addition, many of the education reforms of the 1980s have created a need for an increase in education funding. This has caused an increased concern about the

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ability of local education agencies to pay for many of the recommended, or even mandated, changes in their schools.

Equal opportunity for a high quality educational program has long been an aspiration for students in Virginia's public schools. In 1964, former Governor Colgate Darden stated: "We should set as our goal schools that will ensure to every child in Virginia, without regard to the area in which the child happens to live, an opportunity for a first rate public school education" (Report of the Governor's Commission on Educational Opportunity for All Virginians 1991, p.1). That aspiration was endorsed by the people of the Commonwealth in 1971 when they approved the revised Constitution and Bill of Rights, which included the Jeffersonian belief:

> ...that free government rests, as does all progress, upon the broadest possible diffusion of knowledge, and that the Commonwealth should avail itself of those talents which nature has sown so liberally among its people by assuring the opportunity for their fullest development by an effective system of education throughout the Commonwealth. (p.1)

The 1971 ratification of the state Constitution contains two provisions of significance for school funding. Article VIII, Section 2 states:

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> Standards of quality for several school divisions shall be determined and prescribed from time to time by the Board of Education, subject to revision only by the General Assembly. (p.62)

The section also provides that:

> The General Assembly shall determine the manner in which funds are to be provided for the cost of maintaining an educational program meeting the prescribed standards of quality, and shall provide for the apportionment of the cost of such program between the Commonwealth and the local units of government comprising such school divisions. (p.62)

In 1984, however, the Governor's Commission on Virginia's Future noted unacceptable levels of disparity in schooling across the state, and in 1986, the Governor's Commission on Excellence in Education cited insufficient funds and the disparity across school divisions as the two main obstacles to educational excellence in Virginia. In the 1990s, per pupil expenditures continue to vary in Virginia from about $3300 to $7800, a $4500 difference (Governor's Commission on Educational Opportunity for All Virginians, 1991, p.2).

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Equality of educational opportunity, as defined by expenditure per child, was a public policy issue throughout the 1970s and 1980s and still remains unresolved in the 1990s. Local government has traditionally provided the bulk of local school divisions' revenues. In 1970, school divisions received approximately 52% of their revenues from local sources, mainly from property taxes. States provided about 40% and federal sources about 8% (Carroll, 1983). A school division that enjoyed a high property tax base per pupil could raise abundant money with a low property tax rate; a division with a low per pupil tax base could raise less money even if it levied a high rate. Therefore, it would suffer the dual disadvantage of a high tax rate and limited funds for school spending. The place of residence of a family largely determined the quality of its children's education in-so-far as quality can be measured by expenditures per pupil (Carroll, 1983).

For the first time in 15 years in the Commonwealth of Virginia, a major restructuring in the elementary and secondary education finance formula was enacted during the 1988 General Assembly and revenue for education was increased by $576 million for the upcoming biennium. The overriding purpose of these modifications was to reduce disparities between more and less affluent school systems (Verstegen & Salmon, 1989). Governor Baliles in the 1988 State of the Commonwealth address said:

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> The gap is simply too great between our best schools and our worst. Since implementing the Basic School Aid in 1974 to equalize funding per pupil, the disparities have grown worse not better. I submit that such disparities in funding and quality between local school divisions are inherently unfair and counter-productive. (Closing the Gap, 1988, p.1)

In the 1990s, the concept of closing the educational spending gap between the wealthiest and poorest localities in Virginia continues to receive considerable attention. When one thinks of "level of effort" in education, one thinks of the amount of tax money that is expended on education. Virginia, which is 12th in per capita income, ranks 43rd in education expenditures as a percent of per capita income (Virginia Education Association, 1993).

For the large number of adults in Virginia who do not have children in public schools, education expenditure may not rate number one on their lists of priorities. As population growth slows somewhat in the 1990s, a further decline in interest in public schools in Virginia can be expected. The kinds of taxpayers' revolts that have been visible throughout the state in early 1990 on property tax increases, particularly increases in home assessments, certainly suggest that increased support for more school funding will be tough to obtain, even in divisions with an increased number of students to educate (Hodgkinson, 1990).

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According to Ken White, President of the Virginia Taxpayers Association, the Association has released an actual tabulation of educational expenditures of all cities and counties in the Commonwealth based on figures provided by the Virginia Department of Education. The Virginia Taxpayers Association's calculation of the expense to eliminate the disparity in educational expense between school divisions in the state is that it will cost $3.2 billion. He said, "taxpayers just won't stand for this kind of highway robbery by the education lobby" (Ken White, personal communication, April 18, 1993).

In a press release by Mr. White on September 9, 1991, he stated, " that any legal or judicial solution to allegations of disparity must be based on hard, factual evidence." It's not enough, according to Mr. White, to look at a single range of costs per pupil from the lowest to the highest. During a telephone conversation, Mr. White said, " The Virginia Taxpayers Association is worried about the recent disparity litigation in Virginia and is comparing it to the litigation in Kentucky (Rose v. Council for Better Education, Inc., 1989)." Mr. White said, "The Kentucky Supreme Court decision on which the Virginia litigation is based has already resulted in the largest per capita tax increase in any state in history" (Ken White, personal communication, April 18, 1993).

Perhaps the most challenging aspect of increasing educational opportunity for Virginia's school-age population is determining what to do about the disparity in educational funding from locality to locality across the Commonwealth. Politicians

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for many years have carefully avoided the explosive disparity issue because the only answers seemed to involve substantial tax increases or shifting money from rich to poor school divisions. But with states across the nation being dragged into extensive court battles over how public education should be funded, the members of the General Assembly in Virginia in 1991-1993 were again forced to grapple with how to close the spending gap. With the current Case No. HC-77-1 pending before the Virginia Supreme Court, the General Assembly in 1994 will be facing educational funding issues again.

In order to address pupil equity in the revised funding formula, the number of instructional personnel per 1,000 students funded by the Commonwealth was allowed to vary; eight northern Virginia localities received a 12.5% "cost of competing" adjustment; and the transportation formula was redesigned. To address tax equity, the General Assembly retained the composite index, but equalized special, vocational, and remedial education, and transportation and fringe benefit funds. As a result the percentage of equalized state funds reached 75.9% in 1991-92 as compared with 71% in 1990-91. In addition, the legislature voted to increase the state share of funding the Standards of Quality by 1% each year until the figure reaches 55% in 1993 (Governor's Commission on Educational Opportunity for All Virginians, 1991).

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By and large, Virginia is a state that could afford to increase its resource base for public schools during this decade, as the number of youth is predicted to continue to increase. But, will it happen as other economic consequences of the state's growth patterns begin to emerge and other funding priorities begin to build larger voter support? There exists a vast range of economic resources per student in the Commonwealth of Virginia . Because such a high percentage of resources are derived locally, some students in Virginia will have, in relative terms, little spent on them. While in other areas, students will have a great amount expended on them. If the discrepancies get too large, Virginia may have to worry about legal actions similar to those in Kentucky and Texas, in which the state's entire system of public education has been dismissed as inequitable. It is likely that more such suits will occur during the nineties (Hodgkinson, 1990).

The problem of educational disparity is not unique to Virginia. Over the last 20 years, more than 20 courts have heard cases involving constitutional challenges to state educational systems. In 1990 alone, state courts found three states' education funding formulae to be in violation of those states' constitutions, and the state of Kentucky called for the restructuring of the entire system of public education (Commission on Educational Opportunity for All Virginians, 1991).

The Coalition for Equity in Education Funding filed suit against the Commonwealth of Virginia in the circuit court for the city of Richmond on June 12, 1992. The suit, which was filed on behalf of 31 local school boards and

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students in those school divisions, asked the court for a judgment declaring that the current system of funding public elementary and secondary schools within the Commonwealth of Virginia violates the Constitution of Virginia by denying children who attend public school in the school divisions of the complainant school boards an educational opportunity substantially equal to that of children who attend public school in wealthier divisions (State ED, Vol. XI, No. 13).

The suit alleges that the state has failed to create a finance system, i.e. a uniform funding system, of public education which provides children throughout the Commonwealth with substantially equal educational opportunity, and that the state has failed to assure an effective system of education throughout the Commonwealth (State Ed, Vol. XI, No. 13). According to Cooper (1992), a Richmond Times-Dispatch staff writer, Judge Melvin R. Hughes, Jr. did not agree with the above allegations. Judge Hughes, a Richmond Circuit Court judge, ruled on November 24, 1992, that "the Virginia Constitution does not now mandate equality of funding for school divisions in Virginia, except for meeting minimum educational standards." This ruling, however, did not adjourn the contention of the Coalition representing 31 of Virginia's poorest school divisions that the Commonwealth's method of financing public elementary and secondary education is unconstitutional.

In summary, the main intention of the decisions in Serrano and more recent cases such as Kentucky's Rose v. Council for Better Education is toward equity

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or fairness in public school finance systems. The school finance reforms in almost all the 50 states seem to echo the words "fairness," "sameness," "standardization," and "equity." According to Burrup, Brimley, and Garfield (1993), equity for children, at present, can best be measured in terms of comparing the expenditures per child. Horizontal equity (equal treatment of equals) is relatively easy to attain, since it implies only equal dollars spent per pupil. Vertical equity (unequal treatment of unequals) is more difficult to determine, since no one can define fairness with complete confidence when treating students with disabling conditions or other unequal characteristics.

The purpose of this study is to analyze the Virginia school finance system in order to determine: (1) whether disparities in revenue for education have been reduced between pupils in high and low fiscal capacity school divisions as a result of the 1988 changes in the financing system in education, and (2) if the relationship between a locality's fiscal capacity and its educational expenditure has changed subsequent to the 1988 Virginia General Assembly's restructuring of the school financing system.

These research questions are of significance to state lawmakers, finance scholars, and educators who are seeking to ascertain whether equal educational opportunity for all children in the Commonwealth is being provided.

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Theoretical Rationale

If, theoretically, all the children of the Commonwealth of Virginia are equally important and are entitled to have equal educational opportunities, what would happen to their intellectual development and social behaviors if this is not being realized? The answer to this question, and indeed the underlying premise of the research proposed in this dissertation, rests with the broad and controversial fiscal construct of equity.

Why would equity theory apply to this research problem? According to Walster, Walster, and Berscheid (1978) equity theory focuses on statements that are pervading our lives. "What's fair is fair!"; "It's just not right!"; "It's illegal!"; "It's unethical!"; and "It's unjust!" Many of these statements have been used in recent press releases by The Coalition for Equity in Education Funding. Members of this Coalition and others in the Commonwealth of Virginia are trying to determine what is fair or unfair, equitable or inequitable, just or unjust about the present educational funding system in the Commonwealth of Virginia.

According to Walster, Walster, & Berscheid (1978), equity theory focuses on two specific questions: (1) What do people think is fair and equitable? and (2) How do they respond when they feel they are getting far more or far less than they deserve? In other words, how do they respond when they observe peers reaping undeserved benefits or bearing what they believe to be undeserved suffering?

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Equity theory is reported by Walster, Walster, and Berscheid (1978) to be a simple theory comprised of four interlocking propositions which are:

1. Individuals will try to maximize their outcomes (where outcomes equal rewards minus costs).

2. Groups can maximize collective rewards by evolving accepted systems for equitably apportioning resources among members. Thus, groups will evolve systems of equity and will attempt to induce members to accept and adhere to these systems. Groups will generally reward members who treat others equitably and generally punish members who treat others inequitably.

3. When individuals find themselves participating in inequitable relationships, they become distressed. The more inequitable the relationship, the more distress individuals will feel.

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> 4. Individuals who discover they are in an inequitable relationship will attempt to eliminate their distress by restoring equity. The greater the inequity that exists, the more distress they will feel, and the harder they will try to restore equity. (p. 6)

These four propositions apply to the complainants from the seven school divisions and the eleven students whose families filed suit against the Commonwealth of Virginia in June, 1992. They believe they are in an inequitable relationship as compared to the school divisions who spent more money per pupil, and they are working hard to try to restore equity.

According to Bylsma (1988), equity theory proposes that outcome distributions are perceived as fair when the ratio of one's own outcomes to inputs is equivalent to that of a comparison group. According to Walster, Walster, & Berscheid (1978), individuals have only two options available to them for restoring equity in a relationship. These are: (1) to restore actual equity to the relationship or (2) to restore psychological equity to the relationship.

In the process of restoring actual or psychological equity, one must wonder what the impact on the students in the poorer school divisions is? Are teachers in those divisions feeling like they are not paid equitably to teach the same material? Are those wealthier divisions feeling guilty about the fact that they can expend

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more per pupil than the less wealthier divisions or do they justify it? Will students demonstrate greater academic achievement if additional resources (perceived or actual) are devoted to the educational process? What will be the pay-offs if the Commonwealth of Virginia moves toward a system of funding which will decrease disparity?

Statement of the Problem

The purpose of this study is to analyze the Virginia school finance system in order to determine: (1) whether disparities in revenue for education have been reduced between pupils in high and low fiscal capacity school divisions as a result of the 1988 changes in the financing system in education, and (2) if the relationship between a locality's fiscal capacity and its educational expenditure has changed subsequent to the 1988 Virginia General Assembly's restructuring of the school financing system.

Research Questions

During the 1988 General Assembly in the Commonwealth of Virginia, a notable restructuring of the financial system for public education was passed as a means of reducing the disparities between wealthy and less affluent school divisions in Virginia. This investigation is a constructive replication study based upon the Verstegen and Salmon study in 1989 and uses a correlational

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methodology. This research addresses the extent to which this end has been achieved by answering the following questions:

1. Have interdivision disparities in per pupil expenditure been reduced since 1988?
2. What is the relationship between a locality's ability-to-pay as measured by its composite index and its respective per pupil expenditure from local funds during 1987-88, 1989-90, and 1991-92.
3. What is the relationship between a locality's effort as measured by its educational expenditure from local funds and its respective per pupil expenditure during 1987-88, 1989-90, and 1991-92?
4. Have per pupil expenditure from local funds and total per pupil expenditure as measured in constant dollars changed over the study period as compared with five previous years?
5. What has been the effect of increased funding from the General Assembly to the school divisions involved in the Coalition for Equity in Education Funding toward their total educational expenditure for operations since 1988?

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Operational Definitions

1. Adequacy. For the purpose of this study, adequacy is defined as both the program requirements of the constitutionally derived Standards of Quality and the level of funding necessary to implement the State minimum standards for all pupils. In Virginia, the issue of adequacy is addressed by requiring a periodic update of the per pupil allocation based on actual expenditures and projected staffing ratios.

2. Adequate Funding. For the purpose of this study, adequate funding is defined as sufficient allocations of state and local resources necessary to ensure an adequate education for all pupils. In Virginia, adequacy of funding depends on where you sit. A Virginia superintendent's position on adequate funding will be influenced by whether or not sufficient funds are available to fund the educational program desired by the community. A teacher's perspective will be related to salary, working conditions, and types of resources provided by the division. A parent's position will be focused on the perception of the treatment the student receives and the understanding of what the child has learned.

3. Average Daily Membership (ADM). For the purpose of this study, ADM is defined as the sum of days present and days absent divided by days instructed.

4. Basic State Aid. For the purpose of this study, basic state aid is defined as the amount of financial aid distributed by the Commonwealth of Virginia to localities based on a local school division's ability to provide a minimum

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educational program in accordance with the prescribed Standards of Quality. In Virginia, lower fiscal capacity divisions receive a higher proportion of the per pupil cost from state funds than the higher fiscal capacity divisions.

5. Coalition Divisions. For the purpose of this study, Coalition divisions are those 31 school divisions (Allegheny Highlands, Bath, Bland, Buchanan, Campbell, Carroll, Charlotte, Craig, Dickenson, Floyd, Greensville County/Emporia City, Halifax, Lee, Lunenburg, Nottoway, Pulaski, Russell, Scott, Smyth, Washington, Westmoreland, Wise, Wythe, Bristol, Galax, Martinsville, Norton, Petersburg, Radford, South Boston, and Colonial Beach Town) who filed the 1992 equity suit in the Richmond Circuit Court.

6. Division Wealth. For the purpose of this study, division wealth is defined as the figure of true property valuation per pupil. The figure of true valuation of real and public service corporations (equalized valuation) is divided by the average daily membership for each Virginia school division.

7. Equal Opportunity. For the purpose of this study, this precept is defined as the absence of a relationship between educational resources and the wealth or fiscal capacity of an individual school division or locality in Virginia.

8. Equality. For the purpose of this study, equality is defined as the state of mathematical parity or absolute equal treatment of all pupils in the Commonwealth of Virginia.

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9. Equity. For the purpose of this study, equity is defined as equal treatment of equals (horizontal equity) and unequal treatment of unequals (vertical equity). In Virginia, the basis of equity in education must be that which is both the innate and acquired right of every citizen as provided in the state Constitution and the Code of Virginia (Carr, 1987).

10. Fiscal Capacity. For the purpose of this study, fiscal capacity is defined as a Virginia locality's ability to fund education under the current formula for determining the local composite index (LCI) and additional monies provided by the Commonwealth. In Virginia, A Fiscal Capacity Index composed of True Valuation of Property, Adjusted Gross Income, and Taxable Retail Sales is used to set state and local shares of the guaranteed program.

11. Horizontal Equity. For the purpose of this study, horizontal equity is defined as all pupils are equal and deserving of equal amounts of educational resources. Horizontal equity does not take into account the varying needs of students who are gifted, at-risk, special education, etc.

12. Local Composite Index (LCI). For the purpose of this study, the Local Composite Index in Virginia, used in distributing State Aid, is defined as an indicator of a Virginia locality's ability to pay for public education. It is derived from local true values of real estate and public service corporation property values, adjusted gross income, and local retail sales per local average daily membership and population, weighted against the same values on a statewide basis.

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13. Local Revenue. For the purpose of this study, local revenue is defined as the combined money a Virginia school division receives from city-county funds, school division funds, and other funds derived from local resources excluding debt service and capital outlay.

14. Plaintiff Divisions. For the purpose of this study, plaintiff divisions are those seven school divisions (Buchanan County, Halifax County, Pulaski County, Russell County, Petersburg, Radford, and South Boston) listed as plaintiff in the 1993 Virginia Supreme Court educational funding suit.

15. Required Local Expenditure. For the purpose of this study, required local expenditure in Virginia is the required dollar amount a school division must pay to meet the mandated Standards of Quality (SOQ) requirements.

16. Standards of Quality (SOQ). For the purpose of this study, the current Standards of Quality and Standards of Accreditation in Virginia require a maximum pupil-teacher staffing ratio of 25 to 1 in all grade levels except the first grade. Class size maximums are 30 pupils for kindergarten through grade three and 35 pupils for grades four through seven. Middle and secondary teachers of subjects not regulated by other class size requirements, such as vocational and special education, are limited by class periods and student periods taught per week. The determination of funding to support the positions required by these minimum standards do not fully support the number of classroom teachers who are serving the educational needs of students in Virginia.

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17. Total Educational Expenditure for Operations (TEE). For the purpose of this study, total educational expenditure for operations is state, local, state retail sales and use tax, and federal funds utilized by localities for the operation of schools but excludes expenditures for state operated programs (hospitals, clinics, and detention homes) located in the localities.

18. Vertical Equity. For the purpose of this study, vertical equity is defined as the acknowledgement that pupils in Virginia are different and that unequal pupils deserve appropriate unequal amounts of educational resources.

Significance of the Study

This research question is of importance to Virginia localities as they seek to provide equal educational opportunities to all school children residing in their communities. It is, also, of significance to state lawmakers since the reported objective of the 1988 finance formula was to provide greater equity in the revenue distribution among Virginia school divisions.

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Limitations of the Study

The first limitation of this study is derived from the fact that this research is confined to the Virginia public school finance system for 1987-88, 1989-90, and 1991-92. Secondly, data used in the study are limited to that which is available through published documents from the State of Virginia, the Virginia General Assembly, the Virginia Education Association, and the Virginia Department of Education.

Major Assumptions

It is assumed that the present provisions for financing schools do not ensure equality of educational opportunities. It is assumed that the level of spending would have a significant impact on the educational programs offered to children in Virginia. It is assumed that to equalize additional funding would improve equity.

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Chapter 2

Review of Related Literature

According to (Odden, 1990), finance litigation, fiscal inequities, and finance reform have rebounded to the top of state education policy agendas in the 1990s. In order to study the history of the problem, develop familiarity with its theoretical background, and assess the merits of previous studies, research dealing with topics of equity in educational funding, equality in educational opportunity, judicial reviews of school finance structures, and educational funding in the Commonwealth of Virginia are presented in this chapter. Specifically, the literature review which follows is organized using the following sections: equity in educational funding, equality in educational opportunity, judicial reviews of school finance structures, and financing education in the Commonwealth of Virginia.

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Equity in Educational Funding

Pleas for equity. It is generally believed that all individuals in society should contribute to the public good and be treated in uniform ways (Swanson & King, 1991). Measures of equity have been used by economists to answer a wide range of questions such as: Is the distribution of monies among jurisdictions more equal than in the past? Is the distribution of per pupil revenue more equal than it has been in the past (Verstegen & Salmon, 1989)?

Recognizing that at-risk children are capable of success in school and work, a plea for equity was made by the National Board of Inquiry in 1985 (Mueller & McKeown, 1986) and three of the pleas address funding:

> - To increase tax equity through state systems of raising revenues that are not dependent on regressive taxes and that insulate property-poor divisions against excessive local taxes;
> - To eliminate inequality in educational access resulting from disparities funding for schools; and
> - To raise funding levels for programs serving children at risk so that every eligible child is assured of adequate services. (p. 97)

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In a functional sense, equity and equality are often used synonymously. However, equity does not necessarily mean identical or even ample equal treatment. According to McCarthy and Deignan (1982), it generally is considered fair to treat similarly situated persons equally (horizontal equity); however, persons who are not similarly situated may require unequal treatment for it to be fair (vertical equity). In Virginia, the basis of equity in education must be that which is both the innate and acquired right of every citizen as provided in the state Constitution and the Code of Virginia (Carr, 1987).

Equity theory research. Austin and Walster (1974) conducted an experiment to determine how students would react when they were over-rewarded, equitably treated, or deprived of the salary they deserved. Students began the experiment anticipating to be paid two dollars an hour. The supervisor paid some students three dollars, some two dollars, and some one dollar. The students filled out the Mood Adjective Check List at the completion of the experiment. This instrument's scale allows one to determine the distress level of the subjects. The results indicated that the equitably treated students were more content than the unrewarded or overrewarded subjects. Evidence also existed to support the contention that the greater the inequity, the more distress participants felt.

According to Bylsma (1988), equity theory proposes that outcome distributions are perceived as fair when the ratio of one's own outcomes to inputs is equivalent to that of a comparison group. Research on reward allocations and reward

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satisfaction suggests that females' behavior frequently fails to conform to equity theory predictions. Women tend to allocate less reward to self and more to a peer than do men with equivalent inputs.

Equity as it relates to justice. According to Alexander (1982), equity is a term used to surround the theory of justice, equality, humanity, morality, and right. Equity may be regarded as a right or a matter of justice where absolute equality is the conclusive measure of such justice. The goals of equal treatment or equality become a basic standard against which equity may be judged (1982, p.194). Equity relates more favorably to justice and suggests an image of fair, unbiased and impartial treatment that flows from either an innate or acquired right (Alexander, 1982, p.195).

Equity sought through judicial relief. Analyses by skilled legal scholars on systems of school finance began to appear in the late 1960s and the early 1970s. The work of Wise (1967) and Coons, Clune, and Sugarman (1970) set the stage for the landmark Serrano v. Priest opinion of the California Supreme Court in August, 1971. Working separately, Wise and Coons and their groups reached a common agreement which was that the widespread inequities of school finance structures between wealthy and poor areas were not likely to be corrected through the legislative process. For many years, property-wealthy school divisions had been able, legislatively, to protect their taxing and spending advantages. The most promising reform approach was to seek judicial relief for the perceived inequities.

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Coons, Clune, and Sugarman developed the principle of fiscal neutrality which stated that: "The quality of public education may not be a function of wealth other than the wealth of the state as a whole." (1970, p.2) This principle formed the basis for the Serrano litigation and served as a guide for numerous school finance cases through the 1970s and early 1980s.

Search for equity in Virginia. In 1971, the voters of Virginia accepted an amended constitution which greatly strengthened the state's commitment to equal educational opportunity. The language of the revision sought to ensure an educational program of high quality for all Virginia's citizenry.

In 1974, the General Assembly of Virginia adopted a new funding system which included a method of determining the cost of the required educational program and a formula to apportion the established cost equitably between the state and the local communities. The objective of these procedures was the enhancement of equal educational opportunity and the establishment of a system that distributed the cost according to a locality's ability-to-pay (Carr, 1987).

In 1983, a staff report generated for the Joint Legislative Audit and Review Commission (JLARC) revealed that; even though state funding for education had increased by 37% from 1978 to 1982, it did not keep pace with inflation in government service costs which grew at a rate of 40%. Also, state funding trailed behind support at the local level which had expanded during the same time period

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by approximately 63%. The general result of these factors was a decline in state support for educational expenditures of 3% (Carr, 1987).

According to this JLARC report, the results of a survey to 136 cities and counties report that 86% of the respondents believed state education funding to be inadequate and 80% felt it had gotten worse over time.

Studies conducted by Vernall (1982), Jones (1983), and Carr (1987) each concluded that little if any change in Virginia's educational fiscal equity had been achieved. In fact, each study revealed that the disparities in per pupil expenditures had actually increased.

Since the completion of these studies, some proposed changes have been recommended in the Commonwealth. Excellence and equity formed two of Governor Balilies' goals for Virginia Public Education. In proposing full funding for the Standards of Quality (SOQ) Governor Balilies stated, "Since implementing the Basic School Aid formula in 1974 to equalize funding per pupil, the disparities have grown worse, not better...." (The Governor's Commission on Excellence, 1988). An additional $554 million in appropriations for the 1988-90 biennium was recommended in the Budget Bill, resulting in total biennial state funding for Virginia public elementary and secondary education in excess of $4 billion. This represented a 15.7% increase in direct aid (unadjusted for inflation) compared to the previous biennium (Verstegen and Salmon, 1988). On March 12, 1988, the Virginia General Assembly passed the $22.6 billion biennium budget for the state.

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The Governor called the session "a benchmark in the development of Virginia" (The Washington Post, 1988). Others termed the 60-day meeting a "legislative slumber party (Richmond Times Dispatch, 1988). According to the Richmond Times Dispatch: "...Most important, he [The Governor] marked $571 million to extra state aid to localities, a gigantic increase designed to close the gap between the 'have' and 'have not' school divisions. According to Verstegen and Salmon (1988), the budget as passed included record spending on education--biennial funds increased under the bill by $575.4 million and the finance formula was significantly altered.

Equity in school finance. The most comprehensive treatment of equity in school finance has been made by Berne and Stiefel (1984). They organize their analysis around four questions:

1. What is the makeup of the groups for which school finance should be equitable?
2. What services, resources, or, more generally, objects should be distributed fairly among members of the groups?
3. What principles should be used to determine whether a particular distribution is equitable?
4. What quantitative measures should be used to assess the degree of equity? (p. 7)

To address these questions, schoolchildren and taxpayers have been

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studied. The objects to be distributed equitably among students are divided into inputs, outputs, and outcomes. Inputs may be measured in actual dollars or actual amounts of physical resources available. Outputs and outcomes relate to the goals and objectives of schooling. The list of objects of analyses is almost infinite and there is not general agreement on what inputs, outputs, or outcomes should be equitably distributed (Swanson & King, 1991).

These questions have been used to shape studies of school finance equity. Interest in this area began to peak in the 1970s and has waned some since then. The 1970s became recognized as the decade of school finance reform as state after state restructured their finance systems to improve equity. Now in the 1990s, equity in education is becoming a key issue once again.

Equality of Educational Opportunity

The concept of equality. The concept of equality of educational opportunity is one policy dilemma that continues to invoke conflicts with courts and legislatures. Federal courts have made this matter a national area of concern through numerous decisions originating in the U.S. Supreme Court's pronouncement in Brown v. Board of Education (1954). In this case, it says, "Such an opportunity, where the state has undertaken to provide it, is a right which must be made available to all on equal terms." Also, Title VI of the Civil

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Rights Act was implemented in the 1960s as Congress' response to ease inequities in children's educational opportunities (Swanson & King, 1991, p.98).

Policy changes to address equality. Policy changes in school finance structures at the state level did not immediately address inequities by following federal interventions. Early advocates of reform included the National Urban Coalition, and the Lawyers' Committee for Civil Rights under Law, and other groups who were "outside of the normal state and local policy process and, as such, were a challenge to traditional education policy makers." (Ward, 1990, p. 235) The National Education Finance Project (NEFP) illustrated pragmatically that dissimilarities in school divisions' abilities to fund school programs caused substantial inequities in educational opportunities. This federally-sponsored project advanced model finance plans to redistribute state revenue and equalize divisions' property wealth (Swanson & King, 1991).

Even with pressures to modify the finance policy to help the poor and minority students' educational opportunities, state legislatures were slow to respond. Because of the "give and take, negotiation, and compromise" structure of state legislative processes, voluntary reform was inhibited. (Fuhrman, 1978, p. 160)

First, as representatives of school divisions to be influenced by recommended school finance reforms, legislators are often more concerned with protecting their school divisions' interests than with equalizing funding for all children's education.

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Secondly, the distributive nature of finance policy requires that at least a majority of school divisions benefit from reforms. Equity and equality goals are often sacrificed in the bargaining and compromising essential in finding solutions that are based on which divisions gain and which ones lose. Lastly, resolving educational finance issues is not isolated from other concerns before the legislators. Lining up votes on a financial proposal depends on positions taken by legislators on prior and subsequent policy issues, rather than solely upon the worthiness of equalizing educational opportunities (Swanson & King, 1991).

Challenges to states' school finance policies heard in the courts are more likely than not to consider inequities in the treatment of pupils. Decisions subsequent to Brown determined that absolute equality of resources denies all children, particularly those who have disabling conditions (Mills v. Board of Education, 1972) or who have English-language deficits (Lau v. Nichols, 1974), equality of educational opportunity. These decisions present the principle of equity as a broader concept than that of equality and imply that children have the right to access instructional programs appropriate to their individual learning potentials. Equalizing educational opportunities does not always mean equal amounts of funds per pupil nor equal funds per program. Many challenges to school finance systems explore the concept of equality of opportunity as it relates to disparities in wealth among school divisions and the impact of disparities on divisions' ability to finance educational opportunities for children (Swanson & King, 1991).

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According to Alexander (1991), educational investment has at least two significant aspects that must be addressed by a nation or state. The first is the level of investment, the relative importance placed on education as reflected by the financial effort measured by the ratio of expenditures of education to the state or nation's fiscal capacity. The second is the degree of inequality in the allocation of fiscal resources. He further states that when investment in education decreases and inequality increases, then social mobility is greatly restricted.

The gap between the richest and the poorest states in per capita personal income is currently increasing, after several decades of decreasing. Between 1980 and 1988, just 17 states moved closer to the national average per capita personal income and 31 states moved farther away with two states having no change. The deterioration in the relative position of the poor is complicated by the growing fiscal responsibility on the public schools because of the need to serve an increasingly heterogeneous population. Social and economic fragmentation of society creates higher operational costs to the public schools. Families in poorer economic circumstances tend to have children with greater and more complex educational concerns. Because these children require early and lasting intervention by educators, the demand on school financial resources continues to increase each year (Alexander, 1991). Virginia, which is 12th in per capita income, ranks 43rd in education expenditures as a percent of per capita income.

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Inequality in Kentucky. The dream of an adequate and equitable school system remained unfulfilled as Kentucky approached the 1990s. In 1987-88, almost 40 percent of Kentucky's children lived in poverty. The schools they attended were thought to be some of the worst in the nation. Statistics gathered in the 1980s revealed that Kentucky was at or near the bottom in per-pupil expenditures. In 1985-86, the wealthiest division in Kentucky spent $4,361 per pupil, while the poorest division spent only $1,767 per pupil. While wealthy divisions were purchasing computers for their students, many rural divisions in eastern Kentucky were unable to afford library books or textbooks. Differences in achievement test scores and graduation rates reflected these inequalities of opportunity for children from poor divisions (Dove, 1991).

In hopes of providing equal opportunity to all children in Kentucky, a group of educators and attorneys sued the state legislature for failing to provide educational opportunities in accordance with the Constitution of Kentucky. On June 8, 1989, the court directed the General Assembly to go back to the drawing board and create a new system that would provide adequate and equal educational opportunities for all (Dove, 1991).

Inequality in Tennessee. In Tennessee the disparities were found to be worse than in Kentucky. Plaintiffs revealed that the Tennessee schools were not only inequitably financed, but were inadequately financed as well. Tennessee ranked 49th among the 50 states in fiscal effort to support the schools. Tennessee's

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funding inequities were matched and exceeded only by its fiscal inadequacies. The more affluent school divisions had curriculum of greater scope and sequence, more advanced placement classes, more foreign language opportunities, far superior math and science curricula, and many fine arts programs. Plaintiffs gave evidence that buildings in poor school divisions were antiquated and that the libraries and laboratories were poorly equipped. Students in the more affluent school divisions generally scored significantly higher on standardized tests (Alexander, 1991).

A judicial look at inequality of educational opportunity. According to McUsic (1991), 31 states have tested the constitutionality of their school finance systems, a few more than once. Recent cases are either in process or decisions have just been made in Alabama, Indiana, Illinois, Missouri, Montana, Ohio, and Virginia. The plaintiffs in Ohio faced a particularly difficult task because the Ohio Supreme Court, citing Rodriguez, previously held that education is not a fundamental right and ruled that the legislature has complete and virtually limitless power in matters of school finance (Alexander, 1991).

The Coalition for Equity in Education Funding filed suit against the Commonwealth of Virginia in the Circuit Court for the City of Richmond on June 12, 1992. The suit, which was filed on behalf of 31 local school boards and students in those school divisions, asked the court for a judgment declaring that the current system of funding public elementary and secondary schools within the Commonwealth of Virginia violates the Constitution of Virginia by denying

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children who attend public school in the school divisions of the complainant school boards an educational opportunity substantially equal to that of children who attend public school in wealthier divisions (State ED, Vol. XI, No. 13).

In order to keep the suit from being unwieldy, only a small number of school boards and students, 11 students in seven school divisions, were actually named plaintiffs in the bill of complaint prepared by Andrew P. Miller, attorney for the coalition and former state Attorney General (Walker, 1992).

The Coalition had first filed suit in November, 1991, and then withdrew the complaint. Coalition leaders said they wanted to give Governor Wilder and the 1992 General Assembly time to resolve the disparities during the 1992 legislative session (Daily Press, June 13, 1992). The 1992 General Assembly voted to increase school funding by $74 million to help students at risk of failing and students who speak English as a second language. Also, it voted to supply funds to divisions for building maintenance and lose of enrollment. James Dyke, Secretary of Education, said, " The General Assembly made a tremendous good-faith effort to come up with an additional $74 million to address this issue" (Daily Press, June 13, 1992).

The Coalition waited until after the 1992 General Assembly session to re-file the complaint. The 16-page complaint names as defendants the Commonwealth of Virginia, the State Board of Education, the Secretary of Education, and the Superintendent of Public Instruction. The seven school boards participating as

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complainants are Buchanan County, Halifax County, Pulaski County, Russell County, Petersburg, Radford, and South Boston (State Ed, Vol. XI, No. 13).

The suit alleges that the state has failed to create a finance system, i.e. a uniform funding system, of public education which provides children throughout the Commonwealth with substantially equal educational opportunity, and that the state has failed to assure an effective system of education throughout the Commonwealth (State Ed, Vol. XI, No. 13).

However, Lerman (1993) stated in a recent article that a new report has been prepared for the Senate Finance Committee which disputes the funding gap and calls it "artificial." Delegate Hunter Andrews from Hampton, Virginia stated in a recent Daily Press article dated December 2, 1993, that he really could not determine a close relationship between level of funding and academic achievement. The Finance Committee scheduled a meeting in Williamsburg, Virginia on December 2-3, 1993, to discuss next year's budget for the Commonwealth of Virginia and the disparity issue.

Judicial Reviews of School Finance Structures

According to Hickrod, et al. (1992), between 60 and 70 individual pieces of litigation have been filed, contesting the constitutionality of public school finance systems in 41 of the United States. Presently, some cases are in legal proceedings making it difficult to ascertain the exact number. Some states have won at the

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State Supreme Court level, while some have lost and refiled, and others have lost and have not refiled (See Table 1). In 10 states, the State Supreme Court has declared that education is a fundamental constitutional right while in 10 other states, the State Supreme Court has declared that education is not a fundamental constitutional right (See Table 2).

As mentioned previously, it is difficult to determine the exact number of cases and their actual results since 13 cases are pending; while in nine states, no litigation is present or the case is dormant (See Table 3).

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Table 1

Results of State Supreme Court Cases Involving Educational Funding

State	Won	Lost	Filed Further Complaint	Filed No Further Complaint
Alabama	x			
Arizona		x	x	
Arkansas	x			
California	x		x	
Colorado		x		x
Connecticut	x			
Georgia		x		x
Idaho		x	x	
Kentucky	x			
Louisiana		x	x	
Maine		x		x
Maryland		x		x
Michigan		x		x
Montana	x			
New Jersey	x		x	
New York		x	x	
N. Carolina		x		x
Ohio		x	x	
Oklahoma		x	x	
Oregon		x		x
Pennsylvania		x	x	
S. Carolina		x		x
Tennessee	x			
Texas	x			
Washington	x		x	
W. Virginia	x		x	
Wisconsin		x		x
Wyoming	x			

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Table 2

Decisions of State Supreme Courts Regarding Education as a Fundamental Right

State	Fundamental Right	Not a Fundamental Right
Alabama	x	
Arizona	x	
Arkansas		x
California	x	
Colorado		x
Connecticut	x	
Georgia		x
Idaho		x
Kentucky	x	
Michigan		x
Montana	x	
New Jersey		x
New York		x
Ohio		x
Oregon		x
Pennsylvania		x
Tennessee	x	
West Virginia	x	
Wisconsin	x	
Wyoming	x	

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Table 3

States in Which State Supreme Court Decision is Pending or in Which No Litigation is Pending or Case is Dormant

State	Court Decision Pending	No Litigation or Dormant Case
Alaska	x	
Delaware		x
Florida		x
Hawaii		x
Illinois	x	
Indiana	x	
Iowa		x
Kansas	x	
Massachusetts	x	
Minnesota	x	
Mississippi		x
Missouri	x	
Nebraska	x	
Nevada		x
New Hampshire	x	
New Mexico		x
North Dakota	x	
Rhode Island	x	
South Dakota	x	
Utah		x
Vermont		x
Virginia	x	

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The information contained in Tables 1, 2, and 3 was found in Hickrod, et al. (1992) and was updated to the present. One must ask what the current pending litigation will mean to children/youth in the United States and how it will be different from equal protection cases in the past.

Equal protection. The law of equity allows individuals or groups to seek judicial review when it is believed that principles of fairness are not served by governmental policies and actions. Plaintiffs in school finance suits assert that variations in spending created by finance structures violate federal or state constitutional provisions. According to Swanson & King (1991), judicial reviews of school finance challenges rely upon standards created within the equal protection clauses of the federal and state constitutions and within state education articles.

Under equal protection guarantees, individuals in like situations must be treated the same. Different treatment will be upheld only if classifications created by the law are not arbitrary or irrational. If alleged that varying treatment of students or taxpayers is not in accordance with equal protection guarantees, a three-tiered test determines the reasonableness of the classification: strict scrutiny, sliding scale, and rational basis (Underwood, 1989).

A look to the past. As consideration is given to the impact of court decisions upon equalization of educational funding, it is important to review the decision of the court regarding the right of every child to have an equal opportunity to obtain

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an education. In the historic Brown v. Board of Education of Topeka, Kansas, the U. S. Supreme Court in 1954 stated:

> Today, education is perhaps the most important function of state and local government.... In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity for an education. Such an opportunity, where the state has undertaken to provide it, is a right which must be made available to all on equal terms. (at 579)

In the State Supreme Court of Maine in 1912, the case of Sawyer v. Gilmore drew a clear distinction between legislative and judicial prerogative (Alexander & Jordan, 1973). In its decision, the Supreme Court of Maine refused to apply state constitutional uniformity and equality of taxing provisions to school fund distribution formulae. This was a judicial philosophy which was trusted for over half a century. The opinion of the court in the Sawyer case included:

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> ...In ordering that taxation may be equal and uniform in the constitutional sense, it is not necessary that the benefits arising therefrom should be enjoyed by all the people in equal degree, nor that each one of the people should participate in each particular benefit.
> (p.14)

Cases confronting financial systems of state public schools began to arise again in the late 1960s. This litigation can be divided into two discrete groups--the McInnis-type cases in which the plaintiffs lose and the Serrano-type cases in which the plaintiffs win. Demands voiced by petitioners in both groups asserted that state educational finance procedures which were based upon property tax revenues discriminated unjustly between classes of children because they related their free access to equal educational opportunity to where they reside (Hudgins & Vacca, 1979).

In a 1968 case, McInnis v. Ogilvie, the plaintiffs claimed that the public school finance system of Illinois denied them equal protection under the 14th Amendment. They pursued permanent injunction prohibiting further distribution of tax funds for education (Hudgins & Vacca, 1979). The charge was dismissed by the U. S.

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District Court for these reasons: 1) the quality of a child's education could not be measured exclusively by educational expenses; 2) the 14th Amendment did not compel that public school expenditures be made only on the basis of educational need; and 3) no judicial standard existed to help a federal court to decide if and when the Equal Protection Clause has been satisfied or not (McInnis v. Ogilvie, 1969).

The plaintiffs in the McInnis case were unhappy with the decision of the district court so they appealed their case to the U. S. Supreme Court. At this point, they were joined by the National Teacher Association, the Urban Coalition, and the American Federation of Teachers. However, the U. S. Supreme Court upheld the decision of the lower court without hearing the case (Swanson & King, 1991).

In a Virginia case, Burruss v. Wilkinson (1969), the federal district court found the Virginia school finance system to be constitutional. The court deferred to state legislatures as the appropriate forum for policy development. The Burruss case discussed the value of equalizing educational opportunities but stated its limitations: "the courts have neither the knowledge, nor the means, nor the power to tailor the public monies to fit the varying needs of these students throughout the state. We can only see to it that the outlays on one group are not invidiously greater or less than that of another (Swanson & King, 1991)." Alexander (1982) noted that these cases were not successful because the courts did not have adequate

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standards against which to assess disparities in educational opportunities resulting from variations in property wealth. Even though these earlier cases were unsuccessful for the plaintiffs, they urged a concept of equity under which state funds would eliminate fiscal inequities among school divisions.

Courts in California and Minnesota examined their states' school finance systems in 1971. In Serrano v. Priest (1971), the court's emphasis was on discrimination on the basis of wealth. This narrower focus than in the McInnis and Burruss cases permitted a successful challenge to the equal protection clause of the 14th Amendment. The state of California failed the "strict scrutiny" test which resulted in its financial plan being declared unconstitutional.

The California court adopted the definition of fiscal neutrality as defined by Coons, Clune, and Sugarman (1970): "The quality of public education may not be a function of wealth other than the wealth of the state as a whole" (p.2) A state appellate court in 1986 held that the California legislature had adequately met the fiscal neutrality standard through good faith efforts (Serrano v. Priest, 1986). Ward (1990) indicated that fiscal neutrality in California has been accomplished because of Proposition 13, which changed some institutional factors and created equality in spending in a way that the finance system itself could not.

According to Swanson & King (1991), the federal district courts of Minnesota and Texas found their finance plans to violate the equal protection clause of the 14th Amendment. Denying a motion to dismiss (VanDusartz v. Hatfield, 1971),

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the Minnesota court deferred to the state legislature to develop a satisfactory finance system. The district court decision in the Texas case is the only school finance dispute to be reviewed by the U. S. Supreme Court. The Court reversed the lower court decision and interpreted students' interests in education differently from Serrano.

In (San Antonio Independent School District v. Rodriguez, 1973), The U.S. Supreme Court determined that "education is not a fundamental right guaranteed by the U. S. Constitution. The Court held that the Texas state finance system enabled children to obtain at least a minimal education, and there was no absolute denial of this opportunity. According to the Court, ". . . no charge fairly could be made that the system fails to provide each child with an opportunity to acquire the basic skills necessary for the enjoyment of the right of speech and of full participation in the political process" (at 36-37).

Swanson & King (1991) state that one consequence of the U. S. Supreme Court's holding in Rodriguez was to shift attention of the finance reform movement from federal to state courts. Since 1973, state courts in 10 states, including Texas, have invalidated finance plans as not meeting state constitutional standards. State courts in 15 other states upheld finance plans as furthering legitimate state objectives despite resulting expenditure disparities. The state court of the Commonwealth of Virginia will be hearing a school finance case in 1992 - 93. The decision may not be rendered until 1994.

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A glimpse of the present in Virginia. The Coalition for Equity in Education Funding filed suit against the Commonwealth of Virginia in the Circuit Court for the City of Richmond on June 12, 1992. The suit which was filed on behalf of 31 local school boards and students in those school divisions, asked the court for a judgment declaring that the current system of funding public elementary and secondary schools within the Commonwealth of Virginia violates the Constitution of Virginia by denying children who attend public school in the school divisions of the complainant school boards an educational opportunity substantially equal to that of children who attend public school in wealthier divisions (State ED, Vol. XI, No. 13).

In order to keep the suit from being unwieldy, only a small number of school boards and students, 11 students in seven school divisions, were actually named plaintiffs in the bill of complaint prepared by Andrew P. Miller, attorney for the Coalition and former state Attorney General (Walker, 1992).

The Coalition had first filed suit in November, 1991, and then withdrew the complaint. Coalition leaders said they wanted to give Governor Wilder and the 1992 General Assembly time to resolve the disparities during the 1992 legislative session (Daily Press, June 13, 1992). The 1992 General Assembly voted to increase school funding by $74 million to help students at risk of failing, students who speak English as a second language, building maintenance, and school divisions that are losing enrollment. James Dyke, Secretary of Education, said,

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" The General Assembly made a tremendous good-faith effort to come up with an additional $74 million to address this issue" (Daily Press, June 13, 1992).

The Coalition waited until after the 1992 General Assembly session to re-file the complaint. The 16-page complaint names as defendants the Commonwealth of Virginia, the State Board of Education, the Secretary of Education, and the Superintendent of Public Instruction. The seven school boards participating as complainants are Buchanan County, Halifax County, Pulaski County, Russell County, Petersburg, Radford, and South Boston (State Ed, Vol. XI, No. 13).

The suit alleges that the state has failed to create a finance system, i.e. a uniform funding system, of public education which provides children throughout the Commonwealth with substantially equal educational opportunity, and that the state has failed to assure an effective system of education throughout the Commonwealth (State Ed, Vol. XI, No. 13). Will the state court of Virginia express the willingness of the judiciary to influence educational structures and policies as the state courts in Kentucky and West Virginia did?

Alabama, Tennessee, West Virginia, and Kentucky. Three recent decisions in favor of plaintiffs expanded greatly the role of the courts and the standards to be applied in resolving school finance challenges. "This is the happiest day of my life in more than 40 years in education," was Dr. Wayne Teague's reaction to a state court's decision which found Alabama's education system unconstitutional. According to Judge Gene Reese, Alabama's system of public schools failed to

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provide equitable and adequate educational opportunities to all children. Children with disabilities ages three through 21 were not receiving appropriate instruction and special services according to Judge Reese. The decision cited funding disparities for Alabama's special education programs . According to testimony at the trial, state special education funding for the 1990-91 school year ranged from $2,087 per pupil to $643 per pupil. According to Dr. David Rostetter, a noted consultant and expert on special education law, "This is the first time that special education administrators have intervened as plaintiffs in a state funding equity lawsuit." Robert Goodwin, attorney and professor at Stanford University, School of Law, agrees that the decision is precedent-setting in two major ways. First, it includes children with disabilities in its determination that students in Alabama have certain state constitutional rights to educational services. Second, it is important to note that the court adopted a standard for what constitutes an appropriate special education program. The standard includes inclusion, program support, curriculum, instruction, peer support, collaborative teaming, and preparation for life (The Special Educator, May 11, 1993). Another equity lawsuit, (Tennessee Small School Systems v. Ned Ray McWherter, 1993), was recently decided in favor of the plaintiff school divisions.

The West Virginia Supreme Court of Appeals in (Pauley v. Kelly, 1979) declared that the Constitutional requirement of a "thorough and efficient system of free schools" made education a fundamental right. The Appeals court,

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rather than declare the school finance plan unconstitutional, directed the lower court to assess whether the failure of the school system to meet "high quality" educational standards resulted from "inefficiency and failure to follow existing school statutes" or an inadequacy of the current system (at 878). The trial court ordered the development of a master plan for the "constitutional composition, operation, and financing" of the state's educational system. The Supreme Court of Appeals reaffirmed the State Board of Education's duty to ensure delivery and maintenance of a thorough and efficient educational system as embodied in the committee's "Master Plan for Public Education" (Pauley v. Bailey, 1984). Camp and Thompson (1988) observed that the judiciary had accepted a new role in outlining characteristics of a quality education for the state.

In a like decision, (Rose v. Council for Better Education, 1989), the Kentucky Supreme Court found its state's entire system of precollegiate education unconstitutional (Walker, 1989, p. 1). The district court had previously made a narrower decision, holding only that the formula violated the efficiency clause of the education article. The Kentucky Supreme Court ultimately ordered the legislature to "re-create and re-establish" the entire system of public education. The court requested that the General Assembly of Kentucky devise a plan to provide adequate funding and clearly specified that any plan relying on real and personal property taxation would have to assess all property at 100 percent of

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market value and have uniform tax rates across the state (Swanson & King, 1991).

The courts upheld their state finance structures. In direct contrast to these judicial reviews are rulings where states have successfully defended challenges to their state finance structures.

In two decisions mentioned earlier in this section, federal courts upheld school finance systems in Illinois and Virginia. Following the U. S. Supreme Court decision in San Antonio Independent School District v. Rodriguez (1973) indicating that school finance is to be resolved within states, the following state courts have validated the finance plans of their states: Arizona, Michigan, Montana, Washington, Idaho, Oregon, Ohio, Pennsylvania, Georgia, Colorado, New York, Maryland, Oklahoma, South Carolina, and Wisconsin. In addition, a federal Circuit Court of Appeals of Louisiana upheld that state's finance system in 1987.

Decisions evaluating finance systems against equal protection clauses declared that education was not a fundamental interest with the exception of Arizona. Even though the Arizona Supreme Court maintained that students are guaranteed a basic right to education under the constitution of the state, it decided that the educational finance system need be "only rational, reasonable, and neither discriminatory nor capricious" (Shofstall v. Hollins, 1973, at 592). The Oregon Supreme Court in (Olsen v. Oregon, 1976) determined that the state finance system should enable all

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divisions to finance at least a minimal level of education and should also allow local divisions to have control over decisions about spending for educational programs beyond the level guaranteed by the state system (Swanson & King, 1991).

The Colorado Supreme Court in 1979 ruled that the state constitution did not establish education as a fundamental right nor did it require the General Assembly to develop a centralized school finance system that would limit schools to equal expenditures per pupil (Lujan v. Colorado State Board of Education, 1982).

State courts in New York and Maryland rejected the desires of plaintiffs to expand the concept of equity to include conditions of urban divisions. Twenty-seven poor school divisions in New York were joined by four of the state's largest cities to challenge the distribution of state aid. The large, urban divisions claimed they were actually poorer than the 27 poor divisions because of their student population having high concentrations of pupils requiring alternative and compensatory education (Swanson & King, 1991).

Swanson and King (1991) state that the Court of Appeals in New York determined that the finance system did not offend equal protection clauses or the state constitution's education provision. The rational basis test was accepted as the appropriate level of review. In 1988 the South Carolina Supreme Court utilized the rational basis test to uphold the state's finance system under the 14th Amendment (Richland County v. Campbell, 1988).

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What is the current education finance system in the Commonwealth of Virginia? What recommendations have been made by the Coalition and others such as Vernall (1982), Jones (1985), and Carr (1987) for improving the existing structure?

Many unanswered questions are left to be answered as this case proceeds in the Virginia Supreme Court. Will Governor-elect Allen assist with funding disparities by providing additional educational funds as Governor Wilder did? What will the 1994 General Assembly decide about the disparities? Are they artificial as a December 3, 1993 Daily Press article reported? Will the Commission on Equity headed by Senator Stanley Walker from Norfolk, Virginia, which began its work on November 24, 1992, be able to offer recommendations for a more equitable funding system?

Financing Education in the Commonwealth of Virginia

The Constitution of Virginia. Article VIII, Section 1 of the Constitution of Virginia requires the General Assembly to provide for a substantially equal public educational opportunity for every child in the Commonwealth by mandating a single, statewide public educational system.

In his analysis of this constitutional provision, State Delegate W. L. Lemmon noted that the General Assembly has the responsibility to establish a state system

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of education and not 135 totally different systems. He, also, reasoned that the word "system" suggests an assembly of substances that is in, or tends, toward equilibrium. It is Lemmon's conclusion that the Constitution of the Commonwealth of Virginia could read as follows:

> The General Assembly shall provide for a grouping of school divisions which are in, or tend to equilibrium throughout the Commonwealth.
>
> (Lemmon, p.10)

Thus Lemmon (1981) contends that the Virginia Constitution requires a formula for the equalization of school funds. Article I, Section 15, paragraph 2 of the Constitution of Virginia makes education a fundamental right. It imposes an affirmative duty upon the Commonwealth to assure an effective system of education throughout the Commonwealth. It states:

> That free government rests, as does all progress, upon the broadest possible diffusion of knowledge, and that the Commonwealth should avail itself of those talents which nature has sown so liberally among its people by assuring the opportunity for their fullest development by an effective system of education throughout the Commonwealth (Par. 2).

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The Virginia coalition for equity. According to the Coalition for Equity in Educational Funding, inequities do exist in the current financial system in Virginia. Its members say that inequity in educational opportunity as it now exists is inherently unfair and that diminished educational opportunity for some of the state's citizens is contrary to the civic interest of the entire Commonwealth. Leaders of the Coalition have called educational disparities a "blight" that must be removed to ensure the future well-being of Virginia's children and the economic well-being of the Commonwealth as a whole (Walker, 1991).

Walker (1991) reports that funding in Virginia for public school education ranges from approximately $3500 to over $8,000 per student. A child in Virginia's wealthier divisions has advantages over one residing in a poor locality. These benefits may include, but not be limited to, better facilities, more instructional materials, lower pupil-teacher ratio, and a wider array of course offerings.

Concern about funding inequities led to the formation of a coalition of school boards in 1990 to challenge the state's funding mechanism. Thirty-one school divisions and the Virginia Education Association now belong to this Coalition. According to Walker (1991) the Coalition has sought to document current inequities for Governor Wilder, the Commission on Educational Opportunity for All Virginians, and members of the General Assembly and to provide input

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regarding an appropriate funding system that will meet the requirements of the state constitution.

Walker (1991) continues by pointing out that lower teacher salaries contribute to the difficulty poor school divisions have in hiring and retraining teachers. In 1988-89, the average salary for teachers in the top five school divisions in Virginia was $15,224 higher (70% more) than in the bottom five school divisions. The average teacher salary in the state as a whole was $7,153 higher (33% higher) in the top five divisions. The 1992 data show a narrowing of the gap between the top five and bottom five divisions. The top five pay their teachers on the average approximately $10,300 more per year than the bottom five divisions pay their teachers.

Previous research and a description of the funding system. Verstegen and Salmon (1989) conducted analyses of Virginia's education funding and discovered that the disparities worsened after the new funding formula was put into place for the 1988-89 school year. What is the current funding system under which these disparities exist?

According to Salmon (1991), the Virginia Public School Finance System has been classified as a Minimum Foundation Program (Strayer-Haig Formula), whereby the major state grant-in-aid to local school divisions is a foundation-type equalization formula. Using the fiscal equalization formula, state aid is distributed in three steps: (1) a minimum per pupil expenditure for each school division; (2)

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a required local contribution is charged; and (3) the difference between the guaranteed amount and the required local contribution becomes the state's contribution. Some state aid is provided through a series of smaller categorical grants and flat grants. Also, significant revenues above the required local contribution, known as leeway funds, are generated by the localities.

The two leading elements of the funding system for Virginia's public elementary and secondary schools are basic aid payments and other costs shared by the Commonwealth and the local school divisions, (1990 Va. Acts C. 972, Item 172); and funds which localities provide for public education, which are not mandated by the Commonwealth. Also, federal funds, on an average, make up about five percent of the budget of each school division in the Commonwealth (Madeline I. Wade, 1989 President of the Virginia Education Association).

Basic aid. The basic aid payments provide funds for the instructional and administrative positions mandated by the Standards of Quality. The SOQs are provided in Article VIII, Section 2 of the Constitution of Virginia provides for and Virginia Code Ann. 22.1-253.1 to 253.13 (1950) established the Standards of Quality. SOQs are minimum state-wide educational standards every local school system must meet. The Virginia Board of Education determines and prescribes the Standards of Quality which are subject to revision by the General Assembly.

SOQ. Funding for the Standards of Quality comes from three sources: (1) Revenues from the State Sales and Use Tax (a one-cent tax earmarked for

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education), (1990 Va. Acts C. 972, Items 172 (A) (8) and 173 and Va. Code Ann. 58,1-638 (1950); (2) Required Local Expenditure, 1990 Va. Acts C. 972, Item 172 (A) (5); and (3) State Share, 1990 Va. Acts C. 972, Items 172 (A) (8) and 173).

Before the Commonwealth of Virginia calculates the state and local shares of the general costs of funding the Standards of Quality, it first subtracts the estimated revenues from the state sales and use tax. Virginia distributes the revenues earmarked for education from the state sales and use tax on the basis of the school-age population in each division (1990 Va. Acts C. 972, Items 172 (A) (8) and 173).

Local composite index. After the Commonwealth deducts the revenues from the state sales and use tax, it uses the local composite index, pursuant to 1990 Va. Acts C. 972m Uten 172 (A) (4), to decide each school division's required local expenditure. The local composite index reflects the fiscal capacity by measuring the value of real estate and public service corporations (weighted 50%), adjusted gross income (weighted 40%), and taxable retail sales (weighted 10%) (Virginia State Department of Education).

The higher a division's local composite index is, the higher its required local expenditure for the funding of the Standards of Quality is, also. In no case, however, after the state sales and use tax is subtracted, will a school division pay more than 80 percent of the costs shared by the Commonwealth and the division. The reason for this is that the Commonwealth has put an artificial cap on the local

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index which ensures that the Commonwealth still shares the costs of the basic aid payments with school divisions which have even the highest fiscal capacities (1990 Va. Acts C. 972, Item 172 (A) (4)).

The state share is the amount the Commonwealth of Virginia provides toward the funding of the Standards of Quality, after it deducts the state sales and use tax and required local expenditure from the overall cost of funding the Standards of Quality (John Mitchell, personal communication, November 22, 1992).

The Commonwealth of Virginia also uses the local composite index to determine the required local expenditure and state share of other educational costs, including grants for vocational and special education positions mandated by the Standards of Quality, as well as school-related transportation costs (1990 Va. Acts. C. 972, Item 172).

Beyond its required local expenditure, each division must raise any funds spent on a student's public education beyond the grants and programs mentioned above. These funds pay for additional teachers, staff, classes, and equipment not identified by the Standards of Quality. These funds, also, generally pay for capital outlays, since the major form of assistance the Commonwealth of Virginia provides to localities for capital outlays is low interest loans from the Literary Fund (John Mitchell, personal communication, November 22, 1992).

Changes in funding proposed by the JLARC II for 1988. The goals and objectives of the modifications proposed by the Joint Legislative Audit and Review

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Commission (JLARC) were to achieve greater student and taxpayer equity across the Commonwealth of Virginia. JLARC discovered that the key to achieving pupil equity was to accurately cost out the Standards of Quality requirements. Since the SOQ (foundation program) is mandated, changes were recommended for areas that required additional costs beyond those recognized by the state but were beyond the control of localities such as: (1) SOQ staffing requirements, (2) SOQ instructional salaries, and (3) pupil transportation (Verstegen & Salmon, 1988).

Taxpayer equity was important to the Joint Legislative Audit and Review Commission, also. Taxpayer equity was defined by JLARC as "the apportionment of state and local responsibility for the SOQ in a manner to ensure that the proportion of local taxable resources required to provide a meaningful foundation program does not vary greatly across localities." JLARC decided that the first way to begin to improve taxpayer equity was to be able to accurately assess each locality's ability to pay for the foundation program. Out of this finding came the proposals for alternative equalization mechanisms, a higher state share of SOQ costs, and the equalization of several categorical programs (Verstegen & Salmon, 1988).

These recommendations were joined in seven alternatives to the current financing system in the Commonwealth of Virginia. Options 1-7, a "revised cost method" was proposed which had some fixed components across all options and

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some that varied among the options. According to Verstegen & Salmon (1988), the fixed components were:

Fixed Components of Options. The first fixed component was to provide a variable number of instructional staffing positions to divisions, calculated per 1,000 pupils per Average Daily Membership (ADM) with floors and ceilings. This would replace the statewide average of 59.5 supported teachers per 1,000 pupils with the number actually needed to meet the foundation program.

The second fixed component was the proposal for an instructional base computed on "prevailing salary levels" among the local school divisions was proposed. This option measures costs for approved SOQ teacher salaries based on a study of current salaries and would utilize a linear weighted estimator with a weight of five on the center value, rather than the average of median of statewide salaries.

The third fixed component was the proposed increase in the instructional salary calculations to include a 5.8 percent increase beyond prevailing salary levels for each year of the ensuing biennium were recommended.

The fourth fixed component was the "cost of competing" increase for Northern Virginia of 12.53 percent was proposed. This was to take into account the higher costs for goods and services in that area of the Commonwealth.

The fifth fixed component was the proposal for additional funding in SOQ was included to allow for the proposed changes in the Standards of Quality by the State

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Board of Education such as: 24 students per 1 teacher in grade 1; 1 elementary guidance counseling per 500 students; and 24 students to 1 English teacher in grades 6-12.

Other recommendations included in the JLARC proposals were: "prevailing" non-instructional salary costs at 5.824 percent for each year of the biennium; a transportation reimbursement schedule which takes into account the land area covered and the number of students transported; inflation adjustments of 5.270% for 1988-89 and 6.193% for 1989-90; remedial education funded at one position per qualifying 1,000 pupils; and a cap on the local share cost of the SOQ program at 80% (Verstegen & Salmon, 1988).

Variable Components of Options. According to Verstegen & Salmon (1988), one of the major differences among the seven options proposed by JLARC II and the arrangements for distributing aid to the local school divisions at the time of the proposal was the equalization mechanism. The equalization mechanism that exists now and existed at the time of the proposal determines the relative fiscal capacities of Virginia school divisions and is referred to as the Local Composite Index (LCI). JLARC II proposed three variations to the LCI: (1) a revenue capacity measure; (2) an equalized tax effort; and (3) an income adjustment measure.

Verstegen and Salmon (1988) continue to say that from 1973-74 through 1987-88, the LCI utilized true values of real and public service property, personal income, and taxable retail sales receipts to provide a measure of local fiscal

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capacity for Virginia school divisions. These measures were divided by average daily membership and by population, respectively, and referred to as "standardizing units." School divisions with high LCIs must pay more of the shared per-pupil costs of the program and vice versa for divisions with low LCIs. The LCI is capped at .8 under current law, so no school division has to pay more than 80 percent of the state/local shared costs.

Governor Balilies' proposals. According to Verstegen and Salmon (1988), funding initiatives reflecting the Joint Legislative Audit and Review Commission's studies and recommendations that were included in the Governor's proposals include the following:

- Variable staffing ratios;
- Prevailing statewide salary funding costs;
- Instructional salary increases for all covered instructional positions, appropriated at 8 per cent per year for the 1988-90 biennium;
- Costs of competing for nine Northern Virginia localities at 12.53 percent;
- Funding for the proposed State Board of Education's new Standards of Quality;
- The phased-in equalization of fringe benefits;
- A new transportation system reimbursement schedule;

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- Retention of the cap on the local share cost (LCI) at 0.8;
- Equalization of vocational, remedial, gifted and talented, and special education;
- Greater average state assumption of equalization aid costs, to be increased by from 50 to 51 percent in 1988-89 and 52 percent in 1989-90, with an ultimate goal of a state share at 55 percent.
- The continuation of the LCI utilized for distributing basic aid under the existing law at the time of the proposal, but using adjusted gross income in place of the personal income factor.

Verstegen and Salmon (1988) continue to say that an additional $554 million in appropriations for the 1988-89 biennium was recommended in the Budget Bill, resulting in total biennial state funding for schools in the Commonwealth of Virginia to be in excess of $4 billion. This represented a 15.7% increase in direct aid (unadjusted for inflation) compared to previous years. Did these extra funds flowing to elementary and secondary schools in Virginia improve the level of disparity between the poorest and wealthiest divisions?

Disparities in funding. According to Verstegen and Salmon (1989), the method by which Virginia funds its system of public schools results in substantial disparities in educational opportunities among school divisions. School divisions with low fiscal capacities expend less money per student for the education of those pupils residing in those divisions than do those with high fiscal capacities.

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According to Walker (1991), total per pupil expenditures for education ranged from $2,895 to $7,268 between the lowest and highest spending school divisions during 1989-90, excluding federal funds. The 10 wealthiest divisions spent an average of $6,285 per pupil, and the 10 poorest spent an average of $2,954 per student. It appears that 2.5 times more money was spent on some of Virginia's children based solely on where they live.

According to the Governor's Commission on Educational Opportunity for All Virginians (1991), divisions with high fiscal capacities have instructional programs with greater breadth and depth in mathematics, science, languages, and social studies than low fiscal capacity divisions. Public high schools in school divisions with high fiscal capacities have more course electives, more advanced placement courses, more foreign languages, and a wider array of science and math offerings than localities with low fiscal capacities.

The Commission (1991) continues to say that children from divisions with low fiscal capacities generally score significantly lower on achievement tests at all grade levels tested. It listed as an example first graders in the 10 wealthiest divisions who scored on the average at the 60th percentile on quantitative tests while first graders in the 10 poorest divisions scored on the average at the 48th percentile.

School divisions with low fiscal capacities pay teachers lower salaries on average than divisions with high fiscal capacities. According to the Commission

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(1991), the average salary for classroom teachers in the 10 wealthiest divisions was $32,399 for the year 1988-89 while the average salary in the 10 poorest divisions was $25,341.

According to Walker (1992), the average per pupil expenditure for education by the complainant school divisions of Allegheny Highlands, Bath, Bland, Buchanan, Campbell, Carroll, Charlotte, Craig, Dickenson, Floyd, Greensville County/Emporia City, Halifax, Lee, Lunenburg, Nottoway, Pulaski, Russell, Scott, Smyth, Washington, Westmoreland, Wise, Wythe, Bristol, Galax, Martinsville, Norton, Petersburg, Radford, South Boston, and Colonial Beach Town is less than half that of the wealthier divisions. He, as Chairman of the Coalition, and the members of the Coalition believe that these differences in expenditures per pupil among public elementary and secondary school divisions in the Commonwealth have deprived the students who attend school in the complainant school divisions of a substantially equal educational opportunity.

The disparities in expenditures per pupil for public education among school divisions in the Commonwealth of Virginia continue to increase. According to Walker (1992), the gap in per-pupil expenditure between the wealthier and poorer school divisions increased from $3,844 per pupil in 1987 to $4,372 per pupil in 1989-90 (excluding federal funds). He further adds that the preliminary estimates show that the Department of Education's funding allocations for 1992-93 will

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increase disparity. The gap between the highest and lowest spending divisions for 1992-93 is estimated to be $5,844.

The Coalition, in the suit filed in the Richmond Circuit Court in June, 1992, alleges the following:

1. The Commonwealth of Virginia has failed to create a uniform system of public education which provides children throughout the Commonwealth with a substantially equal educational opportunity. As a consequence, the Commonwealth's system of educational funding for public elementary and secondary schools violates Article VIII, 1 of the Constitution of Virginia.
2. The Commonwealth of Virginia has failed to assure an effective system of education throughout the Commonwealth. As a consequence, the Commonwealth's system of educational funding for public elementary and secondary schools violates Article I, 15, paragraph 2 of the Constitution of Virginia (Walker, 1992).

According to Cooper (1992), the 11 public school students and seven school divisions who are listed as complainants in the case have 20 days to modify their complaint or to appeal the Richmond Circuit Court's holding to the Virginia Supreme Court. Dr. Kenneth E. Walker in a phone conversation on November 25, 1992, indicated that the Coalition's attorneys, led by Former Attorney General

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Andrew P. Miller, will take several days to analyze Judge Hughes' ruling and to develop their strategy.

According to Cooper (1992), Judge Hughes offered a method for the complainants to keep their suit alive and indicated the legal pitfalls of proceeding. He compared the Virginia suit with the successful one in Kentucky where the Kentucky divisions argued inadequate education and invoked the due process and equal protection clauses of the state and federal constitutions. A pitfall he pointed out for the Virginia complainants was that they alleged that the present funding system fails to meet the Standards of Quality. They did not allege that the Standards of Quality or accreditation are inadequate to guarantee high quality education as mandated in the state Constitution.

On June 10, 1993, Virginia's largest teachers' group, the Virginia Education Association recommended eliminating the state funding formula used in the Commonwealth. The Virginia Education Association's President, Rob Jones said, "the state's formula is a convenient way to apportion what you want to spend and to ignore the reality of current school practices and the real needs of the classroom." The Virginia Education Association recommends replacing the current system of school funding with a three-tiered approach. On the first level, every school division in Virginia would receive enough money for a high-quality basic educational program. Schools that want to exceed this level could get

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extra state money under the proposed formula's second tier. The third tier would be strictly for local funding (Daily Press, 6/11/93).

On July 29, 1993, seven of the 31 school divisions in the Coalition filed suit at the State Supreme Court level. Andrew Miller, attorney, is representing seven of Virginia's poorest and mostly rural school divisions. The contention of the petition is that students in the poorest areas of the Commonwealth are denied the educational opportunities offered in wealthy suburban school divisions in Virginia. The state Attorney General's office filed papers opposing the petition arguing that the General Assembly should decide this issue instead of the courts. Delegate Ford Quillen said the legislature is not likely to tackle the question. He said, "There have been symbolic efforts, but there hasn't been any major effort by the General Assembly to deal with the disparity issue -- to make everyone look beyond their locality." He further added that to make any impact, lawmakers in the Commonwealth would have to raise the state sales tax by a half-cent (Daily Press, July 29, 1993).

The Coalition is appealing the decision made by Richmond Circuit Judge Melvin R. Hughes, Jr., who ruled that the Constitution of the Commonwealth of Virginia does not require equal funding for all school divisions. He ruled in his November, 1992 decision that instead the Constitution requires enough funding to keep divisions from falling below a standard of quality set by the state. The Coalition has said the disparity exists because state financing of education is so low

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that the localities end up paying most schooling costs. Divisions included in the case at the State Supreme Court level include: Buchanan, Halifax, Pulaski, Russell, Petersburg, Radford, and South Boston (Daily Press, July 29, 1993).

Summary

Dissenting interpretations of constitutional requirements have been found in the judicial reviews of states' school finance systems. What does this suggest for policy implications? First, it appears that policy development is a legislative prerogative rather than a judicial privilege. Courts are reluctant to overstep their bounds to assume the role of policymaker. Even in states where the finance plans have been declared defective under constitutional mandates, courts typically leave the formation of remedies to legislatures.

According to Sparkman (1990), the courts do not seem to have a clear role in school finance reform. He concludes, that there is a profound sense that something is at work in the courts' deliberations that is not reported in the decisions. It is clear that the courts frequently struggle with the various issues and often express concern about the disparities, but they continue to defer to the legislature with the anticipation that the political process might rectify the problems. What seems to be missing in the decision is a discussion of the basic sense of fairness. (p.216)

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Secondly, standards are evolving for equity, adequacy, and efficiency. These standards will help to judge policy and to guide finance policy development. Early decisions evidenced a lack of equity standards. Vague standards such as "uniform," "adequate," "thorough," and "efficient" appear to frustrate courts and legislatures.

Thirdly, fiscal neutrality is not incompatible with the objective of preserving and promoting the local choice of spending levels or total tax effort. Courts adopting the standard of fiscal neutrality have announced that the quality of a child's education may not be a function of wealth other than that of the entire state. States may choose to adopt the concept of fiscal neutrality and still maintain local control. For example, rich and poor divisions who desire the same per pupil expenditure would set the same local tax rate, and the state would provide unequal amounts of aid to raise poor divisions to that desired spending level.

Fourthly, perhaps if legislative action fails to promote equity, adequacy, and efficiency, courts may accept a more active role. The West Virginia and Kentucky decisions reveal the courts' willingness to bring about change in educational governance structures and programs as well as to finance plans.

Individuals seeking change in school finance systems in the future may approach the courts more eagerly than ever before. They may hope to influence

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the pattern of reform through judicial reviews instead of through votes from the lawmakers. This may have been the thinking of the 11 school divisions in Virginia when they refiled their suit against the Commonwealth of Virginia in June, 1992.

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Chapter 3

Methodology

Introduction

Many school finance reforms initiated during the 1970s and 1980s in the United States were designed to decrease the linkage between local wealth and revenue, and to decrease disparities in per pupil revenue between more and less affluent jurisdictions (Verstegen & Salmon, 1989). In Virginia, for the first time in almost 15 years, a major restructuring in the education finance formula for elementary and secondary education was enacted during the 1988 General Assembly and revenue was increased by $576 million. This increase in funding was for the primary purpose of decreasing disparities between more and less affluent school divisions.

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The Coalition for Equity in Educational Funding filed suit in November, 1991, saying this was not enough to eliminate disparities. It later dropped this suit while waiting on the actions of Governor Wilder and the 1992 General Assembly. The 1992 General Assembly appropriated $74 million more as a first step to resolving this issue. The Coalition responded that this was not nearly enough. Governor Wilder also suggested a plan that would cost almost $1 billion but did not recommend a way to finance it. The Coalition refiled its suit in June, 1992. This research study is a constructive replication and expansion of the research study conducted by Verstegen and Salmon in 1989. Their study was conducted to determine the extent to which Virginia's goal to increase school finance equity had been achieved since the funding formula change enacted by the 1988 General Assembly. It examined the fiscal equity of educational revenue distribution under the present state aid system. This study will add 1992 to the years studied by Verstegen and Salmon and will address slightly different questions than they did.

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Research Questions

The following research questions are answered in this study:

1. Have interdivision disparities in per pupil expenditure been reduced since 1988?
2. What was the relationship between a locality's ability-to-pay as measured by its composite index and its respective per pupil expenditure from local funds during the fiscal years of 1987-88, 1989-90, and 1991-92?
3. What was the relationship between a locality's effort as measured by its educational expenditure from local funds and its per pupil expenditure during the fiscal years of 1987-88, 1989-90, and 1991-92?
4. Have per pupil expenditure from local funds and total per pupil expenditure as measured in 1983 constant dollars changed over the study period?
5. What has been the effect of increased funding from the General Assembly to the school divisions involved in the Coalition for Equity in Education Funding toward their total educational expenditure for operations since 1988?

The answers to these research questions are important to state and local leaders in the Commonwealth of Virginia. They are equally important to The Commission on Equity which held its first meeting on November 24, 1992. Its members are seeking ways to assure an equal educational opportunity for all children attending

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public schools in Virginia. Also, these questions are relevant to officials in Virginia localities as the superintendents and school boards seek to assure an equal educational opportunity for all school children in their communities. In addition, parents of all public school children in the Commonwealth are interested in the best education for their children whether they live in an affluent area or a poor, rural locality.

Sample and Accessible Population

Sample size. All 138 school divisions (95 counties, 2 towns, and 41 cities) in the Commonwealth of Virginia were included in this research. The data from the Virginia Department of Education listed only 134 school divisions, with three cities and one county not shown under their individual names but are combined with other school divisions. Since all school divisions were included, sampling strategies were not employed.

Description. Data from three fiscal years (1987-88, 1989-90, and 1991-92) on these school divisions were collected from the Virginia State Department of Education and the Virginia Education Association to answer questions 1-3. Data from the study period and five years previous were used to answer question 4. Data from fiscal year 1991-92 were used to answer question 5. All school divisions in Virginia were included. They represent student population sizes

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(computed as average daily membership) from approximately 400 to more than 120,000 and include communities with composite indices (based on an ability-to-pay formula) ranging from .1818 to .8000. They represent divisions with per-pupil expenditures ranging from $3,819 to $9,139. The State Department of Education was asked to provide the necessary state financial information, and the Virginia Education Association was asked to furnish supplemental data on the mechanics of the pre 1988 and post 1988 funding formulae and the local school division wealth information.

Fiscal equity changes resulting from the 1988 Virginia General Assembly Session were analyzed. The year 1988-89 was chosen since this was the point in which the General Assembly of the Commonwealth of Virginia, for the first time in nearly 15 years, enacted a major restructuring in the elementary and secondary education finance formula and increased the educational revenue by $576 million. The year 1989-90 was chosen since it was the first year the new funding formula actually went into effect and was the year that $74 million extra dollars were promised by the General Assembly. However, these additional funds did not transfer to the localities because of a budget deficit at the State. The year 1991-92 was chosen since this is the last year that funding information was available from the State which reflected changes in local expenditure after increased funding was available. The years between 1987-88 and 1991-92 were important to this research study on equity because of the 1988 formula change in educational

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funding in the Commonwealth of Virginia and the disparity suit which was filed by the Coalition in 1992.

Generalizability. The results of the study are unique to the Commonwealth of Virginia and may not be generalized to school divisions and State Departments of Education outside of Virginia because of its unique educational funding structure. However, the issues addressed by this study are generalizable to school divisions and State Departments of Education outside the Commonwealth of Virginia who are considering equity in funding.

Instrumentation

Data collection for this research did not command the development of instrumentation which required tests for reliability and validity. Facing Up - 23: 1987-88 Statistical Data of Virginia's Public Schools, A New Vision for Education: 1989-90 Superintendent's Annual Report for Virginia, and A New Vision for Education: 1991-92 Superintendent's Annual Report for Virginia which all provide statistical data on Virginia's Public Schools relevant to this study were provided by the Virginia Department of Education for use in this study. Data for

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the five years previous to the study period were provided by the Virginia Department of Education in Facing Up - 18: 1982-83 Statistical Data of Virginia's Public Schools.

Data Collection Procedures

Telephone calls were made to the Virginia Department of Education to request Facing Up - 23 , A New Vision for Education: 1989-90 Superintendent's Annual Report for Virginia, and A New Vision for Education: 1991-92 Superintendent's Annual Report for Virginia, and other data for the five previous years to the study; to the President of the Virginia Taxpayers Association to discuss the Association's position on the Virginia disparity in educational funding issue; and to Dr. Ken Walker, Chairman of the Coalition on Equity, to obtain written information regarding the equity case currently before the Virginia Supreme Court. Written communication with the State Department of Education in Richmond was not necessary.

Data Analysis

This investigation was a constructive replication study based upon the Verstegen and Salmon study in 1989 and used a correlational methodology. According to Borg (1983), correlational methodology is:

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> [a] method of analyzing research data...useful in studying problems in education and other behavioral sciences. Its principle advantage is that it permits one to analyze the relationships among a large number of variables in a single study....The correlational method allows the researcher to analyze how several variables, either singly or in combination, might affect a particular pattern of behavior. (p. 575)

A constructive replication study, according to Borg and Gall (1983), is one in which the current researcher deliberately avoids imitation of the first author's methods. To obtain an ideal constructive replication, the current researcher or replicator will formulate her own methods of sampling, measurement, and data analysis.

To answer question 1 (Have interdivision disparities in per pupil expenditure been reduced since 1988?). All school divisions in the Commonwealth of Virginia were placed in rank order from the highest per pupil expenditure to the lowest per pupil expenditure for 1987-88, 1989-90 and 1991-92. The top 20 school divisions and the bottom 20 school divisions were examined and compared to see if a change had occurred in rank from 1987-88 to 1991-92. After this testing of ranks, the percentage of school divisions who were in the top 20 in 1987-88 and continued to rank there in 1991-92 was calculated. Also, the percentage of school

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divisions who were in the bottom 20 in 1987-88 and remained there in 1991-92 was calculated.

The two variables in question 2 were a locality's composite index and its respective per pupil expenditure from local funds. These variables were compared using data from 1989 for the 1987-88 school year, data from 1991 for the 1989-90 school year, and data from 1993 for the 1991-92 school year. The relationship of these variables are pictorially represented by scattergrams. The two scores of each school division in the sample are represented by a single point (i.e. coordinate on the graph). Correlation coefficients were calculated comparing composite indices and per pupil expenditures during 1987-88, 1989-90, and 1991-92.

The two variables in question 3 were a locality's effort as measured by its educational expenditure from local funds and its respective per pupil expenditure. These variables were compared using data from 1989 for the 1987-88 school year, 1991 for the 1989-90 school year, and 1993 for the 1991-92 school year. The relationship of these variables is pictorially represented by a scattergram. Correlation coefficients were calculated comparing each division's per pupil expenditure from local funds with its total per pupil expenditure.

To answer question 4 (Have per pupil expenditure from local funds and total expenditure as measured in constant dollars changed over the study period as compared with five years previous?), data from five years prior to the study were collected in addition to those for the study period. Inflation was taken into

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consideration by holding the dollar amounts constant using 1983 dollars. The relationship of these variables are pictorially represented in a scattergram. A bivariate analysis is illustrated in a line chart in which the dollar amount is held constant in 1983 dollars. The two variables compared are the means of the local per pupil expenditure and the means of the total per pupil expenditure during 1983 1988, 1990, and 1992.

To answer question 5 (What has been the effect of increased funding from the General Assembly to the school divisions involved in the Coalition for Equity in Education Funding toward their total educational expenditure since 1988?), each school division in the Coalition was located using the rank data from question one to determine if it was in the bottom 20 in 1987-88 and continued to remain there in 1991-92. A mean per pupil expenditure was calculated for the school divisions in the Coalition. Using data from 1987-88 through 1991-92, a comparison of the mean per pupil expenditures from local funds, mean per pupil expenditures from state funds, and mean total per pupil expenditures of the 31 school divisions in the Coalition and the seven plaintiff divisions was calculated. The state and local shares were compared for these school divisions using data from 1987-88 through 1991-92 to determine what impact the increased funds from the General Assembly had on the local educational share. The same data were compared using just the seven school divisions that remained in the suit at the Virginia State Supreme

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Court level. Two trend lines illustrate the findings in the area of total educational expenditure. Mean comparison data were tabulated and trend lines were prepared to show per pupil expenditures from local funds, from state funds, and total per pupil expenditures for the 31 Coalition divisions, the seven Plaintiff divisions, and All divisions in the Commonwealth of Virginia.

Ethical Safeguards and Considerations

This research design is ethical in terms of providing results that can be interpreted meaningfully (i.e., empirically). The data are translated into meaningful statistical units that can be interpreted logically. The research design is ethical and did not involve the use of human subjects.

This research is conducted following acceptable research practices as determined by the Human Subjects Review Committee, for the School of Education, The College of William and Mary, Williamsburg, Virginia.

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Chapter 4

Analysis of Results

This chapter presents the results of the analysis of the research data for the study and is organized as follows: (a) overview of the study, (b) demographic information, and (c) findings of the research questions.

Overview of the Study

The current study sought to analyze the Virginia school finance system to determine whether disparities in funding for education have been reduced between poor and wealthy school divisions as a result of the 1988 funding formula change. Additionally, the study sought to determine if the funding formula change of 1988 decreased the relationship between the fiscal capacity of each Virginia locality and its total per pupil expenditure.

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Demographics of the Population

All 138 school divisions (95 counties, 2 towns, and 41 cities) in the Commonwealth of Virginia were included in this research study. The data from the Virginia Department of Education listed only 134 divisions, but three cities and one county were combined with other school divisions. These divisions include rural, suburban, and urban localities. They represent student population sizes from approximately 400 pupils in average daily membership to more than 120,000 in ADM. The data include localities with composite indices ranging from .1818 to .8000 with total per-pupil expenditures ranging from $3,819 to $9,139, and per pupil expenditures from local funds ranging from $749 to $7,043 in 1992, the final year of this study.

Tests of Research Questions

This study examined five research questions. A description of the methods and results for these five questions follows.

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Question 1. Have inter-division disparities in per pupil expenditure been reduced since 1988?

In order to answer this question, two analyses were performed. The first analysis examined whether the divisions in the top or bottom 20 had remained constant over the 1988 and 1992 period (Tables 4-7). The second analysis examined the difference between the per pupil expenditures of the top 20 and bottom 20 school divisions in 1988 and 1992 (Table 8).

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Table 4

Top 20 School Divisions in 1988 In Rank Order for 1988 and 1992

Division	PPE - 1988	Rank - 1988	PPE - 1992	Rank - 1992
Alexandria	$ 7,117	1	$ 8,525	3
Arlington	$ 6.987	2	$ 8,592	2
Falls Church	$ 6,914	3	$ 9,139	1
Bath	$ 5,834	4	$ 7,710	4
Charlottesville	$ 5,754	5	$ 7,245	5
Richmond City	$ 5,675	6	$ 7,028	6
Fairfax County	$ 5,281	7	$ 6,640	9
Fairfax City	$ 5,005	8	$ 6,863	7
Surry	$ 4,876	9	$ 6,384	10
Albemarle	$ 4,582	10	$ 5,244	--
Norfolk	$ 4,542	11	$ 5,164	--
Loudoun	$ 4,542	12	$ 5,845	11
West Point	$ 4,480	13	$ 5,561	17
Winchester	$ 4,476	14	$ 6,650	8
Fredericksburg	$ 4,438	15	$ 5,697	15
Charles City	$ 4,373	16	$ 5,786	12
Roanoke County	$ 4,310	17	$ 4,955	--
Prince William	$ 4,274	18	$ 5,426	19
Roanoke City	$ 4,189	19	$ 5,499	18
Covington	$ 4,184	20	$ 5,729	13

--Those school divisions who were not in the top 20 in 1992.

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Table 5

Top 20 School Divisions in 1992 In Rank Order for 1992 and 1988

Division	PPE - 1992	Rank - 1992	PPE - 1988	Rank - 1988
Falls Church	$ 9,139	1	$ 6,914	3
Arlington	$ 8,592	2	$ 6,987	2
Alexandria	$ 8,525	3	$ 7,117	1
Bath	$ 7,710	4	$ 5,834	4
Charlottesville	$ 7,245	5	$ 5,754	5
Richmond City	$ 7,028	6	$ 5,675	6
Fairfax City	$ 6,863	7	$ 5,005	8
Winchester	$ 6,650	8	$ 4,476	14
Fairfax County	$ 6,640	9	$ 5,281	7
Surry	$ 6,384	10	$ 4,876	9
Loudoun	$ 5,845	11	$ 4,520	12
Charles City	$ 5,786	12	$ 4,373	16
Covington	$ 5,729	13	$ 4,184	20
Highland	$ 5,721	14	$ 3,730	--
Fredericksburg	$ 5,697	15	$ 4,438	15
Colonial Heights	$ 5,584	16	$ 4,071	--
West Point	$ 5,561	17	$ 4,480	13
Roanoke City	$ 5,499	18	$ 4,189	19
Prince William	$ 5,426	19	$ 4,274	18
Clarke	$ 5,359	20	$ 3,930	--

--Divisions not included in top 20 in 1988.

Eighty-five percent of the divisions that were in the top 20 in 1988 remained in the top 20 in 1992. Since only three divisions fell from the top, there was stability in the rankings for the per pupil expenditure at the top level.

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Table 6

Bottom 20 School Divisions in 1988 in Rank Order for 1988 and 1992

Division	PPE - 1988	Rank - 1988	PPE - 1992	Rank - 1992
Spotsylvania	$ 3,050	134	$ 3,988	125
South Boston	$ 3,061	133	$ 3,819	134
Pittsylvania	$ 3,107	132	$ 3,995	123
Lexington	$ 3,122	131	$ 4,061	118
Poquoson	$ 3,135	130	$ 3,941	131
Page	$ 3,147	129	$ 3,969	129
Washington	$ 3,150	128	$ 4,167	---
Smyth	$ 3,165	127	$ 3,974	128
Franklin	$ 3,187	126	$ 4,364	---
Virginia Beach	$ 3,189	125	$ 3,942	130
Craig	$ 3,198	124	$ 4,030	122
Mecklenburg	$ 3,199	123	$ 4,045	120
Richmond County	$ 3,202	122	$ 4,049	119
Scott	$ 3,206	121	$ 4,580	---
Bland	$ 3,206	120	$ 4,884	---
Appomattox	$ 3,217	119	$ 3,826	133
Tazewell	$ 3,220	118	$ 3,990	124
Powhatan	$ 3,221	117	$ 4,331	---
Brunswick	$ 3,249	116	$ 4,556	---
Grayson	$ 3,260	115	$ 4,378	---

---Those school divisions who were not in the bottom 20 in 1992.

Sixty-five percent of the divisions that were in the bottom 20 in 1988 remained there in 1992. With seven divisions moving out of the lower rankings, there appears to be less stability at the lower level than at the top level.

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Table 7

Bottom 20 School Divisions in 1992 in Rank Order for 1992 and 1988

Division	PPE - 1992	Rank - 1992	PPE - 1988	Rank - 1988
South Boston	$ 3,819	134	$ 3,061	133
Appomattox	$ 3,826	133	$ 3,217	119
Colonial Beach	$ 3,881	132	$ 3,371	---
Poquoson	$ 3,941	131	$ 3,135	130
Virginia Beach	$ 3,942	130	$ 3,189	125
Page	$ 3,969	129	$ 3,147	129
Smyth	$ 3,974	128	$ 3,165	127
Campbell	$ 3,978	127	$ 3,293	---
Russell	$ 3,984	126	$ 3,456	---
Spotsylvania	$ 3,988	125	$ 3,050	134
Tazewell	$ 3,990	124	$ 3,220	118
Pittsylvania	$ 3,995	123	$ 3,107	---
Craig	$ 4,030	122	$ 3,198	---
Amherst	$ 4,042	121	$ 3,457	---
Mecklenburg	$ 4,045	120	$ 3,199	123
Richmond County	$ 4,049	119	$ 3,202	122
Lexington	$ 4,061	118	$ 3,122	131
Amelia	$ 4,062	117	$ 3,289	---
Warren	$ 4,096	116	$ 3,374	---
Wythe	$ 4,111	115	$ 3,396	---

---Those school divisions who were not in the bottom 20 in 1988.

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Table 8

Mean Data for Top and Bottom 20 Divisions for 1988 and 1992

Year	Division	Mean	Change	% Change
1988	Top 20	$ 5,091		
1992	Top 20	$ 6,549	+ $ 1,458	+ 22%
1988	Bottom 20	$ 3,175		
1992	Bottom 20	$ 3,989	+ $ 814	+ 20%

The mean per pupil expenditure for the top and bottom 20 divisions are presented in Table 8. These data show that the gap between the top and bottom 20 divisions was $1,916 in 1988 and $2,560 in 1992. Over the time period studied, the gap between the top and bottom 20 divisions has increased by $644.

Question 2. What is the relationship between a locality's ability-to-pay as measured by its composite index and its respective per pupil expenditure from local funds during 1987-88, 1989-90, and 1991-92 school years?

This question was answered by examining the scattergrams and correlation coefficients for the three years studied. Table 9 presents the bivariate correlations and Figures 1 through 3 present the scattergrams. As can be seen from the correlations, the relationship between a locality's ability-to-pay and its per pupil expenditure from local funds was very stable over the years investigated.

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Table 9

Correlation Coefficients Between Local Ability-to-Pay and Per Pupil Expenditure From Local Funds

Year	1988	1990	1992
Correlation	.849	.868	.876

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Figure 1. Scattergram depicting the composite index and per pupil expenditure from local funds for each locality for 1988.

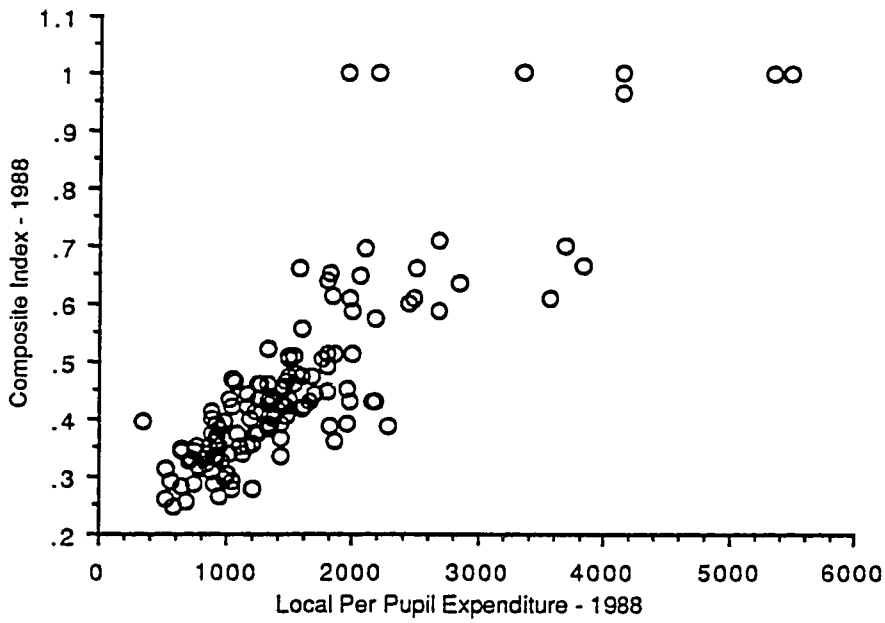

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Figure 2. Scattergram depicting the composite index and per pupil expenditure from local funds for each locality for 1990.

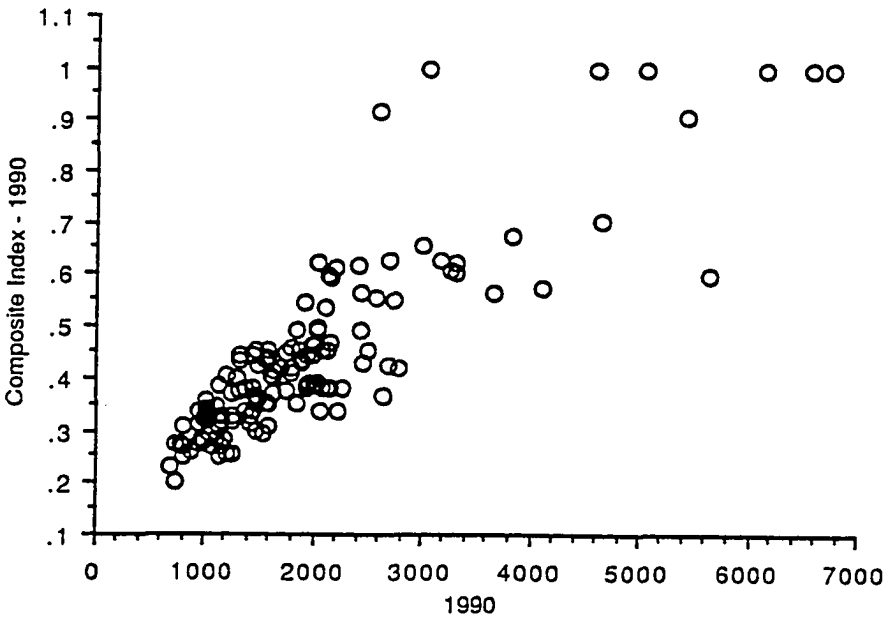

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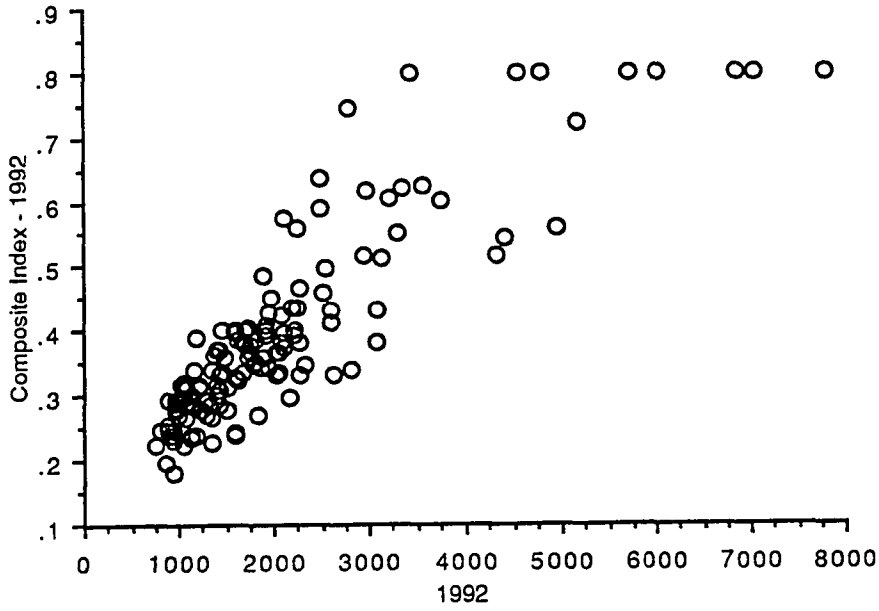
Figure 3. Scattergram depicting the composite index and per pupil expenditure from local funds for each locality for 1992.



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Question 3. What is the relationship between a locality's effort as measured by its educational expenditure from local funds and its respective total per pupil expenditure during the 1987-88, 1989-90, and 1991-92 school years?

This question was answered by examining the scattergrams and correlation coefficients for the three years being studied. Table 10 presents the bivariate correlations and Figures 4 through 6 present the scattergrams. As can be seen from the correlations, the relationship between a locality's efforts as measured by its per pupil expenditure from local funds and its total per pupil expenditure was very stable over the years investigated.

Table 10

Correlation Coefficients Between Local Per Pupil Expenditure and Total Per Pupil Expenditure

Year	1988	1990	1992
Correlation	.952	.943	.923

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Figure 4. Scattergram depicting local per pupil expenditure and total per pupil expenditure for each locality for 1988.

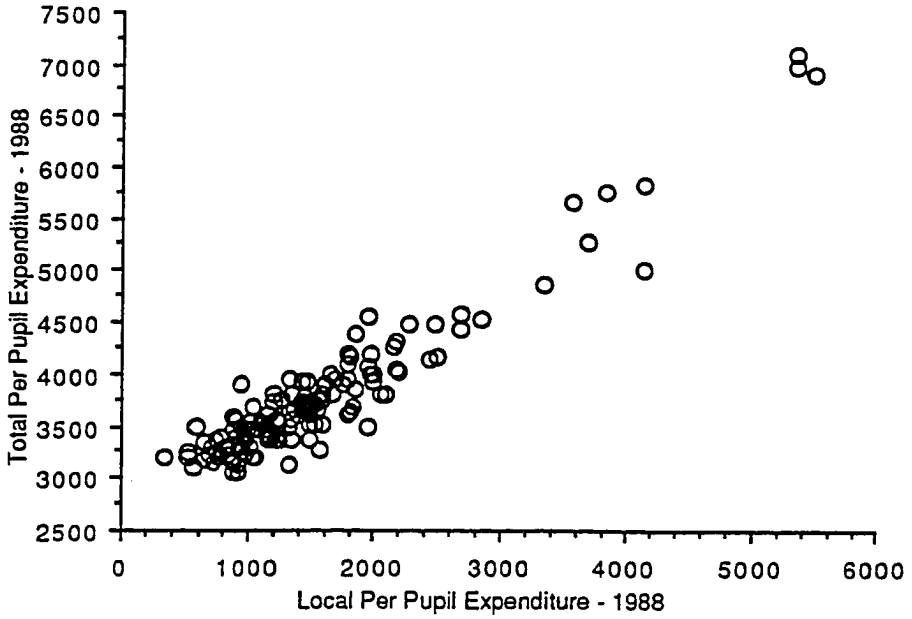

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Figure 5. Scattergram depicting local per pupil expenditure and total per pupil expenditure for each locality for 1990.

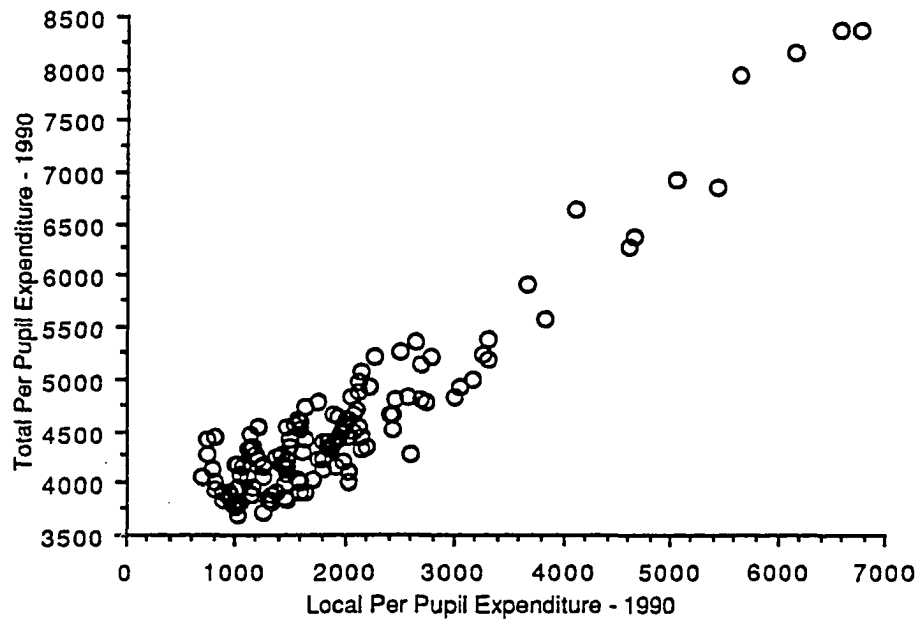

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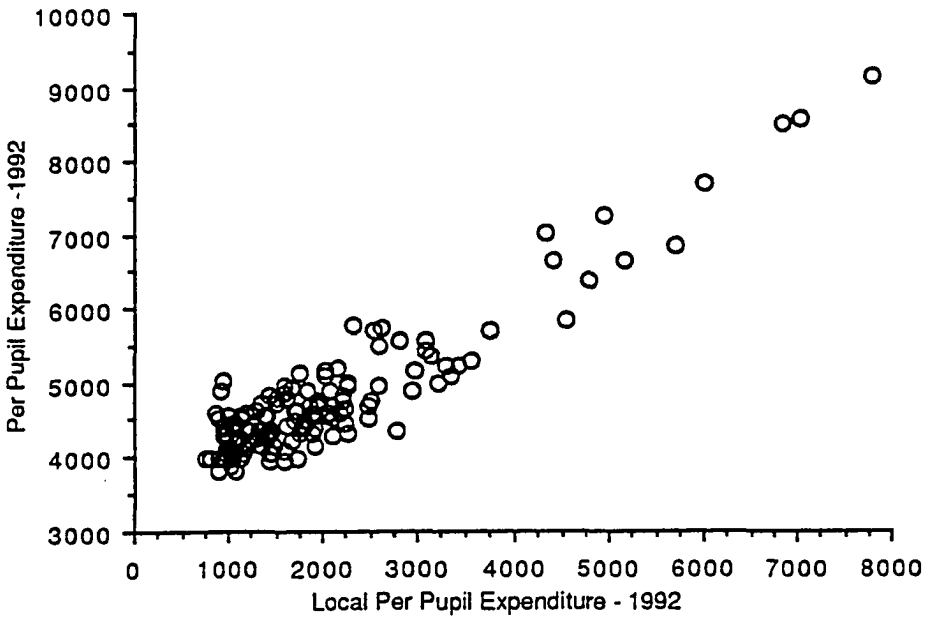
Figure 6. Scattergram depicting local per pupil expenditure and total per pupil expenditure for each locality for 1992.



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Question 4. Have per pupil expenditure from local funds and total per pupil expenditure as measured in 1983 constant dollars changed over the study period?

This question was investigated three ways to determine the change in per pupil expenditure from local funds and total per pupil expenditure when held constant for inflation. In order to answer this question, the inflation rates were obtained from the Virginia Education Association for the years dating to 1983. The variables for the study period were 1.226 for 1988; 1.355 for 1990; and 1.454 for 1992. The actual local expenditure was divided by the appropriate inflation factor to hold the expenditure constant to 1983 dollars.

The first method used to analyze the data for this question was the calculation of range. The range in expenditures in actual and constant local dollars for 1988 was: $5,494 in actual dollars in Falls Church to $335 in the county of Craig and $4,481 to $273 in constant dollars; in 1990, the actual dollars were $6,770 in Falls Church to $680 in Scott while the constant dollars were $4,996 in Falls Church to $502 in Scott. In 1992, the range for actual local expenditures was $7,043 in Arlington to $749 in Russell and for constant dollars $4,844 to $515. These dollar figures and those for 1990 and 1992 are located in Table 11 and Appendices A-1 and A-2.

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Table 11

Highest and Lowest Per Pupil Expenditures From Local Funds and Total Per Pupil Expenditure Over the Study Period in Actual Dollars and Constant to 1983 Dollars

Year	1988		1990		1992	
	Actual[1]	Constant[2]	Actual[1]	Constant[2]	Actual[1]	Constant[2]
Highest						
Local	$ 5,494	$ 4,481	$ 6,770	$ 4,996	$ 7,043	$ 4,894
Total	$ 7,117	$ 5,805	$ 8,371	$ 6,178	$ 9,139	$ 6,285
Lowest						
Local	$ 335	$ 273	$ 680	$ 502	$ 749	$ 515
Total	$ 3,050	$ 2,488	$ 3,700	$ 2,731	$ 3,819	$ 2,627

* (1= Actual dollars are the real expenditures over the study period; 2= Constant dollars are real dollars held to 1983 dollars using inflation factors 1.226, 1.355,and 1.454 for 1988, 1990, and 1992 respectively.)

The second method for examining the data for this question was to calculate the mean of the local and total per pupil expenditures for both actual and constant dollars (held to 1983) and the percentage change over the study period. Tables 12-13 present these computations. These tables show a decrease in the value of the divisions' actual dollars due to inflation from 1988 to 1992.

Finally, this question was analyzed by examining the scattergrams and the trend lines. Figures 7-9 present the scattergrams. As can be seen from the scattergrams, the increase in state funds to the localities in 1990 caused a greater number of the divisions to move marginally closer to the top in a linear motion. Figure 10 presents the trend lines of local per pupil expenditures and total per pupil expenditures in constant dollars (held to 1983 dollars). They each show a slight decrease in 1992.

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Table 12

Mean Per Pupil Expenditure From Local Funds in Actual and Constant Dollars During the Study Period Including Percentage of Change From 1988 to 1990 and from 1990 to 1992 in All School Divisions in the Commonwealth of Virginia

PPE* - Local[1]	1988 Mean	1990 Mean	% (+/-) 1988-90	1992 Mean	% (+/-) 1990-92
PPE-L (Actual)[2]	$ 1,931	$ 2,432	+ 21%	$ 2,548	+ 5%
PPE-L (Constant)[3]	$ 1,281	$ 1,445	+ 11%	$ 1,417	- 2%

* (1= PPE-Local is the per pupil expenditure from local funds.); ; 2= PPE-L (Actual) is the dollar amount expended from local funds without the impact of inflation.); 3= PPE-L (Constant) is the per pupil expenditure from local funds with the inflation factor considered for 1988 at 1.226, for 1990 at 1.335, and for 1992 at 1.454. The actual local expenditure is divided by the above factors to hold the figures to 1983 dollars.)

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Table 13

Mean Total Per Pupil Expenditure in Actual and Constant Dollars During the Study Period Including Percentage of Change From 1988 to 1990 and from 1990 to 1992 for All School Divisions in the Commonwealth of Virginia

PPE* - Total[1]	1988 Mean	1990 Mean	% (+/-) 1988-90	1992 Mean	% (+/-) 1990-92
PPE-T (Actual)[2]	$ 4,069	$ 4,878	+ 17%	$ 4,995	+ 2%
PPE-T (Constant)[3]	$ 3,094	$ 3,372	+ 8%	$ 3,304	- 2%

* (1= PPE-Total is the total per pupil expenditure which includes the local and state share, state retail and use tax, and federal funds.); 2= PPE-T (Actual) is the total per pupil expenditure without the impact of inflation.); 3= PPE-T (Constant) is the per pupil expenditure from local funds with the inflation factor considered for 1988 at 1.226, for 1990 at 1.335, and for 1992 at 1.454. The actual total per pupil expenditure is divided by the above factors to hold the figures to 1983 dollars.)

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Figure 7. Scattergram depicting local per pupil expenditure and total per pupil expenditure for each locality for 1988 held constant to 1983 dollars.

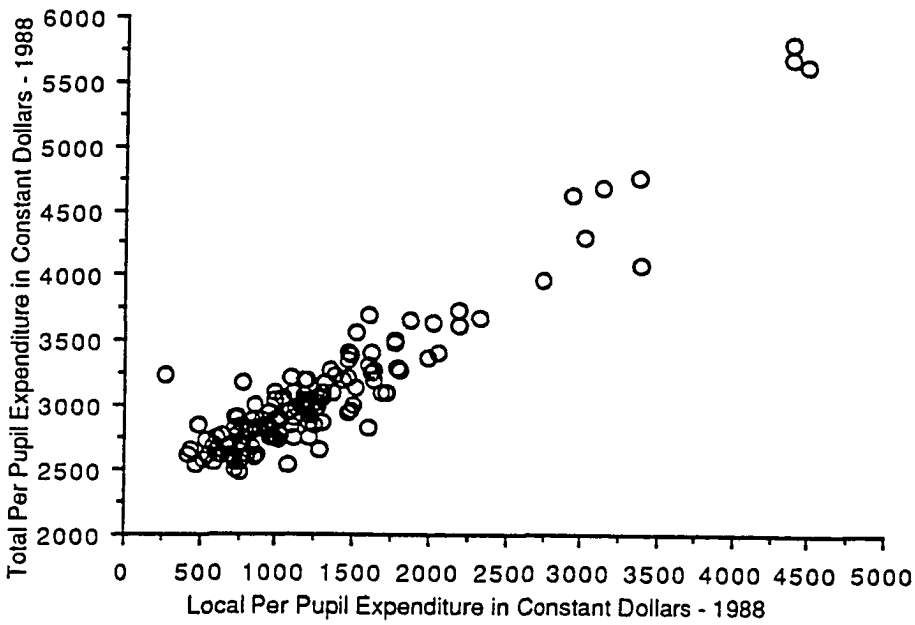

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Figure 8. Scattergram depicting local per pupil expenditure and total per pupil expenditure for each locality for 1990 held constant to 1983 dollars.

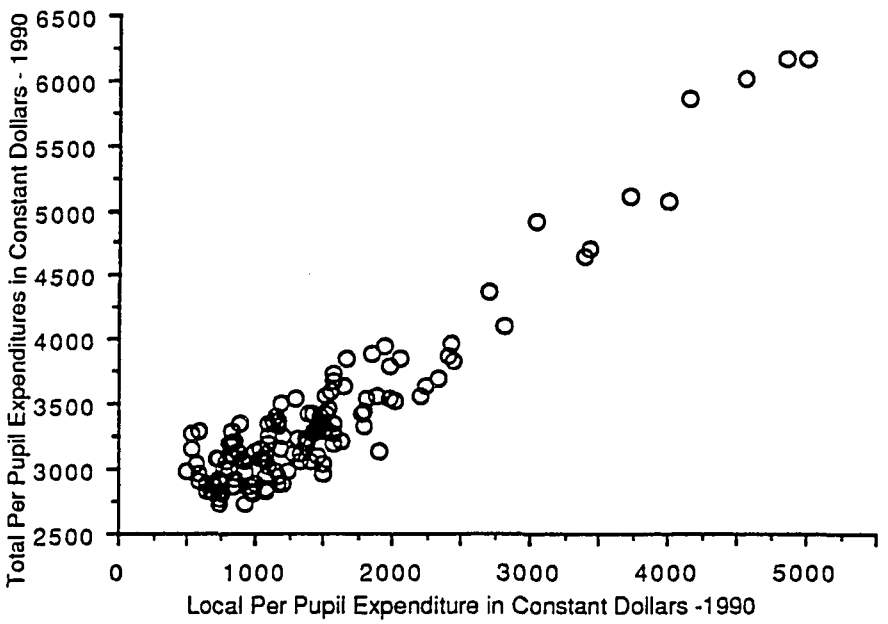

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Figure 9. Scattergram depicting local per pupil expenditure and total per pupil expenditure for each locality for 1992 held constant to 1983 dollars.

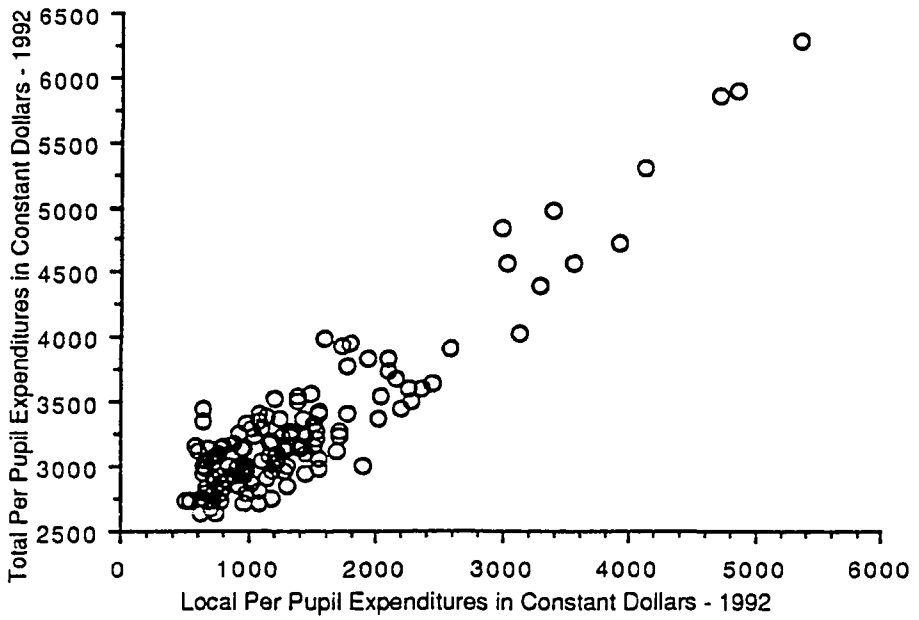

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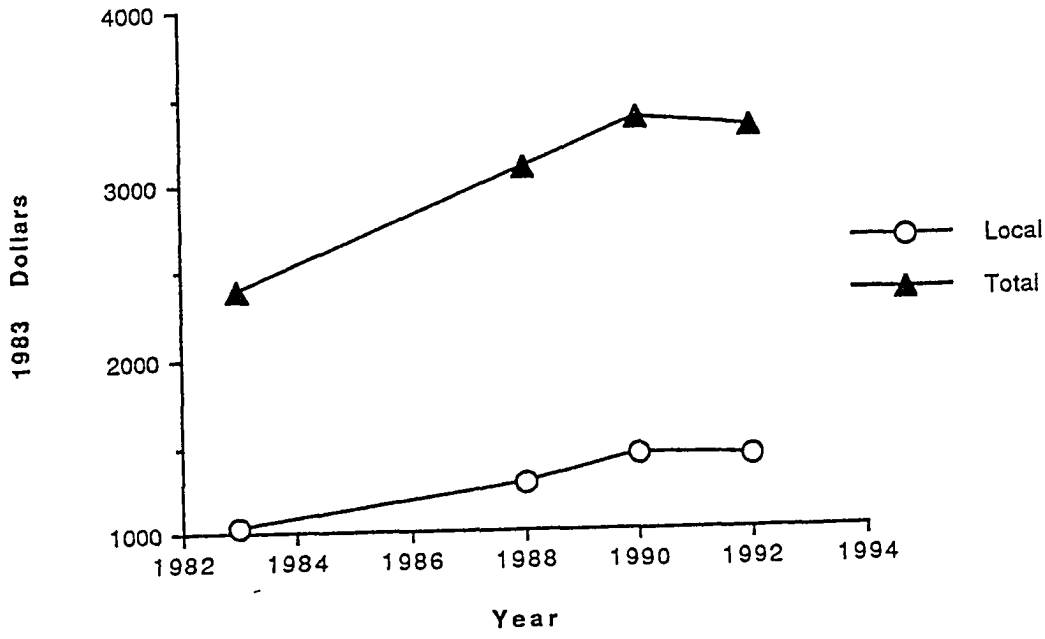
Figure 10. Trend line depicting the trend of local per pupil expenditure and total per pupil expenditure for 1983, 1988, 1990, and 1992 held constant to 1983 dollars with the exception of 1983 which are actual dollars.



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Question 5. What has been the effect of increased funding from the General Assembly to the school divisions involved in the Coalition for Equity in Education Funding toward their total expenditure for operations since 1988?

In order to answer this question, the total educational expenditures for the cost of operations for each locality in the Coalition for Equity were obtained from the Virginia State Department of Education. The total expenditure for operations includes local, state (including the state contribution for Social Security, Virginia Supplemental Retirement System, and Group Life Insurance), state retail sales and use tax, and federal funds. Since 1987-88, this figure has not included expenditures made by school divisions for state operated education programs (hospitals, clinics, and detention homes) located in the localities. The total expenditure for operations is divided by the a locality's average daily membership (ADM) to determine the total per pupil expenditure. Table 14 presents the total expenditure for education during the study period for the 31 school divisions in the Coalition for Equity. All 31 divisions show an increase in total educational expenditure for operations for each year. The average increase of these divisions from 1988 to 1992 was $2.6 million.

Table 15 presents the same information as stated above for the seven plaintiff divisions. The average increase in total expenditure for education from 1988 to 1992 was $3.1 million. Figure 11 presents the trend data on total educational expenditure for operations.

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Table 14

Total Expenditure for Operations by the 31 Coalition Divisions During the Study Period Including Percentage of Change Over the Study Period

Year	1988		1990			1992		
	ADM[1]	TEE[2]	ADM[1]	TEE[2]	% (+/-) 1988 to 1990	ADM[1]	TEE[2]	% (+/-) 1990 to 1992
Counties								
Alleghany[3]	3,291	$ 12.3[4]	3,178	$ 14.4[4]	15%	4,890	$ 15.3[4]	6%
Bath	883	$ 5.2	805	$ 5.6	7%	780	$ 6.0	7%
Bland	1,097	$ 3.5	1,069	$ 4.8	27%	1,039	$ 5.1	6%
Buchanan	7,329	$ 24.2	6,658	$ 28.4	15%	6,147	$ 30.4	7%
Campbell	8,381	$ 27.6	8,043	$ 31.3	12%	8,235	$ 32.8	5%
Carroll	4,326	$ 15.4	4,105	$ 16.9	9%	4,058	$ 18.4	8%
Charlotte	2,203	$ 7.5	2,078	$ 8.7	14%	2,021	$ 9.0	3%
Craig	711	$ 2.3	682	$ 2.7	15%	664	$ 2.7	0%
Dickenson	3,953	$ 14.8	3,644	$ 16.7	11%	3,484	$ 17.3	3%
Floyd	1,901	$ 6.3	1,881	$ 7.6	17%	1,886	$ 8.2	7%
Greensville[5]	2,849	$ 10.5	2,736	$ 11.9	12%	2,765	$ 12.7	6%
Halifax	5,551	$ 18.8	5,361	$ 21.3	12%	5,167	$ 23.6	10%

(table continues)

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Table 14 (Continued)

Year	1988		1990			1992		
	ADM[1]	TEE[2]	ADM[1]	TEE[2]	% (+/-)	ADM[1]	TEE[2]	% (+/-)
Counties								
Lee	5,002	$ 17.5[4]	4,581	$ 20.3[4]	14%	4,461	$ 22.4[4]	9%
Lunenburg	2,190	$ 7.2	2,197	$ 8.7	17%	2,217	$ 9.5	8%
Nottoway	2,438	$ 8.2	2,368	$ 9.3	12%	2,376	$ 10.5	11%
Pulaski	6,183	$ 20.4	5,684	$ 23.6	14%	5,395	$ 23.5	0%
Russell	5,721	$ 19.8	5,414	$ 21.0	6%	5,072	$ 20.2	0%
Scott	4,432	$ 14.2	4,114	$ 16.7	15%	4,057	$ 18.6	10%
Smyth	5,884	$ 18.6	5,563	$ 21.3	13%	5,435	$ 21.6	1%
Washington	7,938	$ 25.0	7,614	$ 29.1	14%	7,451	$ 31.0	9%
Westmoreland	1,846	$ 7.6	1,817	$ 8.5	11%	1,893	$ 8.7	2%
Wise	9,131	$ 31.6	8,766	$ 36.3	13%	8,426	$ 37.0	2%
Wythe	4,582	$ 15.6	4,402	$ 17.2	9%	4,349	$ 17.9	4%
Cities								
Bristol	2,899	$ 10.8	2,749	$ 12.9	16%	2,622	$ 13.3	3%
Galax	1,243	$ 4.2	1,191	$ 4.6	9%	1,148	$ 5.1	10%

(table continues)

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Table 14 (Continued)

Year	1988		1990			1992		
	ADM[1]	TEE[2]	ADM[1]	TEE[2]	% (+/-)	ADM[1]	TEE[2]	% (+/-)
Cities								
Martinsville	2,944	$ 11.6	2,834	$ 12.8	9%	2,752	$ 13.7	7%
Norton	958	$ 3.3	920	$ 4.5	27%	902	$ 3.8	-2%
Petersburg	6,038	$ 22.9	5,690	$ 26.2	13%	5,896	$ 28.2	7%
Radford	1,565	$ 5.9	1,457	$ 6.9	14%	1,514	$ 7.2	4%
South Boston	1,343	$ 4.1	1,282	$ 4.9	16%	1,299	$ 5.0	2%
Towns								
Colonial Bch.	523	$ 1.8	592	$ 2.3	22%	641	$ 2.5	8%

* (**1**= ADM is average daily membership; **2**= TEE is the total educational expenditure for operations which includes local, state, state retail sales and use tax, and federal funds in addition to the state contribution for Social Security, Virginia Supplemental Retirement System, and Group Life Insurance but excluding local expenditures to state operated programs (hospitals, clinics, and detention homes); **3**= Alleghany Highlands is the merger of Alleghany County and Clifton Forge City; **4**= Figures are in million; and **5**= Greensville County data include Emporia City.)

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Table 15

Total Expenditure for Operations by the Seven Plaintiff Divisions

Period Including Percentage of Change Over the Study Period

Year	1988		1990			1992		
	ADM[1]	TEE[2]	ADM[1]	TEE[2]	% (+/-)	ADM[1]	TEE[2]	% (+/-)
Counties								
Buchanan	7,329	$ 24.2	6,658	$ 28.4	15%	6,147	$ 30.4	7%
Halifax	5,551	$ 18.8	5,361	$ 21.3	12%	5,167	$ 23.6	10%
Pulaski	6,183	$ 20.4	5,684	$ 23.6	14%	5,395	$ 23.5	0%
Russell	5,721	$ 19.8	5,414	$ 21.0	6%	5,072	$ 20.2	0%

(table continues)

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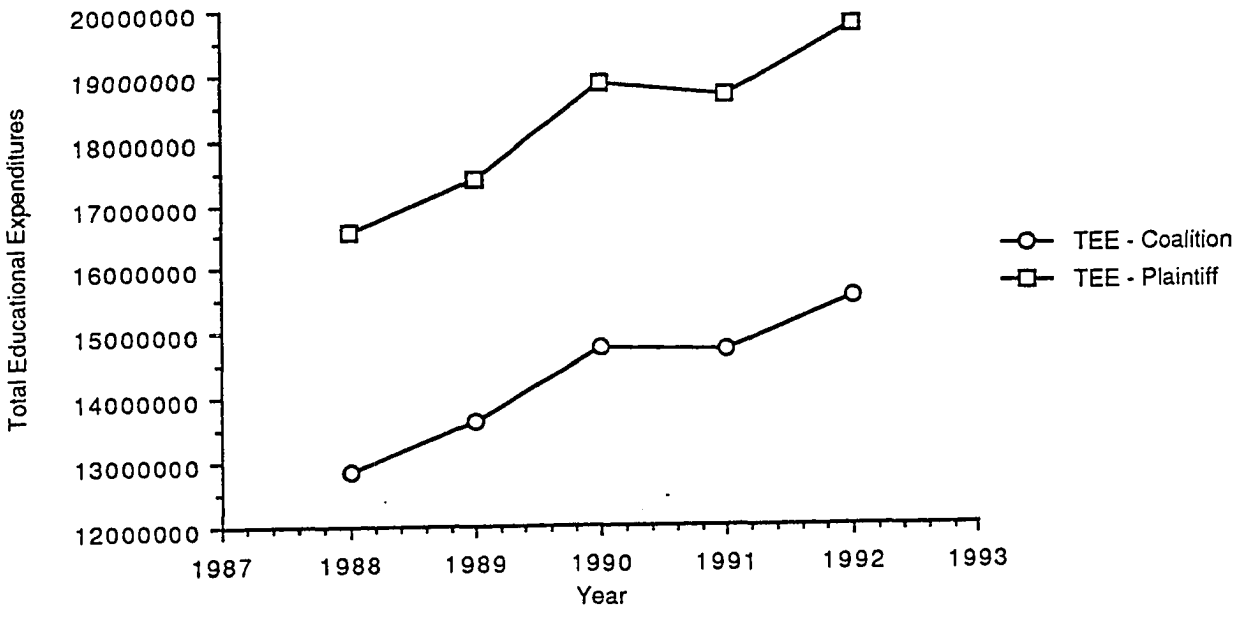
Table 15 (Continued)

Year	1988		1990			1992		
	ADM[1]	TEE[2]	ADM[1]	TEE[2]	% (+/-)	ADM[1]	TEE[2]	% (+/-)
Cities								
Petersburg	6,038	$ 22.9	5,690	$ 26.2	13%	5,896	$ 28.2	7%
Radford	1,565	$ 5.9	1,457	$ 6.9	14%	1,514	$ 7.2	4%
South Boston	1,343	$ 4.1	1,282	$ 4.9	16%	1,299	$ 5.0	2%

* (**1**= ADM is average daily membership; **2**= TEE is the total educational expenditure for operations which includes local, state, state retail sales and use tax, and federal funds in addition to the state contribution for Social Security, Virginia Supplemental Retirement System, and Group Life Insurance but excluding local expenditures to state operated programs (hospitals, clinics, and detention homes); **3**= Alleghany Highlands is the merger of Alleghany County and Clifton Forge City; **4**= Figures are in million; and **5**= Greensville County data include Emporia City.)

Figure 11. Trend line depicting the trend of the mean total educational expenditure for operations of schools by the 31 Coalition and seven Plaintiff divisions over the study period.



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To investigate this question further, the per pupil expenditure from local and state funds and total per pupil expenditure for the Coalition and Plaintiff divisions were examined. These data, too, show similar variation to total educational expenditure for operations. The figures for per pupil expenditure from local dollars lack consistency across the Commonwealth of Virginia as can be seen in Tables 16-17. Some localities contribute thousands more from local funds than others. As was discussed for Question 3, a high, positive correlation does exist in Virginia between per pupil expenditure from local funds and total per pupil expenditure, these data show this to be true, also.

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Table 16

Per Pupil Expenditure From Local and State Funds and Mean Total Per Pupil Expenditure During the Study Period for the Divisions in the Coalition for Equity

Year	1988			1990			1992		
Division	PPE(L)	PPE(S)	PPE(T)[1,2]	PPE(L)	PPE(S)	PPE(T)[1,2]	PPE(L)	PPE(S)	PPE(T)[1,2]
Counties*									
Alleghany[3]	$1,221	$1,889	$3,730	$1,470	$2,255	$4,537	$1,827	$2,318	$4,890
Bath	$4,132	$ 948	$5,834	$5,034	$1,123	$6,934	$5,997	$ 839	$7,710
Bland	$ 685	$1,956	$3,215	$ 810	$2,965	$4,452	$ 928	$3,181	$4,884
Buchanan	$ 923	$1,644	$3,305	$1,173	$2,239	$4,264	$1,582	$2,393	$4,945
Campbell	$ 958	$1,753	$3,293	$1,159	$2,053	$3,889	$1,139	$2,148	$3,978
Carroll	$ 908	$1,941	$3,569	$ 776	$2,531	$4,129	$ 896	$2,787	$4,537
Charlotte	$ 786	$1,800	$3,403	$ 989	$2,270	$4,173	$1,087	$2,303	$4,471
Craig	$ 335	$1,631	$3,198	$1,003	$2,141	$3,965	$1,041	$2,153	$4,030

(table continues)

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Table 16 (Continued)

Year	1988			1990			1992		
Division	PPE(L)	PPE(S)	PPE(T)	PPE(L)	PPE(S)	PPE(T)	PPE(L)	PPE(S)	PPE(T)
Counties*									
Dickenson	$1,443	$1,633	$3,742	$1,536	$2,245	$4,572	$1,583	$2,474	$4,966
Floyd	$ 935	$1,764	$3,322	$1,117	$2,238	$4,062	$1,225	$2,404	$4,362
Greensville[4]	$1,058	$1,885	$3,683	$1,149	$2,394	$4,353	$1,186	$2,464	$4,578
Halifax	$ 742	$1,900	$3,379	$ 866	$2,211	$3,920	$1,138	$2,460	$4,567
Lee	$ 592	$1,949	$3,496	$ 733	$2,537	$4,427	$ 954	$2,796	$5,017
Lunenburg	$ 828	$1,809	$3,289	$ 993	$2,190	$3,939	$ 939	$2,415	$4,283
Nottoway	$ 654	$1,755	$3,347	$ 793	$2,138	$3,944	$ 963	$2,328	$4,411
Pulaski	$ 854	$1,846	$3,302	$1,245	$2,191	$4,150	$1,317	$2,261	$4,351
Russell	$1,015	$1,867	$3,456	$ 944	$2,225	$3,883	$ 749	$2,451	$3,984
Scott	$ 516	$1,983	$3,206	$ 680	$2,534	$4,048	$ 854	$2,831	$4,580
Smyth	$ 650	$1,903	$3,165	$ 871	$2,251	$3,835	$ 801	$2,352	$3,974

(table continues)

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Table 16 (Continued)

Year	1988			1990			1992		
Division	PPE(L)	PPE(S)	PPE(T)	PPE(L)	PPE(S)	PPE(T)	PPE(L)	PPE(S)	PPE(T)
Counties									
Washington	$ 728	$1,801	$3,150	$1,027	$2,001	$3,819	$1,152	$2,165	$4,167
Westmoreland	$1,798	$1,579	$4,102	$1,889	$1,912	$4,652	$1,692	$2,002	$4,614
Wise	$ 888	$1,889	$3,462	$1,073	$2,249	$4,141	$1,062	$2,445	$4,392
Wythe	$ 900	$1,826	$3,396	$ 952	$2,206	$3,919	$ 958	$2,391	$4,111
Cities									
Bristol	$1,451	$1,601	$3,715	$2,087	$1,866	$4,700	$2,022	$2,120	$5,091
Galax	$1,488	$1,368	$3,374	$1,461	$1,792	$3,846	$1,710	$2,022	$4,474
Martinsville	$1,695	$1,623	$3,957	$1,988	$1,825	$4,518	$2,251	$1,940	$4,989
Norton	$1,167	$1,580	$3,473	$2,051	$1,950	$4,838	$1,139	$2,221	$4,247
Petersburg	$1,446	$1,543	$3,788	$1,562	$2,014	$4,608	$1,500	$2,190	$4,789

(table continues)

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Table 16 (Continued)

	Year								
	1988			1990			1992		
Division	PPE(L)	PPE(S)	PPE(T)	PPE(L)	PPE(S)	PPE(T)	PPE(L)	PPE(S)	PPE(T)
Cities									
Radford	$1,589	$1,609	$3,757	$2,063	$1,947	$4,657	$1,942	$2,145	$4,751
South Boston	$ 880	$1,605	$3,061	$1,018	$2,123	$3,797	$1,076	$2,134	$3,819
Towns									
Colonial Beach	$1,361	$1,551	$3,371	$1,360	$2,095	$3,909	$1,036	$2,331	$3,881

* (1= Support by sources may not equal total expenditures due to rounding and omission from this study of some funding streams which contribute to the total per pupil expenditure.; 2= Expenditures made by the local school divisions on behalf of state operated education programs (hospitals, clinics, and detention homes) located within the local school divisions are not included in total expenditures for operations for the local school division.; 3= Alleghany Highlands is the merger of Alleghany County and Clifton Forge City.; 4= Greensville County data include Emporia City.)

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Table 17

Per Pupil Expenditure From Local and State Funds and Mean Total Per Pupil Expenditure During the Study Period for the Plaintiff Divisions in the State Supreme Court Case on Equity

Year	1988			1990			1992		
Division*	PPE(L)	PPE(S)	PPE(T)[1,2]	PPE(L)	PPE(S)	PPE(T)[1,2]	PPE(L)	PPE(S)	PPE(T)[1,2]
Counties									
Buchanan	$ 923	$1,644	$3,305	$1,173	$2,239	$4,264	$1,582	$2,393	$4,945
Halifax	$ 742	$1,900	$3,379	$ 866	$2,211	$3,920	$1,138	$2,460	$4,567
Pulaski	$ 854	$1,846	$3,302	$1,245	$2,191	$4,150	$1,317	$2,261	$4,351
Russell	$1,015	$1,867	$3,456	$ 944	$2,225	$3,883	$ 749	$2,451	$3,984
Cities									
Petersburg	$1,446	$1,543	$3,788	$1,562	$2,014	$4,608	$1,500	$2,190	$4,789

(table continues)

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Table 17 (Continued)

Year	1988			1990			1992		
Division*	PPE(L)	PPE(S)	PPE(T)[1,2]	PPE(L)	PPE(S)	PPE(T)[1,2]	PPE(L)	PPE(S)	PPE(T)[1,2]
Cities									
Radford	$1,589	$1,609	$3,757	$2,063	$1,947	$4,657	$1,942	$2,145	$4,751
South Boston	$ 880	$1,605	$3,061	$1,018	$2,123	$3,797	$1,076	$2,134	$3,819

* (1= Support by sources may not equal total expenditures due to rounding and omission from this study of some funding streams which contribute to the total per pupil expenditure.; 2= Expenditures made by the local school divisions on behalf of state operated education programs (hospitals, clinics, and detention homes) located within the local school divisions are not included in total expenditures for operations for the local school division.)

To continue to examine this question, mean data were computed for expenditures from local funds, state funds, and the total per pupil expenditure for the Coalition divisions, the Plaintiff divisions, and All school divisions in the Commonwealth of Virginia. These data do answer Question 5 and do provide the answer to the purpose of this study which was to determine if the 1988 funding formula change has improved or decreased the gap between the high capacity and low capacity school divisions in Virginia.

Table 18 presents the mean data for local expenditures for the three groups stated above. The percentage difference between Coalition and All divisions in 1988 was 42%. In 1990 (the year extra state money was allocated to localities), the percentage difference increased to 48%. In 1992, it decreased to 45%.

To determine the influence of the seven top spending school divisions in the area of local funds on the mean scores and on the percentage difference between the Coalition and All divisions, the top seven were removed and the means and percentages were recomputed. Table 19 presents these data. Removing the top seven decreased the gap in the area of local expenditure from 42% to 28% in 1988, from 48% to 23% in 1990, and from 45% to 23% in 1992. One of the divisions removed was Bath County, one of the Coalition divisions. Tables 20-21 show the mean per pupil expenditure from state funds and the percentage difference between the Coalition, Plaintiff, and All divisions, and the same data

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with the top seven recipients of state funds removed. With the top seven removed, the gap decreased from -13% to -10% in 1988, from -20% to -18% in 1990, and from -27% to 17% in 1992. This indicates that the greater percentage of equalized funds is moving the state average closer to the state average for the Coalition divisions since the Coalition averages a greater percentage of state funds.

Table 22 shows the mean comparison of the Coalition, Plaintiff, and All divisions in the area of total per pupil expenditure which, unlike total educational expenditure for operations, does consider average daily membership. Table 23 presents the data with the top seven divisions removed. With these divisions out of the data set, the gap closed further from 13% to 3% in 1988; from 12% to 3% in 1990; and from 8% to 1% in 1992.

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Table 18

A Comparison of the Mean Per Pupil Expenditures From Local Funds for the Seven Plaintiff Divisions, the 31 Coalition Divisions, and All Divisions in the Commonwealth of Virginia

	Plaintiff	Coalition	% (+/-)	All	% (+/-)
Year					
1988	$ 1,064	$ 1,117	+ 5%	$ 1,931	+ 42%
1990	$ 1,267	$ 1,351	+ 6%	$ 2,432	+ 48%
1992	$ 1,329	$ 1,411	+ 6%	$ 2,548	+ 45%

(1= The Plaintiff divisions are those seven divisions involved in the funding suit at the State Supreme Court level.); 2= The Coalition divisions are those 31 mostly rural school divisions who came together to form the Coalition for Equity in Funding.); 3= All refers to the total population of 138 school divisions who are reported by the Virginia Department of Education as 134 divisions since four divisions are combined with others.)

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Table 19

A Comparison of the Mean Per Pupil Expenditures From Local Funds for the Seven Plaintiff Divisions, the 31 Coalition Divisions, and All Divisions in the Commonwealth of Virginia With the Top Seven Spending Divisions Removed

	Plaintiff	Coalition	% (+/-)	All	% (+/-)
Year					
1988	$ 1,064	$ 1,117	+ 5%	$ 1,550	+ 28%
1990	$ 1,267	$ 1,351	+ 6%	$ 1,748	+ 23%
1992	$ 1,329	$ 1,411	+ 6%	$ 1,831	+ 23%

(1= The Plaintiff divisions are those seven divisions involved in the funding suit at the State Supreme Court level.); 2= The Coalition divisions are those 31 mostly rural school divisions who came together to form the Coalition for Equity in Funding.); 3= All refers to the total population of 138 school divisions who are reported by the Virginia Department of Education as 134 divisions since four divisions are combined with others.)

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Table 20

A Comparison of the Mean Per Pupil Expenditures From State Funds for the Seven Plaintiff Divisions, the 31 Coalition Divisions, and All Divisions in the Commonwealth of Virginia

	Plaintiff	Coalition	% (+/-)	All	% (+/-)
Year					
1988	$ 1,716	$ 1,724	+ .5%	$ 1,501	- 13%
1990	$ 2,136	$ 2,152	+ 1%	$ 1,715	- 20%
1992	$ 2,291	$ 2,305	+ .5%	$ 1,694	-27%

(**1**= The Plaintiff divisions are those seven divisions involved in the funding suit at the State Supreme Court level.); **2**= The Coalition divisions are those 31 mostly rural school divisions who came together to form the Coalition for Equity in Funding.); **3**= All refers to the total population of 138 school divisions who are reported by the Virginia Department of Education as 134 divisions since four divisions are combined with others.)

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Table 21

A Comparison of the Mean Per Pupil Expenditures From State Funds for the Seven Plaintiff Divisions, the 31 Coalition Divisions, and All Divisions in the Commonwealth of Virginia With the Top Seven Recipients of State Funds Removed

	Plaintiff	Coalition	% (+/-)	All	% (+/-)
Year					
1988	$ 1,716	$ 1,724	+ .5%	$ 1,558	- 10%
1990	$ 2,136	$ 2,152	+ 1%	$ 1,759	- 18%
1992	$ 2,291	$ 2,305	+ .5%	$ 1,910	- 17%

(1= The Plaintiff divisions are those seven divisions involved in the funding suit at the State Supreme Court level.); 2= The Coalition divisions are those 31 mostly rural school divisions who came together to form the Coalition for Equity in Funding.); 3= All refers to the total population of 138 school divisions who are reported by the Virginia Department of Education as 134 divisions since four divisions are combined with others.)

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Table 22

A Comparison of the Mean Total Per Pupil Expenditures for the Seven Plaintiff Divisions, the 31 Coalition Divisions, and All Divisions in the Commonwealth of Virginia

	Plaintiff	Coalition	% (+/-)	All	% (+/-)
Year					
1988	$ 3,435	$ 3,534	+ 3%	$ 4,069	+ 13%
1990	$ 4,183	$ 4,286	+ 2%	$ 4,878	+ 12%
1992	$ 4,458	$ 4,576	+ 3%	$ 4,995	+ 8%

(**1**= The Plaintiff divisions are those seven divisions involved in the funding suit at the State Supreme Court level.); **2**= The Coalition divisions are those 31 mostly rural school divisions who came together to form the Coalition for Equity in Funding.); **3**= All refers to the total population of 138 school divisions who are reported by the Virginia Department of Education as 134 divisions since four divisions are combined with others.)

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Table 23

A Comparison of the Mean Total Per Pupil Expenditures for the Seven Plaintiff Divisions, the 31 Coalition Divisions, and All With the Top Seven Spending Divisions Removed

	Plaintiff	Coalition	% (+/-)	All	% (+/-)
Year					
1988	$ 3,435	$ 3,534	+ 3%	$ 3,654	+ 3%
1990	$ 4,183	$ 4,286	+ 2%	$ 4,401	+ 3%
1992	$ 4,458	$ 4,576	+ 3%	$ 4,635	+ 1%

(**1**= The Plaintiff divisions are those seven divisions involved in the funding suit at the State Supreme Court level.); **2**= The Coalition divisions are those 31 mostly rural school divisions who came together to form the Coalition for Equity in Funding.); **3**= All refers to the total population of 138 school divisions who are reported by the Virginia Department of Education as 134 divisions since four divisions are combined with others.)

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Figure 12. Trend line depicting the trend of the mean per pupil expenditure from local and state funds and the mean total per pupil expenditure for the Coalition divisions over the study period.

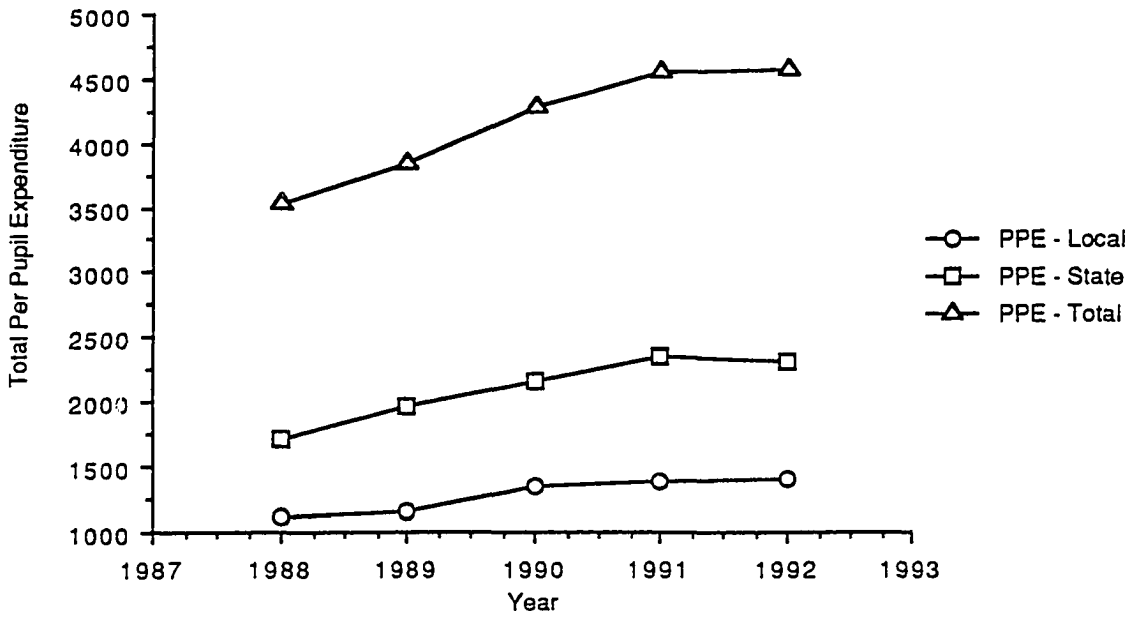

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Figure 13. Trend line depicting the trend of the mean per pupil expenditure from local and state funds and the mean total per pupil expenditure for the Plaintiff divisions over the study period.

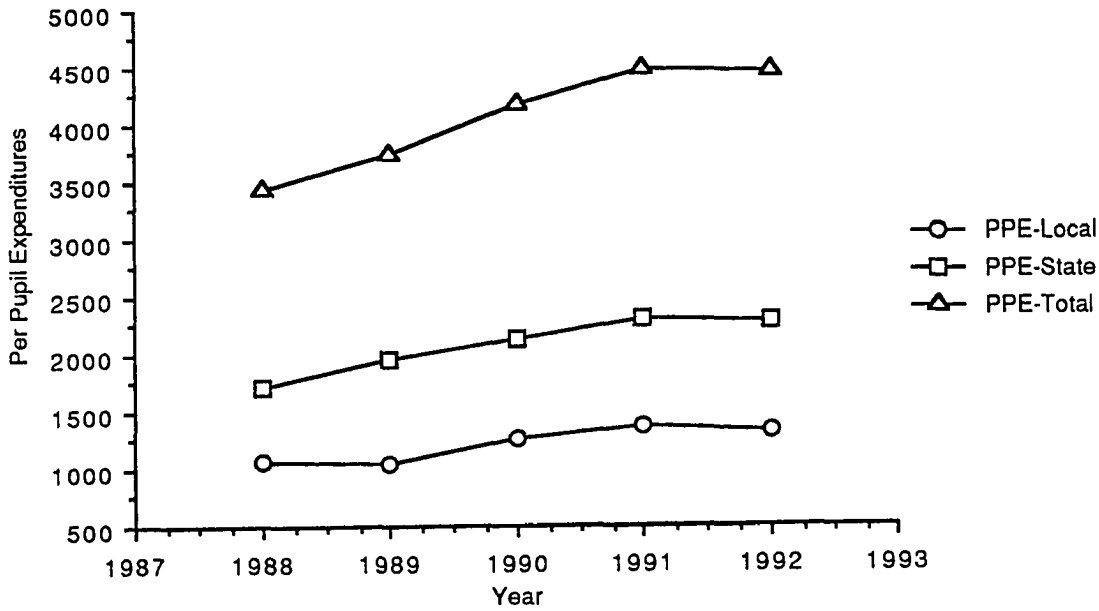

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Figure 14. Trend line depicting the trend of the mean per pupil expenditure from local and state funds and the mean total per pupil expenditure for the All divisions over the study period.

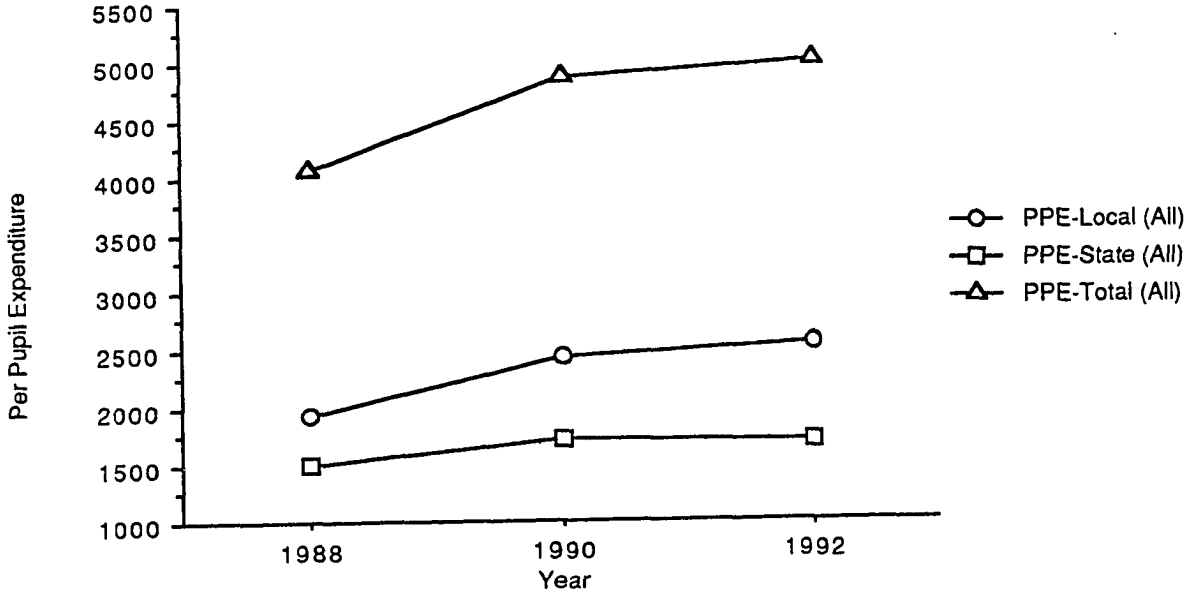

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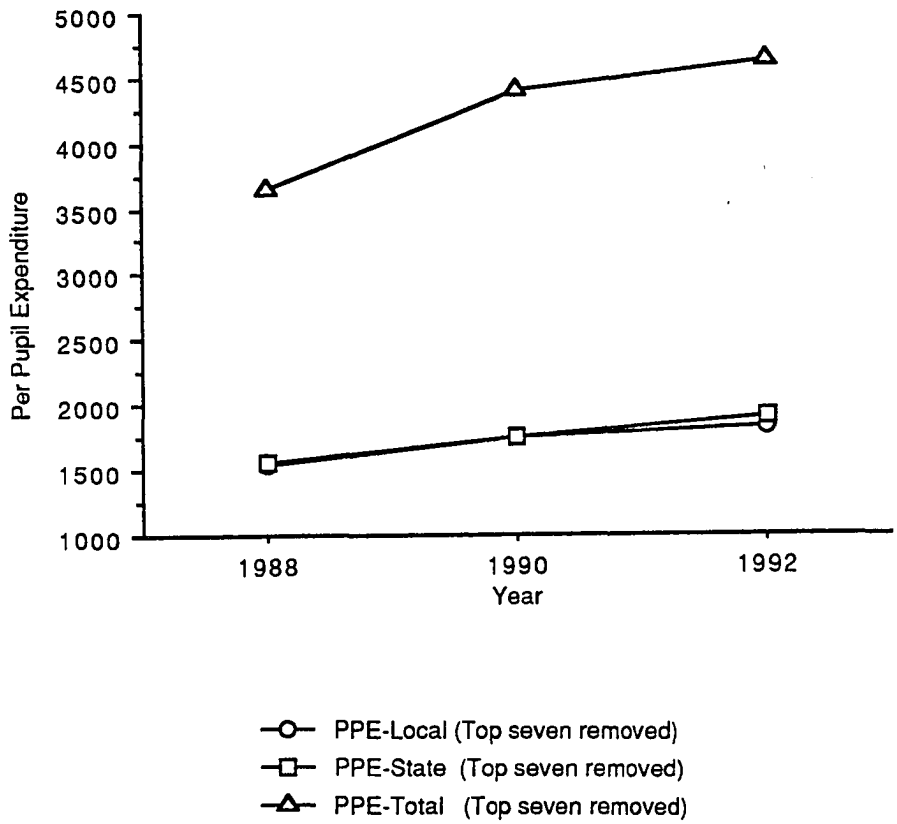
Figure 15. Trend line depicting the trend of the mean per pupil expenditure from local and state funds and the mean total per pupil expenditure for All divisions over the study period with the top seven divisions removed.



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Chapter 5

Summary, Conclusions, Discussion, and Implications

This chapter will focus on the summary of the methodology which was utilized to examine the top and bottom 20 school divisions to see if they had changed over the study period and the per pupil expenditure from local funds in each Virginia school division and its relationship to the composite index of each respective division before and after the 1988 funding formula change. Also, the chapter will discuss the change in per pupil expenditure from local funds and total per pupil expenditure when held constant for inflation. Too, this chapter will focus on the total educational expenditure for operations of the divisions in the Coalition for Equity and the Plaintiff divisions. Additionally, the results obtained from this correlational study and discussion regarding those results will be explicated. Finally, the implications of this study, as well as recommendations for future research, will be addressed.

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Summary

Three premises under-pin the debate about educational disparity: 1) Widespread disparity exists in educational opportunities, as measured by per pupil spending; 2) This difference in spending prevents students in the lowest spending localities from receiving an adequate education; and 3) The Commonwealth of Virginia should provide enough resources to level-up the educational program in all areas to approximate the per pupil spending levels of the highest spending divisions in the state. The purpose of this study was to analyze the Virginia school finance system to determine whether disparities in revenue for education had been reduced between students in low-capacity and high-capacity divisions and if the relationship between a locality's fiscal capacity and its per pupil expenditure changed after the implementation of the 1988 educational funding formula. These analyses were important since the 1988 Virginia General Assembly restructured the school finance system for the purpose of decreasing the disparity between the high and low fiscal capacity school divisions.

Equity theory provided the theoretical rationale for this study. According to Bylsma (1988), equity theory proposes that outcome distributions are perceived as fair when the ratio of one's own outcomes to inputs is equivalent to that of a comparison group. While Bylsma's definition of equity theory was not written with high and low capacity school divisions in mind, the theory certainly can be

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applied. Theoretically, all the children in the Commonwealth of Virginia are equally important and are entitled to have equitable educational opportunities.

The present study was a constructive replication of research conducted by Verstegen and Salmon in 1989. Their finding was that the disparities worsened after the new funding formula was put into place for the 1988-89 school year. Vernall (1982) and Carr (1987) found, in their studies, that the Virginia equalization formula based on a composite index had not been effective in improving fiscal neutrality among the school divisions of the Commonwealth of Virginia.

The present study attempted to fill a gap in public education funding research in Virginia by analyzing funding information after the funding formula change in 1988 and by examining the educational revenue of the 31 school divisions involved in the Coalition for Equity. Seven of these divisions were in an equity suit in the Virginia Supreme Court in 1993.

All 138 school divisions (95 counties, 2 towns, and 41 cities) in the Commonwealth of Virginia were included in this research study. The data from the Virginia Department of Education listed 134 divisions, with three cities and one county combined with other school divisions. These divisions included rural, suburban, and urban localities. They represented student population sizes from approximately 400 pupils in average daily membership to more than 120,000 in average daily membership. The data included localities with composite indices

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ranging from .1818 to .8000 with total per-pupil expenditures ranging from $3,819 to $9,139, and per pupil expenditures from local funds ranging from $749 to $7,043 in 1992, the final year of this study. Since all school divisions were included, sampling strategies were not employed.

A correlational method for analyzing the research data was employed as the design for this study. Scattergrams and trend lines were generated for the majority of the funding variables. In order to explore correlational relationships and to predict one variable's relationship to another, bivariate correlation coefficients were generated.

Conclusions

The following conclusions are based on the findings of this study.

1. When range is used as the method, the disparity increased between 1988 and 1992.

2. A high positive correlation does exist between ability-to-pay as measured by the composite index and total per pupil expenditure.

3. A high positive correlation does exist between per pupil expenditure from local funds and total per pupil expenditure.

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4. Inflation factors do change the local and total per pupil expenditures.

5. The Coalition divisions have moved closer to the state average total per pupil expenditure since 1988. Disparities in revenue for education have been reduced between students in low-capacity and high-capacity divisions since the implementation of the 1988 funding formula change.

Discussion

The first conclusion was drawn because, if this researcher had used range alone to determine if disparity in the Commonwealth of Virginia had decreased following the implementation of the 1988 funding formula change, the answer would have been the opposite of what was found in Question 5. If the range had been used alone, the conclusion would have been the disparity had worsened by .6% from 1988 to 1992. If this researcher had stopped at this point, this study would have agreed with the results of Verstegen and Salmon in their 1989 study of which this study is a constructive replication. They reported a worsening of the disparity gap following the 1988 funding formula change.

Using the range to measure the spending gap, exaggerated its size since range is a poor measure of the actual spending dispersion in Virginia. The method range used in Question 1 described the relationship between only two school divisions--the highest spending division and the lowest spending division.

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The second conclusion was drawn since a high positive correlation was found to exist between a locality's ability-to-pay as measured by its per pupil expenditure from local funds and its respective composite index. Lower fiscal capacity divisions were found to be adding less local dollars to support education than the higher fiscal capacity divisions. This study found that some localities failed to add sufficient local dollars, when the state gave extra funds in 1990, to keep pace with other localities in the state. Even with a high positive correlation between ability-to-pay as measured by the composite index and per pupil expenditure from local funds, the correlation coefficients cannot compute local choice. It seemed apparent that the top seven spending divisions, because of their wealth, were able to spend more without putting forth more relative effort. It was less apparent whether or not the bottom seven divisions could reasonably afford to increase their local contributions to education. According to the Virginia Department of Education records, the bottom seven divisions devoted a lower proportion of their total local adjusted gross income to education than the other divisions. They used a lower proportion of their revenue capacity to support education than others in the Virginia. According to the Virginia Department of Taxation records, the bottom seven divisions, also, had lower effective property tax rates than the other divisions. What this study found was that, even with extra state money, some localities chose not to increase local dollars to keep pace with other locality's per pupil expenditure from local funds. This would not create a funding problem for

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them perhaps if most other divisions chose to act in a similar manner. But, the seven top spending divisions were using a sizeable portion of their wealth to fund education. If the bottom seven spending divisions and other Coalition divisions tapped additional local capacity, would it make any difference? If those at the bottom increased their efforts to a level close or at the median, it would have produced between $350 and $525 per pupil. This would have produced sufficient additional revenues to have brought their local spending in line with the median divisions. Due to their low wealth, the bottom seven spending divisions would not have the capacity to generate much more than median-level revenues.

The fourth conclusion focuses on the change upon the per pupil expenditure from local dollars and total per pupil expenditure during the study period when dollars were held constant for inflation. Inflation factors did change the local and total per pupil expenditures over the study period. Since school divisions appeared to put the majority of their budget into teacher salaries, benefits, and instructional support, materials, and supplies, inflation between 1988 and 1992 decreased the worth of the actual dollars to purchase these. Both high-capacity and low-capacity localities' ability to purchase goods and services were influenced by inflation.

The discussion of the final conclusion follows. The method range in Question 1 indicated an increase in disparity since the 1988 funding formula change went into effect, but the mean data in Question 5 revealed that the funding formula brought about a decrease in the gap. Mean data were computed for expenditures

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from local and state funds and the total per pupil expenditure for the Coalition divisions, the Plaintiff divisions, and All school divisions in the Commonwealth of Virginia.

The mean data for local expenditures for the three groups stated above indicated that the percentage difference between Coalition and All divisions in 1988 was 42%. In 1990 (the year extra state money was allocated to localities), the percentage difference increased to 48%. In 1992, it decreased to 45%. The fact that the percentage increased in 1990, when extra money was allocated, was another indication that some localities failed to keep pace in the area of local per pupil expenditure even when additional funds were provided to them.

To determine the influence of the top seven spending school divisions in the area of per pupil expenditure from local funds on the mean scores and on the percentage difference between the Coalition and All divisions, the top seven were removed and the means and percentages were recomputed. Removing the top seven decreased the gap in the area of local expenditure from 42% to 28% in 1988, from 48% to 23% in 1990, and from 45% to 23% in 1992. One of the divisions removed was Bath County, one of the Coalition divisions.

The mean data for the per pupil expenditure from state funds indicated that the each year of the study period, the Coalition divisions' average per pupil expenditure from state funds increased and remained higher than the average of All divisions. The mean difference increased by 7% each year of the study

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period. This indicated that the greater percentage of equalized funds were moving the state average for All divisions closer to the state average.

The mean comparison of the Coalition, Plaintiff, and All divisions in the area of total per pupil expenditure which, unlike total educational expenditure for operations, does consider average daily membership, revealed a decrease in the spending gap since 1988 from 13% in 1988 to 12% in 1990. By 1992, the final year of the study, the gap had decreased to an 8% difference between the Coalition divisions and All divisions in Virginia. With the top seven spending divisions removed from the data set, the gap closed even more from 13% to 3% in 1988; from 12% to 3% in 1990; and from 8% to 1% in 1992.

In conclusion, the 1988 funding formula change did decrease the disparity gap between high-capacity and low-capacity school divisions in the Commonwealth of Virginia.

Implications

The results of the study indicate that the implementation of the 1988 change in the Virginia educational funding formula to bring about greater equalization of funds in hopes of decreasing the disparity between high capacity and low capacity school divisions was successful in achieving this goal if one measures the decrease in the gap between the state average total per pupil expenditure and the Coalition

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divisions' total per pupil expenditure. However, if one looks at the top and bottom 20 divisions only, the gap has gotten wider which was the conclusion of Verstegen and Salmon's study in 1989 where several methodologies were employed. Since this study was a constructive replication of their study, this researcher purposely did not review the methods of their study until this study was finished and conclusions were drawn.

Based on the above information, the following implications for further research are suggested:

1. An investigation of the effect of a requirement from the state for a locality to increase required local effort when state funds are increased.

2. An investigation of the difference in educational achievement of students in high and low spending school divisions.

3. If there is a difference in #3 above, a further investigation to determine if extra dollars made the difference.

4. An investigation to determine what high-capacity and low-capacity divisions are buying with their funds to answer the question: Are higher spending divisions spending more, or a greater proportion of their funds, on activities that contribute to higher educational achievement?

In conclusion, it is believed that this study will provide members of state education agencies and local education agencies with useful information regarding

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the impact of the 1988 funding formula change on disparity in educational funding in the Commonwealth of Virginia.

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APPENDIX A

SUPPORTING DATA FOR QUESTION FOUR

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Table A-1

Per Pupil Expenditure From Local Funds Over the Study Period Held Constant to 1983 Dollars

Year	1988		1990		1992	
Division*	PPE-L** Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]
Counties						
Accomack	$ 1,340	$ 1,093	$ 1,570	$ 1,159	$ 1,608	$ 1,106
Albemarle	$ 2,681	$ 2,187	$ 3,253	$ 2,401	$ 3,296	$ 2,267
Alleghany[1]	$ 1,221	$ 996	$ 1,470	$ 1,085	$ 1,827	$ 1,257
Amelia	$ 1,035	$ 844	$ 1,137	$ 839	$ 1,152	$ 792
Amherst	$ 1,048	$ 855	$ 1,260	$ 930	$ 1,037	$ 713
Appomattox	$ 843	$ 688	$ 998	$ 737	$ 898	$ 618
Arlington	$ 5,363	$ 4,374	$ 6,580	$ 4,856	$ 7,043	$ 4,844
Augusta	$ 1,337	$ 1,091	$ 1,455	$ 1,074	$ 1,770	$ 1,217
Bath	$ 4,132	$ 3,370	$ 5,034	$ 3,715	$ 5,997	$ 4,124

(table continues)

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Table A-1 (Continued)

Year		1988		1990		1992
Division*	PPE-L** Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]
Bedford[2]	$ 1,226	$ 1,000	$ 1,798	$ 1,327	$ 1,678	$ 1,154
Bland	$ 685	$ 559	$ 810	$ 598	$ 928	$ 638
Botetourt	$ 1,191	$ 972	$ 1,444	$ 1,066	$ 1,494	$ 1,028
Brunswick	$ 748	$ 610	$ 1,120	$ 827	$ 994	$ 684
Buchanan	$ 923	$ 753	$ 1,173	$ 866	$ 1,582	$ 1,088
Buckingham	$ 955	$ 779	$ 1,047	$ 773	$ 971	$ 668
Campbell	$ 958	$ 781	$ 1,159	$ 855	$ 1,139	$ 783
Caroline	$ 1,178	$ 961	$ 1,450	$ 1,070	$ 1,213	$ 834
Carroll	$ 908	$ 741	$ 776	$ 573	$ 896	$ 616
Charles City	$ 1,850	$ 1,509	$ 2,142	$ 1,581	$ 2,321	$ 1,596
Charlotte	$ 786	$ 641	$ 989	$ 730	$ 1,087	$ 748
Chesterfield	$ 1,495	$ 1,219	$ 1,979	$ 1,461	$ 1,909	$ 1,313
Clarke	$ 2,006	$ 1,636	$ 2,566	$ 1,894	$ 3,136	$ 2,157
Craig	$ 335	$ 273	$ 1,003	$ 740	$ 1,041	$ 715
Culpepper	$ 1,554	$ 1,268	$ 2,140	$ 1,579	$ 2,192	$ 1,508

(table continues)

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Table A-1 (Continued)

Year	1988		1990		1992	
Division*	PPE-L** Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]
Cumberland	$ 714	$ 582	$ 1,006	$ 742	$ 1,043	$ 717
Dickenson	$ 1,443	$ 1,177	$ 1,536	$ 1,134	$ 1,583	$ 1,088
Dinwiddie	$ 1,441	$ 1,175	$ 1,408	$ 1,039	$ 1,296	$ 891
Essex	$ 1,802	$ 1,470	$ 1,850	$ 1,365	$ 1,944	$ 1,337
Fairfax	$ 3,700	$ 3,018	$ 4,653	$ 3,434	$ 5,176	$ 3,560
Fauquier	$ 2,059	$ 1,679	$ 2,997	$ 2,212	$ 3,328	$ 2,289
Floyd	$ 935	$ 763	$ 1,117	$ 824	$ 1,225	$ 843
Fluvanna	$ 1,338	$ 1,091	$ 1,329	$ 981	$ 1,399	$ 962
Franklin	$ 859	$ 701	$ 1,315	$ 970	$ 1,358	$ 934
Frederick	$ 1,259	$ 1,027	$ 1,687	$ 1,245	$ 2,104	$ 1,447
Giles	$ 1,098	$ 896	$ 1,362	$ 1,005	$ 1,404	$ 966
Gloucester	$ 1,246	$ 1,016	$ 1,577	$ 1,164	$ 1,743	$ 1,199
Goochland	$ 1,981	$ 1,616	$ 2,686	$ 1,982	$ 2,970	$ 2,043
Grayson[3]	$ 533	$ 435	$ 727	$ 537	$ 938	$ 645
Greene	$ 1,238	$ 1,010	$ 1,480	$ 1,092	$ 1,592	$ 1,095

(table continues)

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Table A-1 (Continued)

Year	1988		1990		1992	
Division*	PPE-L** Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]
Greensville[4]	$ 1,058	$ 863	$ 1,149	$ 848	$ 1,186	$ 816
Halifax	$ 742	$ 605	$ 866	$ 639	$ 1,138	$ 783
Hanover	$ 1,533	$ 1,250	$ 2,030	$ 1,498	$ 2,267	$ 1,559
Henrico	$ 2,187	$ 1,784	$ 2,738	$ 2,021	$ 2,926	$ 2,012
Henry	$ 1,133	$ 924	$ 1,436	$ 1,060	$ 1,401	$ 964
Highland	$ 2,095	$ 1,709	$ 2,126	$ 1,569	$ 2,536	$ 1,744
Isle of Wight	$ 1,598	$ 1,303	$ 2,011	$ 1,484	$ 2,077	$ 1,428
King George	$ 1,328	$ 1,083	$ 1,748	$ 1,290	$ 2,253	$ 1,550
King and Queen	$ 1,473	$ 1,201	$ 1,884	$ 1,390	$ 1,759	$ 1,209
King William	$ 1,445	$ 1,179	$ 1,786	$ 1,318	$ 1,724	$ 1,186
Lancaster	$ 1,567	$ 1,278	$ 2,021	$ 1,492	$ 2,482	$ 1,707
Lee	$ 592	$ 483	$ 726	$ 536	$ 954	$ 656
Loudoun	$ 2,853	$ 2,327	$ 3,808	$ 2,810	$ 4,554	$ 3,132
Louisa	$ 1,967	$ 1,604	$ 2,587	$ 1,909	$ 2,767	$ 1,903

(table continues)

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Table A-1 (Continued)

Year	1988		1990		1992	
Division*	PPE-L** Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]
Lunenburg	$ 828	$ 675	$ 993	$ 733	$ 939	$ 646
Madison	$ 1,545	$ 1,260	$ 1,733	$ 1,279	$ 1,620	$ 1,114
Mathews	$ 1,598	$ 1,303	$ 1,905	$ 1,406	$ 1,890	$ 1,300
Mecklenburg	$ 759	$ 619	$ 1,017	$ 751	$ 957	$ 658
Middlesex	$ 1,795	$ 1,464	$ 2,198	$ 1,622	$ 2,244	$ 1,543
Montgomery	$ 1,474	$ 1,202	$ 1,948	$ 1,438	$ 2,114	$ 1,454
Nelson	$ 1,556	$ 1,269	$ 2,021	$ 1,492	$ 1,973	$ 1,357
New Kent	$ 1,473	$ 1,201	$ 1,937	$ 1,430	$ 1,907	$ 1,311
Northampton[5]	$ 1,029	$ 839	$ 1,110	$ 819	$ 1,304	$ 897
Northumberland	$ 1,826	$ 1,489	$ 2,138	$ 1,578	$ 2,106	$ 1,448
Nottoway	$ 654	$ 533	$ 793	$ 585	$ 963	$ 662
Orange	$ 1,503	$ 1,226	$ 1,869	$ 1,379	$ 2,220	$ 1,527
Page	$ 883	$ 720	$ 1,014	$ 748	$ 1,051	$ 723
Patrick	$ 969	$ 790	$ 1,161	$ 857	$ 1,238	$ 851

(table continues)

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Table A-1 (Continued)

Year	1988		1990		1992	
Division*	PPE-L** Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]
Pittsylvania	$ 568	$ 463	$ 799	$ 590	$ 897	$ 617
Powhatan	$ 990	$ 808	$ 1,297	$ 957	$ 1,792	$ 1,232
Prince Edward	$ 1,057	$ 862	$ 939	$ 693	$ 1,070	$ 736
Prince George	$ 952	$ 777	$ 1,140	$ 841	$ 1,121	$ 771
Prince William	$ 2,163	$ 1,764	$ 2,683	$ 1,980	$ 3,068	$ 2,110
Pulaski	$ 854	$ 697	$ 1,245	$ 919	$ 1,317	$ 906
Rappahannock	$ 1,839	$ 1,500	$ 2,412	$ 1,780	$ 2,487	$ 1,710
Richmond	$ 1,067	$ 870	$ 1,327	$ 979	$ 1,443	$ 992
Roanoke	$ 2,174	$ 1,773	$ 2,462	$ 1,817	$ 2,573	$ 1,770
Rockbridge	$ 1,439	$ 1,174	$ 1,595	$ 1,177	$ 1,432	$ 985
Rockingham	$ 1,352	$ 1,103	$ 2,015	$ 1,487	$ 1,881	$ 1,294
Russell	$ 1,015	$ 828	$ 944	$ 697	$ 749	$ 515
Scott	$ 516	$ 421	$ 680	$ 502	$ 854	$ 587
Shenandoah	$ 1,673	$ 1,365	$ 2,068	$ 1,526	$ 2,072	$ 1,425
Smyth	$ 650	$ 530	$ 871	$ 643	$ 801	$ 551

(table continues)

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Table A-1 (Continued)

Year	1988		1990		1992	
Division*	PPE-L** Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]
Southampton	$ 1,280	$ 1,044	$ 1,485	$ 1,096	$ 1,387	$ 954
Spotsylvania	$ 932	$ 760	$ 1,624	$ 1,199	$ 1,725	$ 1,186
Stafford	$ 1,256	$ 1,024	$ 1,846	$ 1,362	$ 2,052	$ 1,411
Surry	$ 3,359	$ 2,740	$ 4,597	$ 3,393	$ 4,799	$ 3,301
Sussex	$ 1,343	$ 1,095	$ 1,616	$ 1,193	$ 1,661	$ 1,142
Tazewell	$ 793	$ 647	$ 961	$ 709	$ 945	$ 650
Warren	$ 1,170	$ 954	$ 1,552	$ 1,145	$ 1,576	$ 1,084
Washington	$ 728	$ 594	$ 1,027	$ 758	$ 1,152	$ 792
Westmoreland	$ 1,798	$ 1,467	$ 1,889	$ 1,394	$ 1,692	$ 1,164
Wise	$ 888	$ 724	$ 1,072	$ 791	$ 1,062	$ 730
Wythe	$ 900	$ 734	$ 952	$ 703	$ 958	$ 659
York	$ 882	$ 719	$ 1,206	$ 890	$ 1,173	$ 807
Cities						
Alexandria	$ 5,357	$ 4,369	$ 6,161	$ 4,547	$ 6,845	$ 4,708
Bristol	$ 1,451	$ 1,184	$ 2,087	$ 1,540	$ 2,022	$ 1,391

(table continues)

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Table A-1 (Continued)

Year	1988		1990		1992	
Division*	PPE-L** Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]
Buena Vista	$ 980	$ 799	$ 1,241	$ 916	$ 1,338	$ 920
Charlottesville	$ 3,830	$ 3,124	$ 5,629	$ 4,154	$ 4,946	$ 3,402
Chesapeake	$ 1,437	$ 1,172	$ 1,930	$ 1,424	$ 2,036	$ 1,400
Colonial Heights	$ 1,961	$ 1,600	$ 2,791	$ 2,060	$ 3,069	$ 2,111
Covington	$ 1,987	$ 1,621	$ 2,118	$ 1,563	$ 2,625	$ 1,805
Danville	$ 1,377	$ 1,123	$ 1,471	$ 1,086	$ 1,425	$ 980
Fairfax City	$ 4,145	$ 3,381	$ 5,420	$ 4,000	$ 5,704	$ 3,923
Falls Church	$ 5,494	$ 4,481	$ 6,770	$ 4,996	$ 7,789	$ 5,357
Franklin City	$ 1,121	$ 914	$ 1,418	$ 1,046	$ 1,356	$ 933
Fredericksburg	$ 2,686	$ 2,191	$ 3,290	$ 2,428	$ 3,747	$ 2,577
Galax	$ 1,488	$ 1,214	$ 1,461	$ 1,078	$ 1,710	$ 1,176
Hampton	$ 1,613	$ 1,316	$ 2,019	$ 1,490	$ 1,800	$ 1,238

(table continues)

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Table A-1 (Continued)

Year	1988		1990		1992	
Division*	PPE-L** Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]
Harrisonburg	$ 2,508	$ 2,046	$ 3,301	$ 2,436	$ 3,201	$ 2,202
Hopewell	$ 1,809	$ 1,476	$ 2,222	$ 1,640	$ 2,165	$ 1,489
Lexington	$ 1,326	$ 1,082	$ 1,582	$ 1,168	$ 1,429	$ 983
Lynchburg	$ 1,750	$ 1,427	$ 2,128	$ 1,570	$ 2,207	$ 1,518
Manassas	$ 2,439	$ 1,989	$ 3,164	$ 2,335	$ 3,563	$ 2,450
Manassas Park	$ 1,048	$ 955	$ 1,209	$ 892	$ 1,428	$ 982
Martinsville	$ 1,695	$ 1,383	$ 1,988	$ 1,467	$ 2,251	$ 1,548
Newport News	$ 1,659	$ 1,353	$ 1,923	$ 1,419	$ 1,849	$ 1,272
Norfolk	$ 1,958	$ 1,597	$ 2,263	$ 1,670	$ 2,014	$ 1,385
Norton	$ 1,167	$ 952	$ 2,051	$ 1,514	$ 1,139	$ 783
Petersburg	$ 1,446	$ 1,179	$ 1,562	$ 1,153	$ 1,500	$ 1,032
Poquoson	$ 937	$ 764	$ 1,254	$ 925	$ 1,418	$ 975
Portsmouth	$ 1,207	$ 985	$ 1,570	$ 1,159	$ 1,516	$ 1,043
Radford	$ 1,589	$ 1,296	$ 2,063	$ 1,523	$ 1,942	$ 1,336
Richmond City	$ 3,585	$ 2,924	$ 4,109	$ 3,032	$ 4,338	$ 2,983

(table continues)

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Table A-1 (Continued)

Year	1988		1990		1992	
Division*	PPE-L** Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]
Roanoke City	$ 1,801	$ 1,469	$ 2,503	$ 1,847	$ 2,586	$ 1,779
Salem	$ 1,997	$ 1,629	$ 2,430	$ 1,793	$ 2,504	$ 1,722
South Boston	$ 880	$ 718	$ 1,018	$ 751	$ 1,076	$ 740
Staunton	$ 1,491	$ 1,216	$ 1,799	$ 1,328	$ 1,921	$ 1,321
Suffolk	$ 1,361	$ 1,110	$ 1,623	$ 1,198	$ 1,442	$ 992
Virginia Beach	$ 1,058	$ 863	$ 1,447	$ 1,068	$ 1,596	$ 1,098
Waynesboro	$ 1,852	$ 1,511	$ 2,426	$ 1,790	$ 2,248	$ 1,546
Williamsburg[6]	$ 2,209	$ 1,802	$ 3,048	$ 2,249	$ 3,424	$ 2,355
Winchester	$ 2,481	$ 2,024	$ 3,662	$ 2,703	$ 4,410	$ 3,033

(table continues)

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Table A-1 (Continued)

Year	1988		1990		1992	
Division*	PPE-L** Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]
Towns						
Colonial Beach	$ 1,361	$ 1,110	$ 1,360	$ 1,004	$ 1,036	$ 713
West Point	$ 2,282	$ 1,861	$ 2,632	$ 1,942	$ 2,814	$ 1,935

*(**1**= Alleghany Highlands is the merger of Alleghany County and Clifton Forge City; **2**= Bedford County data include Bedford City.; **3**= Grayson County data include the Town of Fries. Effective with the 1987-88 school year, the Town of Fries discontinued operating as a separate school division and was merged with Grayson County.; **4**= Greensville County data include Emporia City.; **5**= Northampton County data include the Town of Cape Charles.; **6**= Williamsburg City data include James City County.)

(1**= PPE-L Actual for 1988, 1990, and 1992 is the actual per pupil expenditure from local funds.; **2**= PPE-L Constant for 1988, 1990, and 1992 is the per pupil expenditure from local funds held constant to 1983 dollars by dividing the actual dollars by 1.226 for 1988, by 1.355 for 1990, and by 1.454 for 1992.

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Table A-2

Total Per Pupil Expenditure Over the Study Period Held Constant to 1983 Dollars

Year	1988		1990		1992	
Division*	PPE-T** Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]
Counties						
Accomack	$ 3,629	$ 2,960	$ 4,525	$ 3,339	$ 4,781	$ 3,288
Albemarle	$ 4,582	$ 3,788	$ 5,238	$ 3,866	$ 5,244	$ 3,607
Alleghany[1]	$ 3,730	$ 3,042	$ 4,537	$ 3,348	$ 4,890	$ 3,363
Amelia	$ 3,289	$ 2,683	$ 3,879	$ 2,863	$ 4,062	$ 2,794
Amherst	$ 3,457	$ 2,820	$ 4,052	$ 2,990	$ 4,042	$ 2,780
Appomattox	$ 3,217	$ 2,624	$ 3,754	$ 2,770	$ 3,826	$ 2,631
Arlington	$ 6,987	$ 5,699	$ 8,371	$ 6,178	$ 8,592	$ 5,909
Augusta	$ 3,643	$ 2,971	$ 4,156	$ 3,067	$ 4,395	$ 3,023
Bath	$ 5,834	$ 4,759	$ 6,934	$ 5,117	$ 7,710	$ 5,303
Bedford[2]	$ 3,371	$ 2,750	$ 4,231	$ 3,123	$ 4,215	$ 2,899

(table continues)

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Table A-2 (Continued)

Year	1988		1990		1992	
Division*	PPE-T** Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]
Bland	$ 3,215	$ 2,622	$ 4,452	$ 3,286	$ 4,884	$ 3,359
Botetourt	$ 3,405	$ 2,777	$ 3,989	$ 2,944	$ 4,164	$ 2,864
Brunswick	$ 3,249	$ 2,650	$ 4,341	$ 3,204	$ 4,556	$ 3,133
Buchanan	$ 3,305	$ 2,696	$ 4,264	$ 3,147	$ 4,945	$ 3,401
Buckingham	$ 3,502	$ 2,856	$ 4,075	$ 3,007	$ 4,335	$ 2,981
Campbell	$ 3,293	$ 2,686	$ 3,889	$ 2,870	$ 3,978	$ 2,736
Caroline	$ 3,623	$ 2,955	$ 4,229	$ 3,121	$ 4,190	$ 2,882
Carroll	$ 3,569	$ 2,911	$ 4,129	$ 3,047	$ 4,537	$ 3,120
Charles City	$ 4,373	$ 3,567	$ 5,076	$ 3,746	$ 5,786	$ 3,979
Charlotte	$ 3,403	$ 2,776	$ 4,173	$ 3,080	$ 4,471	$ 3,075
Chesterfield	$ 3,601	$ 2,937	$ 4,193	$ 3,094	$ 4,144	$ 2,850
Clarke	$ 3,930	$ 3,206	$ 4,833	$ 3,567	$ 5,359	$ 3,687
Craig	$ 3,198	$ 3,234	$ 3,965	$ 2,926	$ 4,030	$ 2,772

(table continues)

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Table A-2 (Continued)

Year	1988		1990		1992	
Division*	PPE-T** Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]
Culpepper	$ 3,649	$ 2,976	$ 4,440	$ 3,277	$ 4,604	$ 3,166
Cumberland	$ 3,299	$ 2,691	$ 4,175	$ 3,081	$ 4,448	$ 3,059
Dickenson	$ 3,742	$ 3,052	$ 4,572	$ 3,374	$ 4,966	$ 3,415
Dinwiddie	$ 3,921	$ 3,198	$ 4,268	$ 3,150	$ 4,246	$ 2,920
Essex	$ 3,938	$ 3,212	$ 4,384	$ 3,235	$ 4,698	$ 3,231
Fairfax	$ 5,281	$ 4,308	$ 6,365	$ 4,697	$ 6,640	$ 4,567
Fauquier	$ 3,793	$ 3,093	$ 4,834	$ 3,568	$ 5,103	$ 3,510
Floyd	$ 3,322	$ 2,710	$ 4,062	$ 2,998	$ 4,362	$ 3,000
Fluvanna	$ 3,496	$ 2,852	$ 3,841	$ 2,835	$ 4,272	$ 2,938
Franklin	$ 3,187	$ 2,600	$ 3,890	$ 2,871	$ 4,139	$ 2,846
Frederick	$ 3,408	$ 2,780	$ 4,035	$ 2,978	$ 4,515	$ 3,105
Giles	$ 3,465	$ 2,826	$ 4,255	$ 3,140	$ 4,562	$ 3,138
Gloucester	$ 3,363	$ 2,743	$ 3,912	$ 2,887	$ 4,302	$ 2,959
Goochland	$ 4,001	$ 3,263	$ 4,805	$ 3,546	$ 5,151	$ 3,543
Grayson[3]	$ 3,260	$ 2,659	$ 4,278	$ 3,157	$ 4,378	$ 3,011

(table continues)

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Table A-2 (Continued)

Year	1988		1990		1992	
Division*	PPE-T** Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]
Greene	$ 3,564	$ 2,907	$ 4,341	$ 3,204	$ 4,858	$ 3,341
Greensville[4]	$ 3,683	$ 3,004	$ 4,353	$ 3,213	$ 4,578	$ 3,149
Halifax	$ 3,379	$ 2,756	$ 3,920	$ 2,893	$ 4,567	$ 3,141
Hanover	$ 3,504	$ 2,858	$ 4,109	$ 3,032	$ 4,326	$ 2,975
Henrico	$ 4,039	$ 3,294	$ 4,779	$ 3,527	$ 4,900	$ 3,370
Henry	$ 3,504	$ 2,858	$ 4,164	$ 3,073	$ 4,244	$ 2,919
Highland	$ 3,812	$ 3,109	$ 4,978	$ 3,674	$ 5,721	$ 3,935
Isle of Wight	$ 3,800	$ 3,100	$ 4,551	$ 3,359	$ 4,886	$ 3,360
King George	$ 3,624	$ 2,956	$ 4,790	$ 3,535	$ 4,969	$ 3,417
King and Queen	$ 3,922	$ 3,199	$ 4,360	$ 3,218	$ 5,124	$ 3,524
King William	$ 3,660	$ 2,985	$ 4,389	$ 3,239	$ 4,639	$ 3,191
Lancaster	$ 3,262	$ 2,661	$ 4,019	$ 2,966	$ 4,524	$ 3,111
Lee	$ 3,496	$ 2,852	$ 4,427	$ 3,267	$ 5,017	$ 3,450
Loudoun	$ 4,520	$ 3,687	$ 5,568	$ 4,109	$ 5,845	$ 4,020
Louisa	$ 3,482	$ 2,840	$ 4,262	$ 3,145	$ 4,364	$ 3,001

(table continues)

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Table A-2 (Continued)

Year	1988		1990		1992	
Division*	PPE-T** Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]
Lunenburg	$ 3,289	$ 2,682	$ 3,939	$ 2,907	$ 4,283	$ 2,946
Madison	$ 3,703	$ 3,020	$ 4,227	$ 3,120	$ 4,429	$ 3,046
Mathews	$ 3,526	$ 2,876	$ 4,141	$ 3,056	$ 4,322	$ 2,972
Mecklenburg	$ 3,199	$ 2,609	$ 3,823	$ 2,821	$ 4,045	$ 2,782
Middlesex	$ 3,602	$ 2,938	$ 4,344	$ 3,206	$ 4,661	$ 3,206
Montgomery	$ 3,738	$ 3,049	$ 4,479	$ 3,306	$ 4,694	$ 3,228
Nelson	$ 3,751	$ 3,060	$ 4,451	$ 3,285	$ 4,719	$ 3,246
New Kent	$ 3,626	$ 2,958	$ 4,453	$ 3,286	$ 4,569	$ 3,142
Northampton[5]	$ 3,547	$ 2,893	$ 4,317	$ 3,186	$ 4,617	$ 3,175
Northumberland	$ 3,643	$ 2,971	$ 4,319	$ 3,187	$ 4,272	$ 2,938
Nottoway	$ 3,347	$ 2,730	$ 3,944	$ 2,911	$ 4,411	$ 3,034
Orange	$ 3,692	$ 3,011	$ 4,327	$ 3,193	$ 4,758	$ 3,272
Page	$ 3,147	$ 2,567	$ 3,700	$ 2,731	$ 3,969	$ 2,730
Patrick	$ 3,383	$ 2,759	$ 3,963	$ 2,925	$ 4,354	$ 2,994
Pittsylvania	$ 3,107	$ 2,534	$ 4,014	$ 2,962	$ 3,995	$ 2,748
Powhatan	$ 3,221	$ 2,627	$ 3,838	$ 2,832	$ 4,431	$ 3,047

(table continues)

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Table A-2 (Continued)

Year	1988		1990		1992	
Division*	PPE-T** Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]
Prince Edward	$ 3,477	$ 2,836	$ 3,834	$ 2,830	$ 4,222	$ 2,904
Prince George	$ 3,901	$ 3,182	$ 4,455	$ 3,288	$ 4,514	$ 3,105
Prince William	$ 4,274	$ 3,486	$ 5,140	$ 3,793	$ 5,426	$ 3,732
Pulaski	$ 3,302	$ 2,693	$ 4,150	$ 3,063	$ 4,351	$ 2,992
Rappahannock	$ 3,685	$ 3,006	$ 4,648	$ 3,430	$ 4,701	$ 3,233
Richmond	$ 3,202	$ 2,612	$ 3,803	$ 2,807	$ 4,049	$ 2,785
Roanoke	$ 4,310	$ 3,515	$ 4,808	$ 3,548	$ 4,955	$ 3,408
Rockbridge	$ 3,713	$ 3,029	$ 4,286	$ 3,163	$ 4,351	$ 2,992
Rockingham	$ 3,562	$ 2,905	$ 4,622	$ 3,411	$ 4,591	$ 3,157
Russell	$ 3,456	$ 2,819	$ 3,883	$ 2,866	$ 3,984	$ 2,740
Scott	$ 3,206	$ 2,615	$ 4,048	$ 2,987	$ 4,580	$ 3,150
Shenandoah	$ 3,794	$ 3,095	$ 4,486	$ 3,311	$ 4,595	$ 3,160
Smyth	$ 3,165	$ 2,582	$ 3,835	$ 2,830	$ 3,974	$ 2,733
Southampton	$ 3,762	$ 3,069	$ 4,420	$ 3,262	$ 4,559	$ 3,135
Spotsylvania	$ 3,050	$ 2,488	$ 3,922	$ 2,894	$ 3,988	$ 2,743

(table continues)

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Table A-2 (Continued)

Year	1988		1990		1992	
Division*	PPE-T** Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]
Stafford	$ 3,543	$ 2,890	$ 4,334	$ 3,199	$ 4,556	$ 3,133
Surry	$ 3,359	$ 2,740	$ 4,597	$ 3,393	$ 4,799	$ 3,301
Sussex	$ 3,943	$ 3,216	$ 4,740	$ 3,498	$ 4,931	$ 3,391
Tazewell	$ 3,220	$ 2,626	$ 3,798	$ 2,803	$ 3,990	$ 2,744
Warren	$ 3,374	$ 2,752	$ 4,041	$ 2,982	$ 4,096	$ 2,817
Washington	$ 3,150	$ 2,569	$ 3,819	$ 2,818	$ 4,167	$ 2,866
Westmoreland	$ 4,102	$ 3,346	$ 4,652	$ 3,433	$ 4,614	$ 3,173
Wise	$ 3,462	$ 2,824	$ 4,141	$ 3,056	$ 4,392	$ 3,021
Wythe	$ 3,396	$ 2,770	$ 3,919	$ 2,892	$ 4,111	$ 2,827
York	$ 3,576	$ 2,917	$ 4,230	$ 3,122	$ 4,113	$ 2,829
Cities						
Alexandria	$ 7,117	$ 5,805	$ 8,160	$ 6,022	$ 8,525	$ 5,863
Bristol	$ 3,715	$ 3,030	$ 4,700	$ 3,469	$ 5,091	$ 3,501

(table continues)

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Table A-2 (Continued)

Year	1988		1990		1992	
Division*	PPE-T** Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]
Buena Vista	$ 3,369	$ 2,748	$ 4,166	$ 3,075	$ 4,727	$ 3,251
Charlottesville	$ 5,754	$ 4,693	$ 7,951	$ 5,868	$ 7,245	$ 4,983
Chesapeake	$ 3,687	$ 3,007	$ 4,426	$ 3,266	$ 4,589	$ 3,156
Colonial Heights	$ 4,071	$ 3,321	$ 5,207	$ 3,843	$ 5,584	$ 3,840
Covington	$ 4,184	$ 3,413	$ 4,868	$ 3,593	$ 5,729	$ 3,940
Danville	$ 3,661	$ 2,986	$ 4,087	$ 3,016	$ 4,303	$ 2,959
Fairfax City	$ 5,005	$ 4,082	$ 6,869	$ 5,069	$ 6,863	$ 4,720
Falls Church	$ 6,914	$ 5,639	$ 8,368	$ 6,176	$ 9,139	$ 6,285
Franklin City	$ 3,537	$ 2,885	$ 4,184	$ 3,088	$ 4,364	$ 3,001
Fredericksburg	$ 4,438	$ 3,620	$ 5,385	$ 3,974	$ 5,697	$ 3,918
Galax	$ 3,374	$ 2,752	$ 3,846	$ 2,838	$ 4,474	$ 3,077
Hampton	$ 3,896	$ 3,178	$ 4,620	$ 3,410	$ 4,498	$ 3,094
Harrisonburg	$ 4,174	$ 3,405	$ 5,198	$ 3,836	$ 4,999	$ 3,438
Hopewell	$ 4,157	$ 3,391	$ 4,937	$ 3,644	$ 5,189	$ 3,569
Lexington	$ 3,122	$ 2,546	$ 3,996	$ 2,949	$ 4,061	$ 2,793

(table continues)

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Table A-2 (Continued)

Year	1988		1990		1992	
Division*	PPE-T** Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]
Lynchburg	$ 3,913	$ 3,192	$ 4,548	$ 3,356	$ 4,838	$ 3,327
Manassas	$ 4,138	$ 3,375	$ 5,007	$ 3,695	$ 5,296	$ 3,642
Manassas Park	$ 3,455	$ 2,818	$ 4,529	$ 3,342	$ 4,834	$ 3,325
Martinsville	$ 3,957	$ 3,228	$ 4,518	$ 3,334	$ 4,989	$ 3,431
Newport News	$ 4,004	$ 3,266	$ 4,644	$ 3,427	$ 4,702	$ 3,234
Norfolk	$ 4,542	$ 3,705	$ 5,226	$ 3,857	$ 5,164	$ 3,552
Norton	$ 3,473	$ 2,833	$ 4,838	$ 3,570	$ 4,247	$ 2,921
Petersburg	$ 3,788	$ 3,090	$ 4,608	$ 3,401	$ 4,789	$ 3,294
Poquoson	$ 3,135	$ 2,557	$ 3,711	$ 2,739	$ 3,941	$ 2,710
Portsmouth	$ 3,802	$ 3,101	$ 4,578	$ 3.379	$ 4,712	$ 3,241
Radford	$ 3,757	$ 3,064	$ 4,656	$ 3,436	$ 4,751	$ 3,268
Richmond City	$ 5,675	$ 4,629	$ 6,649	$ 4,907	$ 7,028	$ 4,834
Roanoke City	$ 4,189	$ 3,417	$ 5,268	$ 3,888	$ 5,499	$ 3,782

(table continues)

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Table A-2 (Continued)

Year	1988		1990		1992	
Division*	PPE-T** Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]	PPE-T Actual[1]	PPE-T Constant[2]
Salem	$ 4,004	$ 3,266	$ 4,664	$ 3,442	$ 4,761	$ 3,274
South Boston	$ 3,061	$ 2,497	$ 3,797	$ 2,802	$ 3,819	$ 2,627
Staunton	$ 3,520	$ 2,871	$ 3,797	$ 3,053	$ 4,372	$ 3,007
Suffolk	$ 3,796	$ 3,096	$ 4,421	$ 3,263	$ 4,365	$ 3,002
Virginia Beach	$ 3,189	$ 2,601	$ 3,868	$ 2,855	$ 3,942	$ 2,711
Waynesboro	$ 3,847	$ 3,138	$ 4,526	$ 3,340	$ 4,439	$ 3,053
Williamsburg[6]	$ 4,011	$ 3,272	$ 4,932	$ 3,640	$ 5,229	$ 3,596
Winchester	$ 4,476	$ 3,651	$ 5,916	$ 4,366	$ 6,650	$ 4,574

(table continues)

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Table A-2 (Continued)

Year	1988		1990		1992	
Division*	PPE-L** Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]	PPE-L Actual[1]	PPE-L Constant[2]
Towns						
Colonial Beach	$ 3,371	$ 2,750	$ 3,909	$ 2,885	$ 3,881	$ 2,669
West Point	$ 4,480	$ 3,654	$ 5,350	$ 3,948	$ 5,561	$ 3,825

*(**1**= Alleghany Highlands is the merger of Alleghany County and Clifton Forge City; **2**= Bedford County data include Bedford City.; **3**= Grayson County data include the Town of Fries. Effective with the 1987-88 school year, the Town of Fries discontinued operating as a separate school division and was merged with Grayson County.; **4**= Greensville County data include Emporia City.; **5**= Northampton County data include the Town of Cape Charles.; **6**= Williamsburg City data include James City County.) **(**1**= PPE-T Actual for 1988, 1990, and 1992 is the actual total per pupil expenditure.; **2**= PPE-T Constant for 1988, 1990, and 1992 is the total per pupil expenditure held constant to 1983 dollars by dividing the actual dollars by 1.226 for 1988, by 1.355 for 1990, and by 1.454 for 1992.

VITA

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1986-88 Supervisor of Special Education
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