APPLYING THE MODIFIED QUADRIFORM TO MEASURE EFFICIENCY IN TEXAS PUBLIC SCHOOLS

A Dissertation

by

CHAD AARON STEVENS

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

December 2006

Major Subject: Educational Administration

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Approved by:

Chair of Committee,	John R. Hoyle
Committee Members,	Virginia S. Collier
	Robert O. Slater
	Ben D. Welch
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ABSTRACT

Applying the Modified Quadriform to Measure Efficiency in

Texas Public Schools. (December 2006)

Chad Aaron Stevens, B.S., Tarleton State University;

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Chair of Advisory Committee: Dr. John R. Hoyle

The purpose of this study was to identify school districts in the state of Texas that would be considered efficient based on the modified quadriform model, and to identify alterable school characteristics most associated with those efficient schools. The researcher used data from the 2003-2004 Texas Academic Excellence Indicator System in this analysis. Texas school districts that had low expenditures with high student output were classified as efficient.

There were two stages to the modified quadriform analysis. In stage one the relationship between input and output was evaluated by two separate linear regressions. The input regression modeled total per pupil expenditure for the district regressed against unalterable school characteristics such as total district enrollment, percentage of economically disadvantaged students, percentage of special education students, percentage of minority students, and local tax base value per pupil. In the output regression six different measures of student outcomes were regressed against the same unalterable characteristics. The measures of student achievement used were the percentage of all students passing the math and reading Texas Assessments of

Knowledge and Skills, graduation completion rate, percentage of students taking the Scholastic Aptitude Test and the ACT Test, and the mean scores on the Scholastic Aptitude Test and/or ACT Test. Once the efficient school districts were identified using the positive and negative residuals from the regressions, a discriminant analysis was conducted to determine what alterable characteristics had the most significant relationship with the different student outcome measures.

Just over 32% of Texas School Districts would be considered efficient in this model, and the number of students per teacher has a significant relationship with the output measures of mean SAT and ACT scores, district completion rate, and Texas Assessment of Knowledge and Skills scores in both math and reading. The data also showed that the percentage of expenditures at central administration was least associated with mean Scholastic Aptitude Test and ACT scores along with district completion rate. This study was intended to be a descriptive "bird's eye" view of efficiency in the Texas system, the researcher believes that this initial study will be a catalyst for more focused research using this production function method of measuring efficiency, and that one day it may lead to an operational definition of efficiency in the Texas system.

DEDICATION

To my wife, Sarah

and sons Caleb and Carson.

We did it, Gig ‘em.

ACKNOWLEDGEMENTS

I have been blessed by many great mentors in my life that have led me down a path knowing that I could accomplish my goals with hard work, the right attitude and determination. In many ways with all the late nights studying, the 45,000 plus miles on the road to classes and the nights spent away from home this study is a testament to all of those people that have molded me from diapers to doctorate. I am eternally grateful to each of you.

Dr. John Hoyle, thanks for always being there to talk Aggie baseball or dissertation. You made a nervous young Ph.D. student believe that this goal was attainable from the instant I met you almost six years ago. Thanks for being a compassionate and caring role model for me in this field of educational administration. The lessons that you have taught me in the time we have spent together will always be cherished.

To my committee members: Dr. Virginia Collier, Dr. Robert Slater and Dr. Ben Welch, thanks for being there when I needed you as I navigated my way through this long distance maze called my doctorate. Also, thanks to two other invaluable members of the Educational Administration department, Joyce Nelson and Bill Ashworth for always making sure the t's were crossed and the i's were dotted in everything I did.

I would also like to recognize the administration of Clear Creek Independent School District. Former Superintendent Dr. John Wilson helped to get me started in the

program and current Superintendent Dr. Sandra Mossman served as my mentor during internship. I would also like to thank Holly Hughes, Assistant Superintendent for Elementary Education, for her support during the final years of this journey. In addition, the staffs of Armand Bayou, Clear Lake City, Silvercrest in Pearland and especially Falcon Pass Elementary that have been such a support throughout this process. Obtaining a goal like this cannot be accomplished without a supportive work environment that covets life-long learners.

To Jim and Prella Phillips for being the most supportive in-laws I could ask for. Both of you have always supported me like I was your son for the past sixteen years of my life. Sarah, Caleb and I greatly appreciate all of your support during our life together and during this doctorate degree. To all of my extended family Jamieson, Laura, Maisie, Mallorie, Rebecca, Jed, Jed Jr., Victoria and Jonathan, thanks for taking care of Sarah and Caleb so many times while I was away. Knowing that Sarah and Caleb were spending time with family always made me feel better when I was on the road.

To Mom and Dad, when you dropped me off at Texas A&M in 1991 I bet you never dreamed this path that I have taken. Thanks for always being by my side in whatever dream I was shooting for. You both instilled in me a never quit attitude that has permeated my life. In many ways I would have never finished this degree without the many lessons I learned from each of you in my youth and adulthood. I love you both very much, more than you know. To my brother, Dr. Tobey Stevens, M.D., I know during your residency and the end of my doctorate it was hard to make time to spend together, but I am so blessed that you are practicing near our family. I have always

admired the way you focused during your program, and it helped me to finish mine thinking about your determination. Thanks for being an example for me.

When I began this degree I did not have any children. As I end it I have Caleb and Carson on the way. Caleb, I know you are just a little guy, and probably didn't notice how much I was gone, on the computer or in the study, but know that Dad sure did realize every second I was away from you. I am looking forward to many fishing adventures, hunting trips and baseball games in our future.

Finally, to the best thing that ever happened to me, Sarah, this degree is as much yours as it is mine. I did not earn this alone, we earned it together. I can never repay you for the sacrifices that you have made for me to earn this degree, and realize this dream. Not one of the sacrifices went unnoticed or unappreciated. You always kept me focused on my goals and my mind in perspective. Thanks for being my driver so I could sleep or study on the way to College Station, and my chief editor. Also, thanks for being a great Mom. I never worry about Caleb when I am on the road. You are a blessing to him and me. It is now over, and you can get that Aggie ring picture you always wanted!

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CHAPTER I

INTRODUCTION

In 1787, Thomas Jefferson stated, "Above all things I hope the education of the common people will be attended to, convinced that on their good sense we may rely with the most security for the preservation of a due degree of liberty" (Kramer, 2002). School finance was as much in the spotlight in the 18th century as it is today in the 21st century. A decade ago, the United States spent $292 billion on elementary and secondary education, just $2 billion less than they spent on defense (Kramer, 2002). Four years ago $70 billion was spent on Kindergarten through 12th grade public education, and only $29.3 billion of that was funded by the state, while $40.4 billion was funded by local property taxes (Charles A. Dana Center, 2003).

In 1876, the framers of the Texas Constitution adopted a flat grant system of education. However, as time passed, the state's role in financing education decreased, and in later years the constitution was amended to allow local taxes levied by the school board to supplement the flat grant system. This flat grant system in combination with the local taxes began to cause large disparity in funding between wealthy and poor districts, so in 1949 Texas adopted a foundation program. A foundation program is a state equalization program that guarantees a certain foundation level of expenditures for each student (Odden & Picus, 1992). In the 1960's Texas added a state matching program to encourage particular programs, such as special education.

The style and format for this dissertation will follow that of *The Journal of Educational Research.*

The matching program became problematic and even compounded the disparity, because wealthy districts in terms of property tax could still take advantage of the system by receiving more matching funds, furthering the gap between wealthy and poor (Carrollton-Farmers Branch Independent School District vs. Edgewood Independent School District, 1992). In 1971 the Texas legislature faced pressure to address the funding inequalities of the state. At that point, they introduced a Guaranteed Tax Base (GTB) program that served as a second tier to the foundation program. This was another attempt to equalize the wealth potential of each district. The Texas legislature tweaked the system again in 1977, 1979, 1984, and 1989 (Carrollton-Farmers Branch Independent School District vs. Edgewood Independent School District, 1992). The program remained in place until Edgewood Independent School District vs. Kirby, et al. required the legislature to make additional changes.

Now, Texas is a growing state that has 1037 school districts and approximately 4.4 million students. It was predicted that between 1996 and 2008 Texas would face a fourteen percent growth rate (Kramer, 2002). The incredible growth predominantly is due to immigration from Mexico and other states. Before the Edgewood vs. Kirby, et al. suit, the inequalities in the state funding were vast. The taxable property value in some districts was as low as $20,000 per student to as high as $14 million per student in other districts, and the range in per pupil spending was from $2,112 to $19,333 (Clark, 1995). The cornerstone argument for the case against the state was stated in the Texas constitution, Article VII, section 1. Article VII gives the legislature the duty “to establish and make suitable provision for the support and maintenance of an efficient

system of public free schools" (Carrollton-Farmers Branch Independent School District vs. Edgewood Independent School District, 1992). The Texas Supreme Court ruled that the existing system of education in place was ineffective, and stated, "Children who live in poor districts and children who live in rich districts must be afforded a substantially equal opportunity to have access to educational funds" (Edgewood Independent School District vs. Kirby, et al., 1989). A year later in 1990, the Foundation-GTB program was again restructured. In 1991, the state was challenged again and lost, with the courts ruling that the legislature had failed to restructure the finance system adequately.

The issues above, the fact that Texas law does not allow the state to take back excess revenue from districts, the still large discrepancies in top property values in the state, and the $1.50 cap for property tax led to the 1993 passing of Senate Bill 7, known as "Robin Hood" (Kramer, 2002). The bill mandated that rich districts share with poorer districts. Robin Hood functions as a way to cap the amount of wealth a district can tax, and the state has limited the amount of property tax that can be applied. However, it is not a full state-funding program, and it does not help to guarantee that funds are distributed equitably to school districts. The Center on Public Policy Priorities reported that in 1996 and 1997 the range of spending in Texas schools was from $4000 to $10,000 per student (1998). Under Robin Hood, districts with a taxable base above $305,000 per weighted students have a choice of five methods to lower their ratio of wealth per student. The district's choices are to consolidate with another district, detach property from the district, purchase attendance credits, contract to educate students outside the district, or consolidate only their tax base with another district.

The system of school finance in Texas has many inherent problems, in addition to the issues discussed thus far. The funding of schools has not been able to keep pace with inflation. The annual average operating fund increase for the last ten years was $1,127,521, and the average annual increase in state funding was $339,706, which led to increased local funding that increased property taxes over time. Districts all over the state are reaching the $1.50 cap, which was set by the legislature. In 2003, almost eighty percent of districts were within $0.10 of the cap. Coupling these financial issues with annual pay increases, increased cost of health insurance, a teacher shortage, energy costs, and the rising cost of maintaining high academic standards, many people believe that school finance in Texas is in crisis, and that the crisis is affecting students. Districts are dipping into reserved funds to get by, cutting budgets, delaying improvement projects, and reducing staff, services and programs. Until the Texas legislature comes up with a solution to these problems in the system, leaders must focus on cost-effectiveness and efficiency. Regardless of the effect additional funds might have, it is important that existing resources be used as efficiently as possible (Miles, 1995).

The relationship between school achievement and school district spending is known as educational production function research. Regression analysis can be used to relate spending and resources to student achievement while controlling for student demographics (Wenglinsky, 1998). This type of research has led to the development of systematic techniques which can determine efficiency. Modified quadriform analyses provide for an operational definition of efficiency that can be used to measure the complex relationship between resources and student achievement (Anderson, 1996).

Statement of the Problem

As the Texas school finance system goes through reform, the legislature is again facing the questions of inequities in schools. During the same time, the public is becoming more concerned with the quality of schools. As the money provided by the state is reduced and schools become increasingly locally funded the local taxpayers are becoming more concerned with the effective use of funds. The combination of wanting quality schools and demanding effective use of funds points to a need in the area of understanding efficiency in education (Anderson, 1996).

Purpose of the Study

The primary purpose of this study will be to identify school districts in Texas that are using resources efficiently based on the modified quadriform model, and to identify what characteristics these efficient district's have that are alterable so that school leader's can know what expenditures make the largest impact on student output.

Research Questions

The following specific research questions were addressed.

1. What school districts in Texas would be considered efficient using the modified quadriform model?
2. What alterable characteristic(s) of school districts has the biggest impact on school efficiency?

3. What alterable characteristic(s) of school districts has the least impact on school efficiency?

Operational Definitions

For the purpose of this study, the following definitions apply:

Alterable school characteristics: school variables that are more open to change such as teacher to student ratios, teacher salaries, and the amount of funding allotted for various programs (Anderson, 1996).

Economically disadvantaged: students eligible for free or reduced lunch prices or other public assistance (TEA, 2003).

Educational efficiency: the optimal use of educational resources which results in student achievement (Anderson, 1996).

Modified quadriform: The modified quadriform captures the input-output relationship of variables in two separate linear regressions in order to determine efficient and inefficient school districts. The model then uses discriminant analysis to distinguish what alterable school characteristics differ between the efficient and inefficient school districts (Anderson, 1996).

Production function research: identifying patterns and relationships of input and outputs (Anderson, 1996).

Resources: any element of school districts relating to funding: per pupil expenditures, local tax base value per pupil, percentages of expenditures per population, teacher average salaries, teacher years of experience, and student to teacher ratios.

Student achievement: student scores on state criterion referenced test (e.g., the Texas Assessment of Knowledge and Skills) in English, graduation completion rate, percentage of students taking the Scholastic Aptitude Test, and the mean scores on the Scholastic Aptitude Test.

Unalterable school characteristics: demographics of students and school districts that school officials have little control over such as total district enrollment, percentage of economically disadvantaged students, percentage of special education students, percentage of minority students, and local tax base value per pupil (Anderson, 1996).

Assumptions and Limitations

1. When using socioeconomic status as a factor in one of the unalterable characteristics, it is assumed that all parent applications for this federal program were turned in and done correctly.
2. The data that will be taken from the Academic Excellence Indicator System reports may not always be accurate.
3. This study will be a single year evaluation; a longitudinal study would allow the researcher to determine variation in the independent and dependent variables.
4. By using the Texas Assessment of Knowledge and Skills, test bias can factor into the research. However, this measure has only been in place for four years, and there is limited research to support this specific test.

Significance of the Study

With the education of our children increasingly being funded locally in Texas, educators must look closely at how efficiently the taxpayer's money is being used. The school districts differ from the classic business model of input / output ratio. The school district's product is for students to achieve, become good citizens, and contribute to our society. None of these things are easily measurable, but the modified quadriform developed by Anderson (1996) helps us to get a better understanding of what truly makes for efficient use of our funds.

The study will help to explore in Texas what alterable characteristics impacts student achievement. In other words, what do we have control over that can make our educational system better? Production function research has just begun to scratch the surface in Texas, and this study will be a foundation for other researchers to build upon. The model can be applied in a variety of settings and ultimately it will help us all understand what efficiency looks like in schools.

What gets measured gets done, and currently there is no definitive measure for efficiency in Texas schools. Once we have a measure of efficiency, school districts that are not using funds appropriately can be given help in order to make improvements. To this date, without using regression to eliminate the affects of unalterable school characteristics, this was not possible. This study will allow educators to increase their base of knowledge in this arena.

Organization of the Remainder of the Study

Chapter II is a review of the literature that is related to this study. Chapter III outlines the procedures and methodology employed in the study. Chapter IV contains the description of the results of the study. Finally, Chapter V contains the summary, conclusions, implication for public policy, and recommendations for further research that arose from the study.

CHAPTER II

REVIEW OF RELATED LITERATURE

In 1787, Thomas Jefferson stated, "Above all things I hope the education of the common people will be attended to, convinced that on their good sense we may rely with the most security for the preservation of a due degree of liberty" (Kramer, 2002). School finance was as much in the spotlight in the 18th century as it is today in the 21st century. A decade ago, the United States spent $292 billion on elementary and secondary education, just $2 billion less than they spent on defense (Kramer, 2002). Four years ago $70 billion was spent on Kindergarten through 12th grade public education, and only $29.3 billion of that was funded by the state, while $40.4 billion was funded by local property taxes (Charles A. Dana Center, 2003).

History of Texas School Finance

In 1876, the framers of the Texas Constitution adopted a flat grant system of education. However, as time passed, the state's role in financing education decreased, and in later years the constitution was amended to allow local taxes levied by the school board to supplement the flat grant system. This flat grant system in combination with the local taxes began to cause large disparity in funding between wealthy and poor districts, so in 1949 Texas adopted a foundation program. A foundation program is a state equalization program that guarantees a certain foundation level of expenditures for each student (Odden & Picus, 1992). In the 1960's Texas added a state matching program to encourage particular programs, such as special education. Educational

finance reform in Texas continued to evolve in the 1970's with the Rodriguez case, and then the Edgewood litigation that began in 1987 and ended in 1995.

When Texas became a state in 1876 the Constitution established an Available School Fund that was subsidized by the Permanent School Fund. The money that flowed into the Permanent School Fund was generated from one-fourth of the general state revenue, and a one dollar poll tax on male voters from age twenty-one to age sixty. Earnings from the Available School Fund were distributed to schools annually based on per-capita. In 1876 there were no provisions for local property taxes. However, the legislature gave taxing authority to some towns giving urban schools an advantage over some rural schools (Thomas & Walker, 1982). Thus began a disparity in educational funding that is still in the forefront of reform over one hundred and twenty five years later.

There was little change in Texas school finance through 1915. The income provided by the Available School Fund was the exclusive source of funds for local schools. This flat grant system began in 1876 by allocating $3.59 per pupil, and by 1884 rose to $480 per average daily attendance. This put quite a strain on the school finance system in Texas and in 1883 voters passed an amendment approving a state property tax of $.20 per $100 valuation to be added to the Available School Fund. This amendment also added a $.20 per $100 valuation local property tax that could be approved by a two-thirds vote of property owners in the district (Casey, 2001). This $.20 local tax was only available to common school districts, those run by counties. The urban municipal school

districts could continue collecting up to $.50 per $100 valuation. This continued the disparity between urban and rural school districts that began to exist in 1876.

In 1901, the Permanent School Fund was made available to independent school districts in order to invest in building bonds. This resulted in many school districts that were run by counties converting to independent school districts in order to take advantage of this funding source. In just three years over 90% of the three hundred eighty one school districts in Texas were imposing taxes while over seven thousand districts run by counties were not (Thomas & Walker, 1982). In 1915, the Texas legislature attempted to address this issue by trying a guaranteed yield. They appropriated $1 million in rural school aid for the biennium. To qualify for this aid the district would have to assess at least $.50 per $100 valuation. As a reward for assessing the valuation they received this aid from the state. In 1920, the constitutional limits on local tax rate were eliminated creating an even wider gap in funding between rural and urban districts (Casey, 2001).

Through the 1920's, 1930's and 1940's little changed in Texas with regards to school finance except some legislation that increased district taxing potential which led to even greater disparities. By, 1947 World War II had ended and school enrollment began to swell in Texas. School districts were only receiving an allotment of about $100 per student, and the quality of education was suffering. However, the communities with greater taxing abilities were offering a comprehensive education with little tax effort (Thomas and Walker, 1982). As the 50th Texas Legislature met in 1947 school finance reform was again in the forefront.

In 1947 a debate over teacher salaries evolved into a clash over the entire system of school finance in Texas. A group known as the Gilmer-Aiken committee was established in order to overhaul the education finance system. In 1948 the committee presented their proposal which included a minimum foundation program, which allocated funds for operations and personnel. It also called for the state to assume 80% of the costs for education with a 20% fund assignment for local districts. The local districts were still available to enrich their programs through levying more taxes, but it had to be approved by the local tax payers (Casey, 2001). The Minimum Foundation Program was designed to give each student a minimum educational opportunity supplemented by state aid sufficient to compensate for the variations in local taxpaying ability (Thomas & Walker, 1982). It is also important to note that at this time the legislature eliminated all non-operating school districts, cutting the number of school districts in Texas in half (Thomas & Walker, 1982).

This legislation immediately helped districts out of financial trouble. State aide per Average Daily Attendance raised $73 per student under the new plan. Although this new plan did relieve some of the financial pressures on school districts it was not perfect. The system still allowed numerous small low tax rate districts to exist. It also used the county education index as a measure of district wealth. This index had flaws in the formula because of poor statistical data, inaccurate credits for lands affected some districts' assignments and the index was based on income while the wealth was based on property values. Lastly, the Minimum Foundation Program was based on legislature appropriations rather than an accurate figure of what it would take to provide a quality

education (Thomas & Walker, 1982). Due to a continued reliance on property taxes the discrepancies continued to grow between school districts with wealthy or poor property taxes.

In 1965 the Governor's Committee on Public Education did extensive research on public education, and they published there findings in 1968. Unfortunately, provisions that would have brought more equity to the finance system were ignored. In 1971, the federal district court ruled that the Texas school funding system was unconstitutional in Rodriguez v. San Antonio (1971). Although this decision was later overturned in 1973 by the United Sates Supreme Court it pressured the Texas legislature to address the funding inequalities of the state and they began to adjust the system in 1975. House Bill 1126 introduced a Guaranteed Tax Base program that served as a second tier to the foundation program. This was another attempt to equalize the wealth potential of each district by increasing state funding allocations, creating weighed personnel units for staffing formulas and reforming the calculation of the local shares from the Foundation School Program from an economic index to an estimated actual market value.

The Texas legislature tweaked the system again in 1977 and 1979 (Carrollton-Farmers Branch Independent School District vs. Edgewood Independent School District, 1992). However in 1983 the legislature was faced with a poor economic outlook and began to look once more on the educational system of Texas. A committee was once again formed by the governor to examine every aspect of the education system. This examination led to the development and passing of House Bill 72 which had a number of

changes to the school finance system. House Bill 72 changed from personnel units to weighted pupil units for the distribution of funds, it established a price index and it broadened adjustments for small districts with little population. In addition the bill called for the use of full-time equivalents in special education and vocational programs, expanded compensatory and bilingual education allotments and instituted teacher career ladders (Casey, 2001).

The program remained in place until Edgewood Independent School District v. Bynam which later became Edgewood Independent School District v. Kirby, et al. required the legislature to make additional changes in 1984 (Sparkman & Carpenter, 1994). In the early part of 1987 the first Edgewood case went to trial. The plaintiff's argument was that the Texas school funding system violated two provisions of the Texas Constitution. Before the Edgewood vs. Kirby, et al. suit, the inequalities in the state funding were vast. The taxable property value in some districts was as low as $20,000 per student to as high as $14 million per student in other districts, and the range in per pupil spending was from $2,112 to $19,333 (Clark, 1995). The cornerstone argument for the case against the state was stated in the Texas constitution, Article VII, section 1. Article VII gives the legislature the duty "to establish and make suitable provision for the support and maintenance of an efficient system of public free schools" (Carrollton-Farmers Branch Independent School District vs. Edgewood Independent School District, 1992). The Texas Supreme Court ruled that the existing system of education in place was ineffective, and stated, "Children who live in poor districts and children who live in rich districts must be afforded a substantially equal opportunity to have access to

educational funds" (Edgewood Independent School District vs. Kirby, et al., 1989). A year later in 1990, the Foundation-GTB program was again restructured. The new plan described a full guaranteed yield program with a drastic redistribution of state aid. The plan was called Robin Hood and the disapproval of the plan prompted the legislature to enact Senate Bill 1 in only four days (Farr & Trachtenberg, 1999).

In 1991, the state was challenged again and lost, with the courts ruling that the legislature had failed to restructure the finance system adequately. After this court defeat, the legislature attempted to make county education districts by consolidating school districts together to help with parity, but this notion was denied in the courts after being found in disagreement with the Texas Constitution.

After the three Edgewood court cases the legislature came up with a plan that was acceptable to the courts, however there are still many obstacles facing the current system, including the foundation program itself, an aging population with less children and Senate Bill 7 which was crafted and passed in May of 1993 (Kramer, 2002). Senate Bill 7 differed from previous legislation by authorizing the recapturing of local tax revenue above a specified per-pupil wealth level. Like Senate Bill 1, Senate Bill 7 came to be known as Robin Hood. Districts that have more than $280,000 of taxable wealth per pupil have a choice of five methods to lower their ratio of wealth per student. The district's choices are to consolidate with another district, detach property from the district, purchase attendance credits, contract to educate students outside the district, or consolidate only their tax base with another district. In addition to the wealth equalization component of this bill there were several changes to the school finance

system made due to Senate Bill 7. Of course, in 1993 Senate Bill 7 was challenged but it was found to be constitutional. This would be the fourth Edgewood case evolving from the original lawsuits. The system was last tweaked when Senate Bill 1 called for some modifications to the finance system.

In 2001, a group of property rich school districts formed an advocacy group for school districts that are forced to give money back that have no additional means to support their district through taxes (Ratcliffe, 2001). The group argued that by capping the tax rates at $1.50 and having to send money back to the state for poorer school districts was unconstitutional. The judge ruled that because only 19% of districts were at the cap, that the districts chose to assess the maximum, and that the districts were still maintaining an adequate education and the case was dismissed (West Orange-Cove Consolidated Independent School District v. Nelson, 2001). This decision was appealed to the 3rd court of appeals in 2002, but it was upheld. However, in May of 2003 the Texas Supreme Court ruled 8-1 that districts should be allowed to prove their claims.

Now, Texas is a growing state that has 1037 school districts and approximately 4.4 million students. It was predicted that between 1996 and 2008 Texas would face a fourteen percent growth rate (Kramer, 2002). The incredible growth predominantly is due to immigration from Mexico and other states. The system of school finance in Texas to this day still has many inherent problems, in addition to the issues discussed thus far. The funding of schools has not been able to keep pace with inflation. The annual average operating fund increase for the last ten years was $1,127,521, and the average annual increase in state funding was $339,706, which led to increased local

funding that increases property taxes over time (See Table 1). Districts all over the state are reaching the $1.50 cap, which was set by the legislature. In 2003, almost eighty percent of districts were within $0.10 of the cap. Coupling these financial issues with annual pay increases, increased cost of health insurance, a teacher shortage, energy costs, and the rising cost of maintaining high academic standards, many people believe that school finance in Texas is in crisis, and that the crisis is affecting students. Districts are dipping into reserved funds to get by, cutting budgets, delaying improvement projects, and reducing staff, services and programs. Until the Texas legislature comes up with a solution to these problems in the system, leaders must focus on cost-effectiveness and efficiency. Regardless of the effect additional funds might have, it is important that existing resources be used as efficiently as possible (Miles, 1995).

Table 1. State and Local Revenue for Public Schools (in millions)

Fiscal Year	Local Revenue	State Aide	Total State and Local	Percentage State Share
1993	$8,147.0	$6,958.3	$15,115.3	46.1
1994	$8,516.0	$7,032.3	$15,548.3	45.2
1995	$8,743.3	$7,283.4	$16,025.7	45.4
1996	$9,328.1	$8,325.9	$17,654.0	47.1
1997	$9,893.3	$8,286.6	$18,197.9	45.6
1998	$10,306.1	$9,161.0	$19,467.1	47.2
1999	$11.368.2	$9,304.0	$20,672.2	45.6
2000	$11,717.4	$10,391.4	$22,108.8	47.0
2001	$13,336.6	$10,247.6	$23,584.4	43.5
2002	$14,430.0	$9,720.3	$24,150.3	40.2
2003	$15,777.4	$10,381,6	$26,159.0	39.7
2004	$16, 631.4	$9,774.0	$26,405.4	37.0
2005	$17,548.7	$10,454.0	$28,002.7	37.3
2006	$18,674.9	$10,676.0	$29,350.9	36.4
2007	$19,576.5	$10,280.0	29,856.5	34.4

West Orange-Cove Revisited

In August of 2004 the West Orange-Cove case was called back to trial in district court. District Judge John Dietz ruled that the Texas school finance system was unconstitutional in that it violates Article VIII, section 1-e of the Texas Constitution because the $1.50 cap on M&O tax rates has become both a floor and a ceiling, denying school districts discretion in setting their tax rates. The courts also ruled that the school finance system did not meet the adequacy clause in Article VII, section 1 of the Texas Constitution. Finally, the court ruled the entire finance system for schools in Texas to be inefficient, inadequate and unsuitable violating Article VII, section 1 of the Texas Constitution yet again.

In July of 2005 the Texas Supreme Court began to hear arguments in the case. The courts were to again to decide the fate of the Texas school finance system with three separate groups of districts raising three separate challenges. The plaintiffs were 47 school districts led by West-Orange Cove Consolidated School District who contend that property taxes, though imposed locally, have become in effect a state property tax prohibited by Article VIII, section 1-e of the Texas Constitution. Edgewood Independent School District and Alvarado Independent School District contended that funding for school operations and facilities were inefficient in violation of Article VII, section 1 of the Texas Constitution. All three groups also contended that the public school system cannot achieve “a general diffusion of knowledge” as required by article VII, section 1 of the Texas Constitution, because the system is under funded.

In this case the Texas Supreme Court ruled that local property taxes for school funding did amount to a statewide tax and gave the state until June 1, 2006 to fix the system. The court agreed 7-1, but found that overall school funding was adequate and that poor districts did have equal access to facilities funding. On April 17, 2006 a special session began on school finance in the Texas legislature resulting in the adoption of House Bill 1 on Wednesday, May 10, 2006.

Texas School Finance System

Funding for Texas public school districts come from three sources. Local funds are generated primarily from property taxes. State funds come from a variety of revenue sources including general revenue, the Available School Fund and special fees. Federal funds make up the remainder of funding for Texas public schools. During the 1999-2000 school year local, state and federal funds amounted to $24.9 billion dollars. Statewide approximately 50.5 percent of funds come from local sources, 46.1 percent from state funds and 0.3 percent from federal funds (Texas Center for Educational Research, 2001).

Local funds in the Texas public education system come primarily from property taxes. Districts adopt the tax rates each year, one for maintenance and operation and one for debt service or interest and sinking fund, if the district has debt. Maintenance and operation taxes are subject to a statutory maximum of $1.50 per $100 of taxable value. Districts may levy up to an additional $0.50 per $100 of taxable value for debt service

taxes at the time bonds are issued. One note is that there is no cap on debt service tax rates to finance debt issued before September 1, 1992.

State funds for public education come from many sources. However most of the funding does come from the General Revenue Fund through the Foundation School Fund. Other major sources of funding for districts include the Available School Fund, revenues from the Permanent School Fund, funds recaptured from wealthy districts, lottery proceeds, and miscellaneous other funds like the Telecommunication Infrastructure Fund. A portion of Available School Fund revenues is set aside for textbooks and school technology allotments.

Federal funds make up a small portion of school funding in Texas. Most of these funds are designated for specific programs or groups of students. In general these funds must be used to supplement programs and not to replace state or local dollars. About half of the federal funds go directly to school districts while the other half goes to fund state or regional education service center.

The funding system in Texas is a shared arrangement between state and local school districts. The system consists of two tiers to fund maintenance and operation, including a number of formulas and weights in order to help the allocations reflect the needs of the school districts and its students. There are separate and additional formulas to help provide districts funding to address existing debt and new facilities construction. The first tier is considered the base or foundation funding level for the state. Calculation of the Tier I funding begins with the Basic Allotment, the base level for funding for each

student is average daily attendance. For the 2002-2003 school year the basic allotment was set at $2537.

The state multiplies the basic allotment by district adjustments that include the Cost of Education Index, the small and mid-size school district adjustments, and the sparsity adjustment. The Cost of Education Index is designed to reflect geographic cost variations that are beyond district control. The index for each district is based primarily on teacher salaries of neighboring districts, school district size, and concentration on low-income students. The small and mid-size district adjustments are designed to help smaller districts compensate for diseconomies of scale encountered in serving smaller populations. Adjusting the basic allotment results in the adjusted allotment, and then instructional program weights are applied based on the number of students enrolled in various special programs including special, compensatory, bilingual, career and technology, and gifted and talented education. It is also adjusted for students participating in public education grants. The special education and career and technology weights are calculated on a full time equivalent student basis, for other programs weights are applied to average daily attendance.

Transportation funds are also included in Tier I but they are not calculated on a per-pupil basis. These funds are distributed based on the number of drivers and the number of miles on the bus routes in the district. The final Tier I allotment received by a school district is the sum of the adjusted allotments for each program category plus transportation costs. In order to participate in this system districts are required to levy a $0.86 tax rate. The distribution of responsibility for funding Tier I is a function on local

property value. The local fund assignment, district's share of Tier I cost, is the amount of revenue that can be raised by $0.86 tax rate. Districts with sufficient wealth to generate the entire allotment on their own receive no state aid in Tier I, and those districts that can not generate the funds have the difference made up by the state.

Tier II funds provide additional funds to school districts beyond the base funding level provided by Tier I. Unlike the $0.86 tax that districts are required to levy, the Tier II tax rate of $0.64 is discretionary. Districts can levy up to a $0.64 tax rate, but it is not required by law. The Tier II tax rate produces resources in the form of a guaranteed yield. In 2003 this yield was that one penny of tax rate would generate $27.14 per student in weighted average daily attendance from a combination of local and state sources. Districts with property wealth below the guaranteed wealth threshold generated local revenue, and the state provides additional funding in order to meet the guaranteed yield. When districts reach a certain level of wealth all Tier II funds are generated locally. In 2003 this number was $271,400 per weighted average daily attendance.

Chapter 41 wealth sharing came about with the passing of Senate Bill 7 in 1993. Districts with wealth over $305,000 weighted average daily attendance in 2003 are subject to the wealth reduction provisions brought forth in this legislation. In order to equalize their wealth, districts can consolidate with another school district, detach commercial property, purchase attendance credits from the state, educate non-resident students, or consolidate tax bases with another district. There are only two exceptions to the recapture, known as Robin Hood. Debt service tax revenue is not subject to recapture, only maintenance and operation tax revenue is. Also, a group of property-rich

districts can choose to have their equalized wealth level computed under a revenue hold harmless provision that allows a district to retain as much revenue per weighted average daily attendance as the district had available in 1999-2000. Only districts that did not offer all twelve grades in the 1999-2000 school year are eligible for this alternative calculation.

During the 1997-1998 school year, districts were able to receive funds from a guaranteed yield program for facilities. The funds can be used for construction, lease or purchase of instructional facilities under the instructional facilities allotment. In 2002-2003 the legislature set aside $1.09 billion for this program. Districts in which voters have granted authority to sell bonds may apply for state assistance. The assistance is based on the amount needed to service the debt and is limited to the lesser of the annual debt service payment of $250 per average daily attendance. School districts that participate in the instructional facilities allotment are guaranteed $35 per penny per unweighted pupil of debt service tax. Districts with a wealth level above the Chapter 41 threshold are not eligible for the instructional facilities allotment. In 1999 the Texas legislature allocated funds for a program to help school districts pay for old debt. The existing debt allotment program guarantees school districts $35 per penny per student up to a maximum of $0.29 of debt service taxes to service bonds for which the district levied taxed in 1998-1999. The legislator also responded to the needs of fast growing districts by providing a $25 million new instructional facilities allotment. The first year the school is open the district is entitled to an allotment of $250 per student. The second

year a school is open the district is entitled to a $250 allotment for each additional student at the school (Texas Center for Educational Research, 2001).

House Bill 1

Overall, House Bill 1 provided for a reduction to 88.67 percent of current tax rates for 2006-2007, and an M&O tax compression rate of 66.67 percent for the 2007-2008 school year. In addition to this, districts will be allowed $0.04 of additional pennies without voter approval, and these monies are not subject to recapture. In 2008-2009, if the voters approve and the district had a $1.50 M&O tax rate in 2005, districts would be allowed an additional $0.02 of guaranteed yield. If a district was under the $1.50 cap in 2005, the district could access the additional $0.02 at a higher yield set by Austin Independent School District without a vote, again these additional funds are not subject to recapture.

Also approved by House Bill 1 was an 88th percentile yield for guaranteed yield, equalized wealth level and basic allotments. The estimated new guaranteed yield will be $31.95, the new equalized wealth level will be $319,500 and the new basic allotment will be around $2,748. In addition to these basic financial changes to satisfy the court's ruling the bill made changes in state and regional governance, accountability, school district efficiency, issues relating to educational employees and high-school success.

House Bill 1 does correct the constitutional violation providing significant additional state revenue to fund the public school system and enable school districts to

exercise meaningful discretion in setting local property tax rates. The bill also contains provisions to provide financial transparency to taxpayers and parents.

How Can We Use the Money We Have to Accomplish Our Goals?

One of the main problems that school districts face in this arena is that they often implement new educational programs, but rarely use program evaluation to eliminate those that do not affect student learning (Picus, 2000). This is why program evaluation is important and why school leaders must understand the importance of such evaluation. Picus calls for an "attitude adjustment" from "We don't have enough money," to "How we can use the money we have to accomplish our goals" (2000). Districts usually start the budgeting process by looking at what it will cost next year to provide the same goods and services provided this year. If the funds are not there, the district is forced to make reductions. The reductions usually are made as far from the students as possible, and could be staff at the administration building. For example, districts may consolidate some positions at the administration building, and cut some assistant principals to part time. At first glance, this seems like a good idea to help with budget constraints, however, the effects of these changes will trickle down to the building principal, and then to the teacher which could cut into instructional time. Another common used budget-cutting approach is to cut all programs by a fixed percentage (Picus, 2000). The problem with this is that it may leave some programs unable to operate if they already had a small operating budget to begin with. Kramer calls this need blind equity (2002). In other words, the needs of the students are not taken into consideration when making

fiscal decisions. Rather than go to these measures, what Picus calls for is better program evaluation by looking at program impact on student achievement when making decisions about budget priorities.

Odden, in his analysis in 1997, argues that individual schools could find additional funds up to $250,000 by a creative use of categorical funds, elimination of aides, reallocation of classroom resources, and possibly eliminating teaching positions. He goes on to argue that a more efficient use of staff, although increasing classroom sizes in some cases, would allow for better professional development, and result in improved student performance. Roughly, half of any district's employees are teachers, and their salaries represent about 60 percent of a district's budget. The real gains in student achievement are likely to occur in the classroom with the teachers, because they have direct contact with the students (Picus, 1998). Thus, districts need to look at how teachers use their time, how they are trained, and how they are compensated. Investing in sound professional development that helps current employees learn how to make new programs successful will make the district more efficient (Picus, 2000). Efficiently using new programs requires a commitment to helping employees through change and giving them support. If the research says that an older program is not working, leaders cannot just simply drop the old program and adopt a new program. They must provide adequate training to implement it correctly.

In addition to looking at teachers and their use, we must also look at the other peripheral positions in the schools. Schools today have a growing number of aides devoted to classrooms, and teacher-specialists that do not necessarily have a regular

classroom assignment (Picus, 2000). These positions often lower student to teacher ratio on reports such as the Academic Excellence Indicator System, which can be misleading when teachers and administrators report actual class sizes. In Tennessee, current research showed no better student outcomes of classes with or without instructional aides (Picus, 2000). The teacher-specialists are a luxury that may need to be examined. These are usually the most gifted and talented teachers in the district, and to take them out of the classroom seems to fly in the face of improving student performance (Picus, 2000). Often times without new funds the increased number of specialists drives up the student-teacher ratio in the other classes. These issues of specialists are often times very political and deal with sensitive issues such as special education, Section 504, and gifted and talented education, but if we are to look at efficiency and student performance, this may be a good place to start.

An example was given earlier about the reduction of administrative staff at the administration building, which is a popular solution at in some school districts. The key before surrendering to this notion is to examine what each position does for students (Picus 2000). Specifically, you can look at how administrative staff are used to evaluate programs, ensure adherence to law through correct paperwork, and manage the overall operation of the school district. The question to ask is, "If these people are not going to provide this service who is going to?" Would it affect school site administrators and teachers? Will these decisions put the burden of more administrative tasks on principals, and further remove them from the goal of being an instructional leader? These are all

complex questions, but as leaders, we must examine these issues in order to run a more cost-effective school district.

Besides the pressing issues surrounding staff, many nonstaff resources also must be considered and looked at in terms of cost-effectiveness. These include technology, transportation, maintenance and operations, risk management, foodservices, purchasing and special programs. With technology, budgeting can be very difficult. It is not that school districts are not capable, but they have little experience in budgeting for things that have a life span of three to five years (Picus, 2000). Relying solely on one-time grants and ignoring technology in the budget can lead to poor technology equipment and instruction. Computers are not a one-time expenditure and they cannot be thought of that way. The district must have a replacement plan in the budget to keep the equipment up to date. Repair and maintenance of these machines is another issue. Having a regular replacement plan can help with this, but most computer technicians in school districts are overwhelmed with repair requests. Unless teachers are confident that the technology will work, they will more than likely not have confidence to implement it into their curriculum (Picus, 2000). Budgeting for the maintenance of technology is difficult because the needs for repair are random. The staffing of a repair team can be difficult during times of financial needs. In addition to this, it is difficult for school districts to have competitive pay when compared to corporations. Outsourcing these services on a contract basis may be the most cost-effective way to handle this in school districts (Picus, 2000). Staffing is also an issue with technology. Most schools have computer resource personnel in place, but Picus believes that one or two consultants might be able

to help teachers implement technology, and it would also leave more advanced technological teachers in the classrooms (2000).

Transportation costs vary greatly in school districts. In Texas, rural school districts tend to spend more on transportation sometimes just due to the distance from home to school. More urban areas deal with population density and student safety to and from school. Buses much like technology require maintenance and a regular replacement plan that can save the district money in the long term. Maintenance and operations also is a big-ticket budget item. Hentschke suggests giving control of this to the actual school site, so that any savings generated go to the school (1988). Usually this will not work because of inequities in school facilities. Some schools may be older and less efficient. Generally, this is the same for maintenance, where the newer buildings cost less to maintain. Once again, the leaders must evaluate individual campuses to best utilize the money. Health insurance is another item on the rise. School officials are torn in this area between having greater risk pools that drive costs down, however, this leads to a less individualized product that may or may not meet the needs of employees. It is imperative that benefits personnel look carefully at these things so that funds used for such programs do not take away from direct instruction.

Food services are largely outsourced to companies or people that have a greater knowledge of these types of programs. However, this is a large budget item and leaders need to think carefully about the cost-effectiveness of maintaining their own food service versus outsourcing. For many years, schools have had large purchasing operations for supplies (Picus, 1997). They would buy in bulk and distribute to the

various schools at substantial cost savings. Picus believes that the decentralization of such practices could be a cost saver for districts because of today's market for office supplies (1997). He advocates a system where schools are given a credit card for an office supply company that they can order directly from. The system would be easy to monitor and maintain, and it would eliminate district inventory storage and distribution. Lastly, in the area of non-staff issues are special needs students. There are laws surrounding the funding of these students services, however, the district must not be blind in allocation of funds. They must evaluate programs and ensure that money is being spent optimally for each student, based on their individualized education plan.

With this information about cost-effectiveness and efficiency, what are the steps that school districts must take next? Over the past ten years, analysts of educational policy have pinpointed four different approaches to achieve educational adequacy (Picus, 2001). First, we must determine the economic cost of various educational functions. The key question here is: How much money is needed per pupil to produce a given level of student performance? This approach relies on some complicated statistical analysis that takes into consideration differences in students and district characteristics when compared to other districts (Picus, 2001). Economists favor this type of method to determine effectiveness, but it is complicated and hard to understand for some policy makers. In addition to this, it usually yields high funding levels and school districts have many financial and political roadblocks to clear before this becomes a viable option (Picus, 2001). Another way to analyze spending is to link it to performance benchmarks. The method is much easier to explain to policy makers,

however reaching agreement on standards when adding in the financial piece could be difficult (Picus, 2001). The question is what to do when districts do not meet the performance standards set by the policy makers? Most states are looking at the cost of specific strategies (Picus, 2001).

Asking professional educators is another approach to measuring cost-effectiveness of educational programs. The model states or districts create teams of education experts that identify best practices in schools based on staff and resources needed (Picus, 2001). The states and districts that use this approach are able to identify effective instructional strategies, link them to programs, and evaluate programs that are not improving student performance and get rid of them. One drawback to this is that it relies mostly on education professionals rather than research (Picus, 2001). The approach that does focus more on research is where states take research findings based on high-performance comprehensive school designs, identifies the strategies used, and then determines the cost for each of the strategies (Picus, 2001). The state then determines the adequate spending level based on the research for each school or district. Because each school design is research based, it establishes a direct link between student performance and funding (Picus, 2001). This allows districts to decide on funding levels based on goals, and gives states the ability to measure efficiency. A superintendent would do good to take a hybrid of the last four approaches in order to increase district cost-effectiveness.

With schools using public funds that must be approved by the school board, districts are typically run top down when it comes to finance. The system has its

benefits, but it sometimes can stifle the creativity of spending. With this system in place, most districts are still modeled on an allocation mechanism to fund individual schools, usually on a per pupil basis (Picus, 2000). These mechanisms reduce flexibility, and give the individual schools little discretion. This system gives principals little reason to create long-term financial plans. Considering this, one could see what a difficult task it will be to change spending patterns of schools in the United States. We must change our schools to more of a cost-effective model to ensure the education that all students deserve, and are entitled to, in this country.

Efficiency Measurement Techniques in Education

There are three major approaches to the study of efficiency with regard to education in public schools. A review of past research shows that studies can be grouped into production functions, cost-effectiveness or cost-benefit studies (Hickrod, 1989). These studies use principles of economics that were founded by profit-seeking organizations that derive much of their revenues from consumer purchases. School districts derive most of their funding from taxing authorities. Thus, the economic reality faced by school districts differs greatly from their private counterparts. Despite these noted differences educational researchers have been committed to improving schools through the use of traditional economic analysis with sometimes varied results (Rolle, 2003).

The production function approach is probably the oldest approach in school finance to measuring educational efficiency (Hickrod, 1989). This approach selects an

educational output and compares it to an independent variable. There are usually two independent variables, one that is non-controllable by administration and one that the administration has some control over. Often times the non-controllable factors have something to do with ethnicity or socio-economic status. This division in variables is important, the same principle is explained later when discussing the modified quadriform.

Nevertheless, the production function approach when applied to education has been proven to have some limitations. Sometimes these divisions in variables are not straightforward. For example, an important part of these investigations is to find out what effect dollars have on output. An example of this would be attempting to control for the variables that educators have little control over while trying to find the effect on educational spending. This question becomes important in the literature especially when dealing with constitutional challenges the school finance system. Unfortunately spending is so interlocked with socio-economic status variables that some researchers like Hickrod believe that there appears to be no direct way to ever answer the policy relevant question, what is the effect of dollars spent in education (1989).

If there were many examples of school districts populated by high socio-economic families that had low expenditures and examples of school districts populated by low socio-economic families with high expenditures then it would be easier to answer the question of what the effect of expenditures has on educational outputs, such as test scores, using traditional research designs. Unfortunately that is not the case in most districts in the United States. In most wealthy districts around the country there is above

average spending and most poor districts continue to have low expenditures per student. This continues to happen even with all of the litigation that has taken place to attempt to alleviate this situation over the past thirty years.

In addition to the above limitations with production function research, many of the studies have been narrowly modeled. In education finance, most things are both curvilinear and interactive, but in the body of literature it is difficult to find studies that have been researched to the point where the true curvilinear relations of the variables being used have been found (Hickrod, 1989). Most researchers assume a linear trajectory without exploring whether or not curves are there. Also, educational variables are often interactive. Occasionally researchers will discuss one interaction, but fail to go deeper and look at other interactions. The literature shows many studies that are linear and additive and not curvilinear and multiplicative (Hickrod, 1989). In early production function research studies there seemed to be a tendency to look for a function that would explain all learning for all kinds of students. This notion was soon dropped and researchers began to select target populations of students, and then research began to be even more specific when variables included schools to individual programs and in some cases individual students.

The production function approach could be called the input-output approach to school finance efficiency measurement. Although this model has some limitations it would not be appropriate to abandon it. The reason for the existence of educational administration itself rests on the assumption that some sort of production functions does exist in education (Monk & Underwood, 1990). Administrators are trained to examine

the effects that expenditures have on educational outcomes, and over the past three decades the production function techniques that have been used are even more sophisticated than the earlier studies completed.

The cost-effectiveness approach may be a better tool for school administrators when trying to determine school efficiency. In these studies the researcher may construct a production function equation to predict test scores, and then set up a cost equation to predict costs and then compare the cost coefficients with the production coefficients. Researchers also sometimes can run more normal school effectiveness studies by determining which educational treatment is more effective that other educational treatments with controlling for variables proceeded by costing-out the price of each educational treatment. This is a valid approach, but there are few examples in the body of literature of this specific technique.

Hickrod believes that more of these studies haven't been completed because there is no clear distinction in the research between educational effectiveness and educational efficiency (1989). The outcome of many cost-effectiveness studies shows that one treatment may be more professionally effective, but another may be more economically efficient. In other words there may be a technique that produces better results for children, but it is often times more expensive. This dilemma is not unique to the education profession, but in education we are using taxpayers money and we have to search for not only the most professionally efficient way to deliver instruction but also the most economically efficient way to deliver it.

In general cost-effectiveness studies seem to have very narrowly defined outputs. In order to best look at efficiency we need to develop measures that give us a more global output, taking into consideration many factors. Often times in education there is a linear relationship between cost and effectiveness. In these cases cost-effectiveness studies do not work. A positive aspect of these cost-effectiveness studies is that in terms of accountability they have the ability to answer global questions that the community may have.

Cost-benefit studies are based of the rate of return economic concept. They tend to be more focused on the economics of education rather than actual school finance issues. These studies do serve a purpose and often times they are used by legislators at the state and national level to defend the allocations of public funds in some way. This type of research is often times performed by professional economists not necessarily interested in improving the educational system for children. It is noteworthy that if the United States education system was centralized like many countries this approach may have some merit. However, the schools of the United States are governed by fifty states with thousands of independent school districts. Presuming that we could actually figure a rate of return on our investment in education nationally we still do not have a central source for funding. This approach becomes even more problematic at the local level.

Future Directions for Educational Efficiency Research

Anthony Rolle and Eric Houck from the Peabody College of Vanderbilt University address the future of education finance and economics comprehensively in an article written in 2004,

> K-12 education finance and economics issues confront policymakers, practitioners, and researcher with a host of confounding, practical and theoretical questions that do not hold simple solutions. Nationally, implementation of the federal No Child Left Behind Act of 2001 challenges parents, educators, and community members to reexamine perspectives, policies, practices, and objectives regarding our commitment to public education. State governors and legislators face the effects of a slow growth economy, and resultant shortage of state revenues, and citizen sponsored litigation regarding inequitable or inadequate levels of school funding. Concomitantly, local education agencies must respond to these policy and revenue changes by increasing taxes or issuing long-term bonds to finance short-term debt. And, because finance and economic issues are the foundations of public policy, educational reform issues ultimately become education finance and economic policy concerns. As such researchers in the field of education finance must be responsive enough to address a myriad of policy issues and yet be disciplined enough to provide practitioners and policymakers with solid reference points form which to address important theoretical principles (p.1)

As we begin to confront these issues as researchers two paradigms for examining educational productivity and efficiency will continue to be prominent. The first are normative economic frameworks that focus on improving measurements of financial inputs, refining and redesigning statistical models that estimate educational processes, and improve student productivity bases on improved measures of input-service. The second are public choice economic frameworks that focus on economic, organizational and political incentives influencing the behavior of groups and individuals within the public education system (Rolle, 2004). Based on these nonmarket-based incentives,

researchers can attempt to explain and predict educational cost and organizational outputs generated by the incentives mentioned above.

Normative economic approaches are based on the assumption that efficiency in public schools is concerned with how much knowledge or education is delivered to the students at what cost. Typically being efficient means one of two things, either we are increasing outputs using the same amount of dollars or we are maintaining our output while lowering expenditures. However this is not as straightforward as it may seem. These studies are complicated by issues like having accurate input and output data to selecting proper mathematical forms. Recent attempts at normative economic efficiency studies have been focused on five major areas, understanding the relationship between human resources allocation, individual preferences and organizational incentives, developing systematic data collection at all levels, and having accurate dissemination methods and improving statistical relations between purchased educational inputs and student learning outcomes. In addition to these the focus has been on determining the influence of nonpurchased inputs on student learning and creating incentives that transfer organizational and individual productivity efforts to help organizational outcomes (Rolle, 2004).

Even with these efforts to improve normative economic research dating back to the early 1990's Rolle calls for even more conceptual ideas to be explored in the future including expanding the traditional two-stage production function relation into multi-stage models that more accurately reflect educational processes, analyzing individual subgroups using expanded statistical models, and examining the hierarchical and

nonlinear statistical models and relations that more accurately represent the educational process for all students and subgroups (2004). Lastly he believes that we need to investigate the effects of time on statistical models again trying to represent the educational process for all students and subgroups and exploring theoretical and statistical relations that accurately represent all students using multiple output regression analyses.

Public choice economic frameworks are conducted in a sociopolitical environment. In these types of studies the researcher must take into account nonmarket influences on educational productivity. Rolle calls for the use of at least three nontraditional forms with in these public-choice paradigms, data envelopment analysis, stochastic frontier analysis and modified quadriform analysis (2004).

Data envelopment analysis has been utilized by researchers for about the past twenty-five years and it is used commonly to evaluate the level of efficiency in an organization relative to a best performing organization in the sample investigated by economic and public policy researchers. The focal point of this analysis is the determination of the best performing organization statistically. Schools are then compared and a production function frontier is defined. This production function frontier defines the maximum combination of outputs that can be produced for combinations of inputs between the groups of schools. Any school or organization which falls below the production function frontier is considered inefficient and an efficiency ratio can be calculated that lets us know how far the school or organization is from the frontier line.

Stochastic frontier analysis is similar to data envelopment. It to uses an efficiency frontier, and compares it to a data to measure relative efficiency. However, stochastic frontier analysis brings in more technical statistical techniques in its measures. Because of these techniques the cost efficiency frontier in this method is represented by a curve. Any organization that falls above the cost curve in considered inefficient and can the estimated level of inefficiency can be measured by using an efficiency ratio. The ratio defines the extent to which costs are over the estimated level of efficiency. In addition to calculating an overall measure of efficiency, stochastic frontier analysis can allow for the distinct measurements of allocative and technical efficiency depending on its functional form and availability of data (Barrow, 1991). Modified quadriform analysis which is the foundation for this dissertation was the final nontraditional type of research that Rolle discussed and it is outlined in the next section of this review of related literature.

Modified Quadriform Analyses

The relationship between school achievement and school district spending is known as educational production function research. Regression analysis can be used to relate spending and resources to student achievement while controlling for student demographics (Wenglinsky, 1998). This type of research has led to the development of systematic techniques which can determine efficiency. Modified quadriform analyses provide for an operational definition of efficiency that can be used to measure the complex relationship between resources and student achievement (Anderson, 1996).

The quadriform was originally used as an abstract tool devised to allow two-dimensional relations to be viewed graphically (Hickrod, 1989). Typically student outcomes are measured along the vertical axis and expenditures are measured along the horizontal axis. Unlike average-marginal cost analyses, the modified quadriform examines expenditure and output variables relative to other school districts in the sample. School districts are grouped using these relations into four quadrants, efficient, effective, ineffective and inefficient. Efficient public schools are those that have high outcomes and low expenditures. Effective schools have high outcomes with high expenditures. Ineffective schools produce low outcomes paired with low expenditures, and inefficient schools have low outcomes with high expenditures. Anderson later used the modified quadriform to analyze expenditure-output relations quantitatively and to measure different levels of economic efficiency among school districts (1996).

In theory this model is constructed by using two separate multiple regression to develop the axis of the quadriform, and the regression residuals are used to determine with of the four quadriform categories a school district is assigned (Rolle, 2004). The second part of the analysis comes when the researcher uses discriminant analysis to identify alterable characteristics that distinguish efficient school districts from inefficient school districts.

CHAPTER III

PROCEDURES AND METHODOLOGY

The purpose of the following chapter is to detail the research methodology and procedures utilized in this study. To that end, this chapter will begin with a brief review of Modified Quadriform Analyses methodology from Chapter II followed by a discussion of the population, procedures, instrumentation and data analysis.

Research Design

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Population

The population of this study will be all school districts in the state of Texas. Data on these districts will be retrieved from the Public Education Information Management System (PEIMS). The Texas Education Agency compiles data for campuses and school districts on an annual basis. This information includes student performance data as well as district characteristics. Data for this study is from the 2003 – 2004 school year.

Instrumentation

The modified quadriform model will be the analytical technique employed to measure the efficiency of schools. An important attribute of this model is that it allows the researcher to take into account alterable and unalterable characteristics and distinguish between the two. The modified quadriform was developed by Anderson (1996). He based his model on the quadriform analysis of efficiency developed by Hickrod (1989). In the corporate world, economists would say that efficiency is accomplished by maximizing the input-output ratio. Achieving the highest output with the least amount of input would be the goal. However, in education, measuring efficiency is not that defined. In education, no precise formulas exist on which to base increased productivity in terms of resource allocation (Anderson, 1996). For this study, efficient districts will be defined as districts that earn higher than expected output scores (e.g., test scores, graduation rates, dropout rates) while having lower than expected expenditures per pupil. The modified quadriform procedure was developed to provide a method to analyze the complex relationships between educational inputs and educational outputs.

Procedures

There are two stages to the modified quadriform model of analysis. In stage one, the relationship between input and output will be evaluated by two separate linear regressions. The input regression will be total per pupil expenditure for the district regressed against a group of unalterable school district characteristics. Thus the

dependent variable will be total per pupil expenditure and the independent variables will be the characteristics unalterable by school personnel. The unalterable characteristics that will be included are total district enrollment, percentage of economically disadvantaged students, percentage of special education students, percentage of minority students, and local tax base value per pupil. For the output regression, student achievement will be regressed against the same set of unalterable school district characteristics. Again, student achievement will be the dependent variable, and the unalterable characteristics will serve as the independent variables. The measures of student achievement to be used will be the percentage of all students passing the math and reading Texas Assessments of Knowledge and Skills, graduation completion rate, percentage of students taking the Scholastic Aptitude Test and the ACT Test, and the mean scores on the Scholastic Aptitude Test and ACT Test. In stage two, a discriminant analysis is conducted to recognize the alterable school characteristics that distinguish relatively efficient schools. Alterable characteristics would include percentage of instructional expenditures in Bilingual/ESL, percentage of instructional expenditures in compensatory education, percentage of instructional expenditures in regular education, percentage of instructional expenditures in special education, teacher average salary, teacher average years of experience, student to teacher ratio, percentage of expenditures in central administration, percentage of expenditures in instructional leadership, percentage of expenditures in campus leadership, percentage of expenditures in gifted and talented and teacher turnover rate.

Data Analysis

Based on the modified quadriform model developed by Anderson (1996) the regression equations will be in the following form:

$$Z_i = b_0 + b_1 W_{1i} + b_2 W_{2i}$$

Z will be the expected value for each school district, either total per pupil expenditure or student achievement. The *W* variables are the unalterable values for each school district. Once the regressions have been calculated, residual values can be found for each school district. The residuals will be the difference between the actual school district expenditure or outcome values and the predicted values from the two regressions. Then Anderson's model (1996) will be followed by placing each of the districts into one of four quadrants based on the two regressions. Quadrant one will be those districts that have high outcomes with low expenditures. Quadrant two will be for those districts with low outcomes and high expenditures, Quadrant three will be districts with high outcomes and high expenditures, and quadrant four will be for the districts with low outcomes and low expenditures.

In stage two, the researcher will use discriminant analyses to identify alterable characteristics that are found in relatively efficient districts. This is significant in two ways. One, the inputs and outputs are separated into two different regressions. This allows the unalterable characteristics to be compared to total per pupil expenditure and student achievement separately. Second, we can analyze alterable school characteristics that can be changed, because unalterable characteristics are separated out. This will allow decision makers to look at the alterable characteristics that impact school district

efficiency and make changes based on the findings of the study. The quadriform eliminates the variance due to the unalterable characteristics, which in turn allows for a more stable analysis of the alterable characteristics (Anderson, 1996).

CHAPTER IV

ANALYSIS OF DATA

This study was designed to identify school districts in the State of Texas that would be considered efficient, low expenditures and high output, using the modified quadriform model. This was done by conducting seven separate multiple regressions. One with the independent variable being expenditures per pupil regressed against total district enrollment, percentage of economically disadvantaged students, percentage of special education students, percentage of minority students, and local tax base value per pupil, and six with different outputs for dependent variables using those same unalterable characteristics for independent variables. Once these efficient districts were identified a discriminant analysis was done for each of the six outputs as dependent variables using percentage of instructional expenditures in Bilingual/ESL, percentage of instructional expenditures in compensatory education, percentage of instructional expenditures in regular education, percentage of instructional expenditures in special education, teacher average salary, teacher average years of experience, student to teacher ratio, percentage of expenditures in central administration, percentage of expenditures in instructional leadership, percentage of expenditures in campus leadership, percentage of expenditures in gifted and talented and teacher turnover rate as independent variables.

The analyses of the data from this study are presented in this chapter. This chapter will begin with an explanation of each multiple regression individually, and then each discriminant analysis will be analyzed. Finally, each of the research questions will be addressed.

1. What school districts in Texas would be considered efficient using the modified quadriform model?
2. What alterable characteristic(s) of school districts has the biggest impact on school efficiency?
3. What alterable characteristic(s) of school districts has the least impact on school efficiency?

Total Expenditures per Pupil Regression

A multiple regression was conducted to determine residuals for each school district in Texas for total expenditures per pupil. These residuals were calculated by regressing the independent variables of total number of students, percentage of economically disadvantaged students, percentage of special education students, percentage of African-American students, percentage of Asian students, percentage of Hispanic students, percentage of Native American students, and standardized local tax base per pupil against the dependent variable of total expenditures per pupil. Regression results indicate an $R^2 = .457$, $R^2_{adj} = .452$, $F(8, 1028) = 108.025$, $p < .001$. (See Table 2)

Table 2. – Model Summary for Dependent Variable Total Expenditures per Pupil

R	R Square	Adj. R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
.676	.457	.452	1965.586	.457	108.025	8	1028	.000	2.026

All Grades Tested Math Regression

A multiple regression was conducted to determine residuals for each school district in Texas for T.A.K.S. math scores for all grades tested. These residuals were calculated by regressing the independent variables of total number of students, percentage of economically disadvantaged students, percentage of special education students, percentage of African-American students, percentage of Asian students, percentage of Hispanic students, percentage of Native American students, and standardized local tax base per pupil against the dependent variable of district T.A.K.S. math scores for all grades. Regression results indicate an $R^2 = .397$, $R^2_{adj} = .392$, $F(8, 1025) = 84.193$, $p < .001$. (See Table 3)

Table 3. – Model Summary for Dependent Variable All Grades Tested Math

R	R Square	Adj. R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
.630	.397	.392	7.68774	.397	84.193	8	1025	.000	2.050

All Grades Tested Reading Regression

A multiple regression was conducted to determine residuals for each school district in Texas for T.A.K.S. reading scores for all grades tested. These residuals were calculated by regressing the independent variables of total number of students, percentage of economically disadvantaged students, percentage of special education students, percentage of African-American students, percentage of Asian students, percentage of Hispanic students, percentage of Native American students, and standardized local tax base per pupil against the dependent variable of district T.A.K.S.

reading scores for all grades. Regression results indicate an $R^2 = .466$, $R^2_{adj} = .462$, $F(8, 1019) = 111.214$, $p < .001$. (See Table 4)

Table 4. – Model Summary for Dependent Variable All Grades Tested Reading

R	R Square	Adj. R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
.683	.466	.462	4.63482	.466	111.214	8	1019	.000	2.115

District Completion Rate Without G.E.D. Regression

A multiple regression was conducted to determine residuals for each school district in Texas for district completion rate without G.E.D. These residuals were calculated by regressing the independent variables of total number of students, percentage of economically disadvantaged students, percentage of special education students, percentage of African-American students, percentage of Asian students, percentage of Hispanic students, percentage of Native American students, and standardized local tax base per pupil against the dependent variable district completion rate without G.E.D. Regression results indicate an $R^2 = .055$, $R^2_{adj} = .047$, $F(8, 958) = 7.009$, $p < .001$. (See Table 5)

Table 5. – Model Summary for Dependent Variable District Completion Rate without G.E.D.

R	R Square	Adj. R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
.235	.055	.047	5.10533	.055	7.009	8	958	.000	1.963

Mean SAT Score Regression

A multiple regression was conducted to determine residuals for each school district in Texas for district mean SAT score. These residuals were calculated by regressing the independent variables of total number of students, percentage of economically disadvantaged students, percentage of special education students, percentage of African-American students, percentage of Asian students, percentage of Hispanic students, percentage of Native American students, and standardized local tax base per pupil against the dependent variable district mean SAT score. Regression results indicate an $R^2 = .317$, $R^2_{adj} = .310$, $F(8, 699) = 40.616$, $p < .001$. (See Table 6)

Table 6. – Model Summary for Dependent District Mean SAT Score

R	R Square	Adj. R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
.563	.317	.310	65.28461	.317	40.616	8	699	.000	2.028

Mean ACT Score Regression

A multiple regression was conducted to determine residuals for each school district in Texas for district mean ACT score. These residuals were calculated by regressing the independent variables of total number of students, percentage of economically disadvantaged students, percentage of special education students, percentage of African-American students, percentage of Asian students, percentage of Hispanic students, percentage of Native American students, and standardized local tax

base per pupil against the dependent variable district mean ACT score. Regression results indicate an $R^2 = .380$, $R^2_{adj} = .374$, $F(8, 872) = 66.823$, $p < .001$. (See Table 7)

Table 7. – Model Summary for Dependent District Mean ACT Score

R	R Square	Adj. R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
.616	.380	.374	1.34147	.380	66.823	8	872	.000	2.066

Total Students Taking SAT and ACT Regression

A multiple regression was conducted to determine residuals for each school district in Texas for total students taking SAT and ACT. These residuals were calculated by regressing the independent variables of total number of students, percentage of economically disadvantaged students, percentage of special education students, percentage of African-American students, percentage of Asian students, percentage of Hispanic students, percentage of Native American students, and standardized local tax base per pupil against the dependent variable total students taking SAT and ACT. Regression results indicate an $R^2 = .078$, $R^2_{adj} = .070$, $F(8, 936) = 9.865$, $p < .001$. (See Table 8)

Table 8. – Model Summary for Total Students Taking SAT and ACT

R	R Square	Adj. R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
.279	.078	.070	16.07563	.078	9.865	8	936	.000	2.082

Discriminant Analysis All Grades Tested Math

A discriminant analysis was conducted to determine whether twelve variables; percentage of expenditures on bilingual / E.S.L., percentage of expenditures on compensatory education, percentage of expenditures on regular education, percentage of expenditures on special education, average teacher salary, average teacher experience, number of students per teacher, percentage of expenditures on central administration, percentage of expenditures on instructional leadership, percentage of expenditures on campus leadership, percentage of expenditures on gifted and talented and teacher turnover rate could predict T.A.K.S. Math scores for all grades tested for the 332 school districts considered efficient when comparing total operating expenditures per pupil and T.A.K.S. math scores. Λ=.941, $\chi^2(12, N=332)=62.616$, $p<.001$. (See Table 9) The tests of Equality of Group Means can be found in Appendix G.

Table 9. - Wilks' Lambda for All Grades Tested Math 2004

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.941	62.616	12	.000

Standardized function coefficients and correlation coefficients (see Table 10) revealed that the variables of number of student's per teacher and teachers average years of experience were most associated with the function of T.A.K.S. math scores for all grades. Expenditures by program in regular and special education along with bilingual education had the least impact on T.A.K.S. math scores for all grades.

Table 10. – All Grades Tested Math Correlations and Standardized Function Coefficients

	Correlation Coefficients with Discriminant Function	Standardized Function Coefficients
% Expenditures Bilingual /E.S.L.	.008	-.102
% Expenditures Compensatory Education	.213	.474
% Expenditures Regular Education	-.100	.139
% Expenditures Special Education	-.018	-.002
Average Teacher Salary	.136	-.307
Average Teacher Experience	.351	.498
Number of Students per Teacher	.661	.921
% Expenditures Central Administration	-.397	-.007
% Expenditures Instructional Leadership	.252	-.027
% Expenditures Campus Leadership	.267	.279
% Expenditures Gifted and Talented	.136	-.012
Teacher Turnover Rate	-.399	-.261

Discriminant Analysis All Grades Tested Reading

A discriminant analysis was conducted to determine whether twelve variables; percentage of expenditures on bilingual / E.S.L., percentage of expenditures on compensatory education, percentage of expenditures on regular education, percentage of expenditures on special education, average teacher salary, average teacher experience, number of students per teacher, percentage of expenditures on central administration,

percentage of expenditures on instructional leadership, percentage of expenditures on campus leadership, percentage of expenditures on gifted and talented and teacher turnover rate could predict T.A.K.S. Reading scores for all grades tested for the 326 school districts considered efficient when comparing total operating expenditures per pupil and T.A.K.S. math scores. Λ=.936, $\chi^2(12, N=326)=67.845$, $p<.001$. (See Table 11) The tests of Equality of Group Means can be found in Appendix J.

Table 11. - Wilks' Lambda for All Grades Tested Reading 2004

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.936	67.845	12	.000

Standardized function coefficients and correlation coefficients (see Table 12) revealed that the variables of number of student's per teacher and teacher's average years of experience were most associated with the function of T.A.K.S. reading scores for all grades. Expenditures in regular education, bilingual education and compensatory education were least associated with T.A.K.S. reading scores for all grades.

Table 12. – All Grades Tested Reading Correlations and Standardized Function Coefficients

	Correlation Coefficients with Discriminant Function	Standardized Function Coefficients
% Expenditures Bilingual /E.S.L.	.024	-.010
% Expenditures Compensatory Education	.036	.295
% Expenditures Regular Education	.057	.179

Table 12. Continued

	Correlation Coefficients with Discriminant Function	Standardized Function Coefficients
% Expenditures Special Education	-.102	-.102
Average Teacher Salary	.164	-.385
Average Teacher Experience	.433	.572
Number of Students per Teacher	.648	.819
% Expenditures Central Administration	-.452	-.134
% Expenditures Instructional Leadership	.190	-.074
% Expenditures Campus Leadership	.165	.192
% Expenditures Gifted and Talented	.222	.068
Teacher Turnover Rate	-.507	-.323

Discriminant Analysis District Completion Rate without G.E.D.

A discriminant analysis was conducted to determine whether twelve variables; percentage of expenditures on bilingual / E.S.L., percentage of expenditures on compensatory education, percentage of expenditures on regular education, percentage of expenditures on special education, average teacher salary, average teacher experience, number of students per teacher, percentage of expenditures on central administration, percentage of expenditures on instructional leadership, percentage of expenditures on campus leadership, percentage of expenditures on gifted and talented and teacher turnover rate could predict District Completion Rate for the 312 school districts

considered efficient when comparing total operating expenditures per pupil and District Completion Rate Λ=.962, $\chi^2(12, N=312)=38.615$, $p<.001$. (See Table 13) The tests of Equality of Group Means can be found in Appendix M.

Table 13. - Wilks' Lambda for District Completion Rate without G.E.D. 2003

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.962	38.615	12	.000

Standardized function coefficients and correlation coefficients (see Table 14) revealed that the variables of number of student's per teacher and teacher's average years of experience were most associated with the function of District Completion Rate. Expenditures on compensatory education, regular education and special education had the least association with District Completion Rate.

Table 14. – District Completion Rate without G.E.D. 2003 Correlations and Standardized Function Coefficients

	Correlation Coefficients with Discriminant Function	Standardized Function Coefficients
% Expenditures Bilingual /E.S.L.	.110	.003
% Expenditures Compensatory Education	.064	.167
% Expenditures Regular Education	-.048	-.012
% Expenditures Special Education	-.039	-.180
Average Teacher Salary	.075	-.468
Average Teacher Experience	.319	.483

Table 14. Continued

	Correlation Coefficients with Discriminant Function	Standardized Function Coefficients
Number of Students per Teacher	.671	.688
% Expenditures Central Administration	-.649	-.424
% Expenditures Instructional Leadership	.248	-.067
% Expenditures Campus Leadership	.211	.218
% Expenditures Gifted and Talented	.187	-.003
Teacher Turnover Rate	-.419	-.232

Discriminant Analysis Mean SAT Score

A discriminant analysis was conducted to determine whether twelve variables; percentage of expenditures on bilingual / E.S.L., percentage of expenditures on compensatory education, percentage of expenditures on regular education, percentage of expenditures on special education, average teacher salary, average teacher experience, number of students per teacher, percentage of expenditures on central administration, percentage of expenditures on instructional leadership, percentage of expenditures on campus leadership, percentage of expenditures on gifted and talented and teacher turnover rate could predict District Mean SAT for the 260 school districts considered efficient when comparing total operating expenditures per pupil and District Mean SAT Λ=.871, $\chi^2(12, N=260)=123.701$, $p<.001$. (See Table 15) The tests of Equality of Group Means can be found in Appendix P.

Table 15. - Wilks' Lambda for District Mean SAT Score 2003

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.871	123.701	12	.000

Standardized function coefficients and correlation coefficients (see Table 16) revealed that the variables of number of student's per teacher and percentage of expenditures on instructional leadership were most associated with the function of District Mean SAT. Total expenditures on school leadership, and expenditures in regular and compensatory education had the least association with District Mean SAT.

Table 16. – District Mean SAT Score 2003 Correlations and Standardized Function Coefficients

	Correlation Coefficients with Discriminant Function	Standardized Function Coefficients
% Expenditures Bilingual /E.S.L.	.154	.096
% Expenditures Compensatory Education	-.018	.235
% Expenditures Regular Education	-.046	.214
% Expenditures Special Education	.159	.116
Average Teacher Salary	.167	-.494
Average Teacher Experience	.314	.539
Number of Students per Teacher	.713	.555
% Expenditures Central Administration	-.742	-.474
% Expenditures Instructional Leadership	.435	.149

Table 16. Continued

	Correlation Coefficients with Discriminant Function	Standardized Function Coefficients
% Expenditures Campus Leadership	.056	.053
% Expenditures Gifted and Talented	.171	-.013
Teacher Turnover Rate	-.405	-.200

Discriminant Analysis Mean ACT Score

A discriminant analysis was conducted to determine whether twelve variables; percentage of expenditures on bilingual / E.S.L., percentage of expenditures on compensatory education, percentage of expenditures on regular education, percentage of expenditures on special education, average teacher salary, average teacher experience, number of students per teacher, percentage of expenditures on central administration, percentage of expenditures on instructional leadership, percentage of expenditures on campus leadership, percentage of expenditures on gifted and talented and teacher turnover rate could predict District Mean ACT for the 295 school districts considered efficient when comparing total operating expenditures per pupil and District Mean ACT Λ=.906, $\chi^2(12, N=295)=95.333$, $p<.001$. (See Table 17) The tests of Equality of Group Means can be found in Appendix S.

Table 17. - Wilks' Lambda for District Mean ACT Score 2003

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.906	95.333	12	.000

Standardized function coefficients and correlation coefficients (see Table 18) revealed that the variables of number of student's per teacher, teacher years of experience and percentage of expenditures on instructional leadership were most associated with the function of District Mean ACT. Total expenditure on bilingual education, school leadership and compensatory education had the least impact on District Mean ACT.

Table 18. – Mean ACT Score 2003 Correlations and Standardized Function Coefficients

	Correlation Coefficients with Discriminant Function	Standardized Function Coefficients
% Expenditures Bilingual /E.S.L.	.141	.014
% Expenditures Compensatory Education	.050	1.175
% Expenditures Regular Education	-.201	-.021
% Expenditures Special Education	.249	.158
Average Teacher Salary	.218	-.397
Average Teacher Experience	.423	.637
Number of Students per Teacher	.653	.529
% Expenditures Central Administration	-.661	-.334
% Expenditures Instructional Leadership	.428	.153
% Expenditures Campus Leadership	.068	.063
% Expenditures Gifted and Talented	.329	.162
Teacher Turnover Rate	-.401	-.183

Discriminant Analysis Total Students Taking SAT and ACT

A discriminant analysis was conducted to determine whether twelve variables; percentage of expenditures on bilingual / E.S.L., percentage of expenditures on compensatory education, percentage of expenditures on regular education, percentage of expenditures on special education, average teacher salary, average teacher experience, number of students per teacher, percentage of expenditures on central administration, percentage of expenditures on instructional leadership, percentage of expenditures on campus leadership, percentage of expenditures on gifted and talented and teacher turnover rate could predict District Total Students Taking SAT and ACT for the 257 school districts considered efficient when comparing total operating expenditures per pupil and District Total Students Taking SAT and ACT Λ=.929, $\chi^2(12, N=257)=72.430$, $p<.001$. (See Table 19) The tests of Equality of Group Means can be found in Appendix V.

Table 19. - Wilks' Lambda for District Total Students Taking SAT and ACT 2003

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1	.929	72.430	12	.000

Standardized function coefficients and correlation coefficients (see Table 20) revealed that the variables of teacher turnover rate and percentage of expenditures on central administration were most associated with the function of District Total Students Taking SAT and ACT. Total expenditures on instructional leadership, school leadership

and compensatory education had the least association with District Total students Taking SAT and ACT.

Table 20. – District Total Students Taking SAT and ACT 2003 Correlations and Standardized Function Coefficients

	Correlation Coefficients with Discriminant Function	Standardized Function Coefficients
% Expenditures Bilingual /E.S.L.	.073	-.014
% Expenditures Compensatory Education	.008	.026
% Expenditures Regular Education	.071	.096
% Expenditures Special Education	-.112	-.080
Average Teacher Salary	.199	.808
Average Teacher Experience	-.490	-.788
Number of Students per Teacher	-.371	-.622
% Expenditures Central Administration	.388	.321
% Expenditures Instructional Leadership	.042	.203
% Expenditures Campus Leadership	-.028	-.011
% Expenditures Gifted and Talented	-.094	.027
Teacher Turnover Rate	.364	.209

Research Question One

Statistics will show that just over 32 percent of all Texas school districts would be considered efficient when looking the outputs measured as a whole. A detailed list of each school district and their residuals can be found in Appendix A-F. Appendix Y shows a graphical breakdown of each output measure and the percentages of schools found in each quadrant. The output measure all grades tested T.A.K.S. math 2004 had 32.1% of schools measure efficient out of a sample of 1034. The measure all grades tested T.A.K.S. reading had a sample of 1028 school districts with 31.7% considered efficient. 32.2% of districts were considered efficient for the output measure of district completion rate without G.E.D. The sample size was 967 districts. District mean Scholastic Aptitude Test scores had the highest efficiency rating of any output with 36.7% of school districts out of 708 falling in that category. District mean ACT had the second highest efficiency percentage with 33.5% of 881 schools falling in quadrant one. Finally, number of students taking the Scholastic Aptitude Test and ACT had a percentage of 27.2% in quadrant one out of 945 school districts. This was the only output with less than 30% of districts in quadrant one.

Research Question Two

The student to teacher ratio had the highest correlation coefficient in five of the six output measures analyzed. This shows that teacher to student ratio or number of students per teacher is most associated with all outputs measured other than number of students taking the Scholastic Aptitude Test and ACT. (See Table 21) Percentage of

expenditures on instructional leadership proved to be associated with mean Scholastic Aptitude Test and mean ACT scores. Teachers years of experience was found to be associated with overall T.A.K.S. reading scores and mean ACT scores. Finally, percentage of expenditures on central administration had a slight association with the number of students taking the Scholastic Aptitude Test or ACT test. All of these correlation coefficients and the corresponding standardized functions can be found in Table 21.

Table 21. – Correlation Coefficients of Independent Variables Most Associated with Dependent Variables in the Discriminant Analysis

Independent Variable for Discriminant Analysis	Correlation Coefficients with Discriminant Function	Standardized Function Coefficients	Dependent Variable for Discriminant Analysis
Number of Students per Teacher	0.713	0.555	District Mean SAT 2003
Number of Students per Teacher	0.671	0.688	District Completion Rate without G.E.D.
Number of Students per Teacher	0.661	0.921	All Grades Tested TAKS Math 2004
Number of Students per Teacher	0.653	0.529	District Mean ACT 2003
Number of Students per Teacher	0.648	0.819	All Grades Tested TAKS Reading 2004
% Expenditures Instructional Leadership	0.435	0.149	District Mean SAT 2003
Average Teacher Experience	0.433	0.572	All Grades Tested TAKS Reading 2004
% Expenditures Instructional Leadership	0.428	0.153	District Mean ACT 2003

Table 21. Continued

Independent Variable for Discriminant Analysis	Correlation Coefficients with Discriminant Function	Standardized Function Coefficients	Dependent Variable for Discriminant Analysis
Average Teacher Experience	0.423	0.637	District Mean ACT 2003
% Expenditures Central Administration	0.388	0.321	District SAT / ACT Tested 2003

Research Question Three

Percentage of expenditures on central administration proved to have a low association with mean Scholastic Aptitude Test and ACT, district completion rate and reading T.A.K.S. scores district wide. This independent variable had the lowest three associations with any dependent variables in the study. (See Table 22) The independent variable teacher turnover rate also did not have an impact in several areas including district T.A.K.S. reading and math, mean Scholastic Aptitude Test and ACT and district completion rate. The last independent variable in the bottom ten was teacher's years of experience which had little association with the number of students taking the Scholastic Aptitude Test or ACT.

Table 22. – Correlation Coefficients of Independent Variables Least Associated with Dependent Variables in the Discriminant Analysis

Independent Variable for Discriminant Analysis	Correlation Coefficients with Discriminant Function	Standardized Function Coefficients	Dependent Variable for Discriminant Analysis
% Expenditures Central Administration	-0.742	-0.474	District Mean SAT 2003

Table 22. Continued

Independent Variable for Discriminant Analysis	Correlation Coefficients with Discriminant Function	Standardized Function Coefficients	Dependent Variable for Discriminant Analysis
% Expenditures Central Administration	-0.661	-0.334	District Mean ACT 2003
% Expenditures Central Administration	-0.649	-0.424	District Completion Rate without G.E.D.
Teacher Turnover Rate	-0.507	-0.323	All Grades Tested TAKS Reading 2004
Average Teacher Experience	-0.490	-0.788	District SAT / ACT Tested 2003
% Expenditures Central Administration	-0.452	-0.134	All Grades Tested TAKS Reading 2004
Teacher Turnover Rate	-0.419	-0.232	District Completion Rate without G.E.D.
Teacher Turnover Rate	-0.405	-0.2	District Mean SAT 2003
Teacher Turnover Rate	-0.401	-0.183	District Mean ACT 2003
Teacher Turnover Rate	-0.399	-0.261	All Grades Tested TAKS Math 2004

Summary

In conclusion, the researcher found that 32.2% of Texas school districts would be considered efficient, low expenditures and high output, when analyzing the output measures in one group. After conducting the discriminant analysis number of students per teacher was found to be most associated with high outcomes for students, and percentage of expenditures in central administration appears to be least associated with

high outcomes for students. These findings will be discussed in greater detail in Chapter V on findings, conclusions, implications and recommendations.

CHAPTER V

FINDINGS, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Schools and how they should be funded has been debated since the founding of our country. Texas is no different with the legislator just this year adopting House Bill I, yet another adjustment in the school funding system. In this age of accountability the public is more concerned than ever with the quality of our schools. At the same time over the past fifteen years state funding of public schools in Texas has dropped over 11%. Until the Texas legislature addresses this trend schools will continue to have to do more with less funds. Article VII of the Texas Constitution gives the legislature the duty "to establish and make suitable provision for the support and maintenance of an efficient system of public free schools" (Carrollton-Farmers Branch Independent School District vs. Edgewood Independent School District, 1992). This leads for a need to operational define what efficiency looks like in the complex arena of school finance.

The purpose of this study was to identify school districts that are using resources efficiently based on the modified quadriform model. The secondary purpose was to identify the characteristics of these efficient school districts in order to see what expenditures most relate to successful student output. The goal in short was to find out what expenditures across Texas get the biggest bang for their buck. Anderson (1996) believed that modified quadriform analysis could help us to operationally define efficiency.

The researcher used regression analysis to relate spending and resources to student achievement. This allowed the researcher to take into account unalterable characteristics that could skew data when comparing school districts with varying demographics. This technique was used to simply identify school districts who spent less while achieving a high output on a variety of outcome measures related to student academic achievement. Once these efficient districts were identified discriminant analysis was used to find out what alterable school characteristics had the strongest relationship with these academic successes.

Findings

The finding of this study are derived from the modified quadriform analysis, then by analyzing the discriminant analysis. The findings are organized by looking at each of the three research questions individually. These sections will be followed by overall conclusions, implications for public policy and recommendations for further study.

Research Question One

The first research question sought to determine what school districts were considered efficient based on the modified quadriform analyses model. The researcher found that 32.2% of Texas school districts would be considered efficient, low expenditures and high output, when analyzing all output measures in one group. 19.5% of school districts were considered effective, high expenditure and high output. 17.5%

of school districts were considered ineffective, high expenditures and low outcomes, while 30.8% of school districts were inefficient, low expenditures and low outcomes.

Texas school districts were most efficient, 36.7% when analyzing mean Scholastic Aptitude Test scores, which had a sample size of 708 school districts. Districts were least efficient in terms of the number of student taking both the Scholastic Aptitude Test and ACT at 27.2%; the sample size was 945 school districts. The output measure all grades tested T.A.K.S. math 2004 had 32.1% of schools measure efficient out of a sample of 1034. The measure all grades tested T.A.K.S. reading had a sample of 1028 school districts with 31.7% considered efficient. 32.2% of districts were considered efficient for the output measure of district completion rate without G.E.D. The sample size was 967 districts. District mean ACT had the second highest efficiency percentage with 33.5% of 881 schools falling in quadrant one.

Research Question Two

The second research questions looked to answer what alterable school characteristics had the largest impact on different outcome measures related to student achievement. It was clear that student to teacher ratio was most related with successful student outcomes. When looking at the ten highest correlation coefficients during the discriminant analysis teacher to student ratio yielded the top five. It appears that student to teacher ratio is an expenditure that warrants additional analysis. Four of the next five highest correlation coefficients in the discriminant analysis relate to what the researcher considers campus level dollars, instructional leadership and average teacher's years

experience. It appears that based on this discriminant analysis monies focused at the building level are closely related to student achievement when analyzing the outputs used in this study.

Research Question Three

While question two looks at the expenditures most likely to affect student outcomes, question three does the opposite by looking at what least affects student academic outcomes. Again, there is a trend when looking at the correlation coefficients that have the least impact. Percentage of expenditures on central administration has the bottom three lowest scores. It also has the sixth lowest coefficient giving it four of the top ten lowest relationship scores. The rest of this list is rounded out with teacher turnover rate and average teacher's experience. Teacher turnover rate produced five of the bottom ten scores in this discriminant analysis. This would suggest that teacher turnover rate may not have as large an impact on student outcomes as the researcher thought.

Conclusions

The modified quadriform is a tool that takes the abstract setting of school finance and portrays it in a more concrete understandable way. As with other quadriform studies dating back to early 1990's, school districts are going to fall in each of the four categories discussed. The researcher was not surprised that right at 50% of school were above and 50% were below the x-axis of the quadriform which defined academic

success regardless of low or high expenditures. The modified quadriform in this study was more of a means to find a target of schools to analyze using a discriminant analysis. This is where the researcher finds direction and many recommendations to continue this type of research in the state of Texas.

Student to teacher ratio stood out when analyzing the correlation coefficients. The fact that it had a strong relationship with five of the six output variables cannot be ignored. In fact with correlation coefficients ranging from .648 to .713 were by far the highest in this study and the only correlation coefficients above .500. During the past twenty-five years many researchers have looked at the relationship between class size and student achievement. Three particular studies stand out related to student to teacher ratio and achievement. In 1978, Glass and Smith conducted a classic meta-analysis of over 80 studies on class size. Their conclusions were that reduced class size can be expected to produce increased academic outcomes and that classes below twenty students gained the most benefit. However, critics of Glass and Smith believed that the selection of studies were not high-quality because many of the studies were too short. In 1986, Robinson and Wittebols conducted an extensive study by reviewing nearly 100 separate studies on class size and student achievement. They concluded that the effects of class size vary based on grade level, student characteristics, subjects, teaching styles and other learning interventions (Robinson, 1990). This is not surprising as complicated as research is in the educational field. Studies like this one must start out large and then focus to find trends in the statistics. In 1989, Slavin and Madden conducted what they called a best evidence synthesis. Like Glass and Smith he did a meta-analysis, however

he only looked at studies that lasted more than one year, had substantial class size reductions and involved random assignments. Slavin and Madden concluded that class size did have a positive effect on students, but not as large as first thought by Glass and Smith. Finn and Voelkl (1994) in a brief overview of research identified three approaches to studying the issue of class size, the classroom focus approach, the ecological approach and the cost-related approach. The cost-related approach associated most closely with this research and it is appropriate to include an overview in the conclusions.

Lowering class sizes is expensive. While state and local policy makers should be commended for being cautious with limited tax dollars, they really do not have a tool to determine the dollar value of school achievement. Production function approaches like the modified quadriform may give policy makers such a tool to justify these difficult often scrutinized decisions. Studies have shown during the past decade that student to teacher ratio is associated with increased pupil performance using production function research methodology (Laine et al., 1995). Wenglinsky (1997) concluded that monies spent on reducing pupil to teacher ratios had a positive impact on 4^{th} graders. Ferguson and Ladd (1996) analyzed class sizes in 131 Alabama school districts and found that class size does matter in both the early and later grades. It appears that this study in some ways contributes to this body of research with the significant correlation coefficient scores for student to teacher ratio in relation to other variables in this study.

Other correlation coefficients that stood out were those at the bottom in terms of relationship with positive student outcomes. Percentage of expenditure on central

administration had negative relationships with mean Scholastic Aptitude Test and ACT scores and district completion rate. All of these outputs are key variables in measuring success in a school district and the correlation coefficients ranged from -0.649 to -0.742. This particular variable represents two things, the number of employees working at central office and the salaries of those individuals. If researchers take this further in the future they may consider identifying and separating these two issues. The researcher believes this would be beneficial because while some central offices may be considered top heavy, others may be trying to compete in the job market for central administration type positions. The salaries of superintendents alone could very much skew this data. The teacher turnover rate variable also appeared many times on this lower list. It appears that the explanation for this is that teacher turnover rate may not have as big of impact on student learning as the researcher may have thought. It is important to note that at certain grade levels this variable could have a tremendous impact, but this particular study looked at outputs relate to the end of high school, except for the T.A.K.S. scores used.

Implications for Public Policy

The researcher hopes that this study opens the door for others to do modified quadriform research with a more specific focus. One study of this magnitude, state wide and over 1000 school districts will not operationally define what efficiency is in Texas. However, if other researchers build on this study, that only begins to point us in a direction, then it could have a large impact on public policy in the future. One must be

reminded that the modified quadriform was first used to analyze schools in 1991. If this happens then one day there may be a universally agreed upon measure of efficiency in Texas.

Recommendations for Further Study

Based on the review of related literature and the analysis of data in this study the following recommendations for further study were determined.

1. A study should be conducted that breaks the school districts into regions using this approach of modified quadriform analysis and discriminant analysis.
2. A study should be done that examines the idea of the "voided cross" developed by Hickrod in which school districts that fall within a certain range of the x and y axis are discarded.
3. A study should be done that breaks the alterable characteristics into two categories, campus level expenditures and district level expenditures. This may shed light on where money should be focused in order to improve output scores.
4. A study should be done using the same procedures as this study examining teacher to student ratio looking at specific grades and specific grade outputs, to determine if class size has a bigger effect size at certain grade levels.
5. If further research is done in the area of student to teacher ratio it would be important to look at actual class size versus what is reported through A.E.I.S. The data used in this study is a broad definition of student to teacher ratio.

6. Each study conducted here after should be more focused, where as this study was exploratory and descriptive others should look at specific policy issues in a more causal manner.

The word efficient is not going away when debating school finance. The Texas Constitution says that the state should establish efficient free public schools. Yet efficiency is never defined in the document. While school finance reform in the past has been focused mostly on inequities, the future direction in the field of educational finance is efficiency. Tax payers want to know that money is not wasted, and that students are learning. In today's information age the community knows more about the daily operations and rating of our school districts and schools than ever before. This study gives us an idea of where districts fall across the state in the efficiency landscape and a direction for future research that may someday lead us to define what efficiency looks like in today's complex world of education finance.

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APPENDIX A

MODIFIED QUADRIFORM FORMATION

ALL GRADES MATH 2004

QUADRANT I

SCHOOL DISTRICTS

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL(2002-2003)	Predicted Value	Residual	Std. Residual	ALL GRADES MATH 2004	Predicted Value	Residual
ABERNATHY ISD	-0.228	8,712	9,160.68	-448.682	0.922	84.00	76.9100	7.09004
ABILENE ISD	-0.695	7,345	8,711.86	-1,366.856	0.794	81.00	74.8972	6.10282
ALAMO HEIGHTS ISD	-0.430	8,725	9,569.40	-844.399	0.472	90.00	86.3683	3.63170
ALBANY ISD	-0.275	8,539	9,079.09	-540.094	0.647	85.00	80.0252	4.97476
ALPINE ISD	-0.792	7,142	8,698.50	-1,556.502	1.108	84.00	75.4820	8.51796
ALVIN ISD	-0.283	7,334	7,890.65	-556.650	0.767	84.00	78.1038	5.89623
AMARILLO ISD	-0.492	7,093	8,060.60	-967.604	0.070	76.00	75.4604	0.53965
ANGLETON ISD	-0.965	6,551	8,447.70	-1,896.703	1.545	89.00	77.1217	11.87830
ANSON ISD	-0.490	8,229	9,191.72	-962.720	0.733	81.00	75.3649	5.63506
ANTHONY	-0.023	9,904	9,949.49	-45.494	0.034	64.00	63.7351	0.26493
ARCHER CITY ISD	-0.030	8,144	8,203.66	-59.660	0.225	87.00	85.2679	1.73205
ATHENS ISD	-0.381	7,633	8,382.33	-749.326	0.167	76.00	74.7199	1.28013
ATLANTA ISD	-0.608	7,337	8,532.97	-1,195.968	0.597	76.00	71.4116	4.58844
AUSTWELL-TIVOLI ISD	-1.882	11,235	14,934.13	-3,699.128	0.255	78.00	76.0423	1.95767
AVERY ISD	-0.524	7,796	8,825.71	-1,029.709	0.852	83.00	76.4471	6.55294
AVINGER ISD	-1.156	7,809	10,080.30	-2,271.301	0.341	74.00	71.3765	2.62348
AXTELL ISD	-0.643	9,106	10,370.26	-1,264.258	0.277	80.00	77.8683	2.13173
BANDERA ISD	-0.399	7,952	8,736.66	-784.664	0.392	84.00	80.9892	3.01081
BANGS ISD	-0.489	7,839	8,799.27	-960.269	0.867	85.00	78.3336	6.66639
BASTROP ISD	-0.422	7,582	8,410.60	-828.601	0.154	78.00	76.8196	1.18043
BAY CITY ISD	-0.248	8,080	8,567.06	-487.060	0.196	73.00	71.4897	1.51035
BELLVILLE ISD	-0.215	7,377	7,799.79	-422.789	0.289	83.00	80.7760	2.22399
BIG SANDY ISD	-0.434	7,606	8,459.51	-853.507	1.353	86.00	75.6010	10.39897
BIG SANDY ISD	-1.115	9,060	11,251.37	-2,191.374	0.898	80.00	73.0939	6.90612
BISHOP CONS ISD	-0.766	8,215	9,721.44	-1,506.442	0.532	79.00	74.9129	4.08708
BLUFF DALE ISD	-0.426	10,304	11,141.16	-837.162	1.391	97.00	86.3041	10.69592
BOERNE ISD	-0.256	7,862	8,365.75	-503.747	0.465	90.00	86.4234	3.57664
BOLING ISD	-0.139	7,527	7,800.83	-273.827	0.536	78.00	73.8827	4.11727
BOSQUEVILLE ISD	-0.118	8,297	8,528.77	-231.769	1.546	91.00	79.1119	11.88808
BOVINA ISD	-0.481	7,886	8,831.63	-945.633	0.033	69.00	68.7461	0.25393
BRADY ISD	-0.445	8,312	9,187.51	-875.514	0.442	78.00	74.6002	3.39976
BRAZOS ISD	-0.536	7,976	9,028.57	-1,052.573	0.592	81.00	76.4483	4.55174
BRAZOSPORT ISD	-1.326	6,904	9,510.30	-2,606.302	0.504	82.00	78.1231	3.87688
BRENHAM ISD	-0.108	7,815	8,026.95	-211.945	1.108	84.00	75.4835	8.51652
BRIDGE CITY ISD	-0.641	6,706	7,965.89	-1,259.888	0.067	85.00	84.4842	0.51581
BROWNSVILLE ISD	-0.361	8,053	8,762.28	-709.283	0.323	68.00	65.5189	2.48110
BROWNWOOD ISD	-0.677	7,267	8,598.25	-1,331.246	0.780	82.00	76.0046	5.99544
BRYAN ISD	-0.235	7,524	7,986.80	-462.797	0.037	71.00	70.7165	0.28350
BRYSON ISD	-0.562	8,367	9,471.72	-1,104.722	0.016	79.00	78.8749	0.12510
BUSHLAND ISD	-0.383	9,177	9,929.39	-752.385	0.724	93.00	87.4353	5.56470
CALALLEN ISD	-0.603	6,840	8,026.10	-1,186.098	0.423	84.00	80.7485	3.25146
CALDWELL ISD	-0.293	7,561	8,137.45	-576.454	0.243	79.00	77.1319	1.86810
CALHOUN CO ISD	-1.939	8,004	11,814.47	-3,810.467	0.588	83.00	78.4782	4.52176
CANADIAN ISD	-0.049	11,681	11,778.29	-97.286	0.182	83.00	81.6036	1.39636

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL(2002-2003)	Predicted Value	Residual	Std. Residual	ALL GRADES MATH 2004	Predicted Value	Residual
CARROLLTON-FARMERS BRANCH ISD	-0.249	8,258	8,747.80	-489.801	0.114	81.00	80.1256	0.87442
CAYUGA ISD	-1.016	7,280	9,276.55	-1,996.551	0.023	83.00	82.8225	0.17746
CELESTE ISD	-0.120	7,681	7,917.53	-236.525	0.680	87.00	81.7699	5.23011
CENTRAL HEIGHTS ISD	-0.264	7,349	7,867.94	-518.945	0.946	87.00	79.7246	7.27541
CENTRAL ISD	-0.903	6,578	8,352.93	-1,774.934	0.332	83.00	80.4507	2.54925
CHAPEL HILL ISD	-0.116	7,277	7,504.54	-227.538	0.076	74.00	73.4192	0.58080
CHILDRESS ISD	-0.040	8,502	8,580.86	-78.861	0.626	81.00	76.1899	4.81005
CHILLICOTHE ISD	-0.557	8,947	10,042.69	-1,095.689	1.949	89.00	74.0187	14.98134
CHINA SPRING ISD	-0.600	6,739	7,918.60	-1,179.600	0.056	86.00	85.5661	0.43386
CHIRENO ISD	-0.407	7,958	8,757.49	-799.491	2.151	90.00	73.4660	16.53396
CISCO ISD	-0.863	8,009	9,704.43	-1,695.428	0.482	80.00	76.2934	3.70660
CLARENDON ISD	-0.035	9,109	9,178.77	-69.766	0.756	81.00	75.1853	5.81469
CLEBURNE ISD	-0.474	7,404	8,335.39	-931.388	0.022	79.00	78.8293	0.17068
CLIFTON ISD	-0.290	8,313	8,882.99	-569.991	0.035	81.00	80.7291	0.27092
CLINT ISD	-0.855	6,934	8,614.26	-1,680.264	0.014	66.00	65.8959	0.10414
COAHOMA ISD	-0.471	7,603	8,529.17	-926.175	0.054	81.00	80.5811	0.41889
COMANCHE ISD	-0.902	6,882	8,654.03	-1,772.026	0.591	81.00	76.4597	4.54030
COMFORT ISD	-0.239	8,260	8,730.07	-470.071	0.100	79.00	78.2284	0.77156
COMMERCE ISD	-0.591	7,803	8,964.99	-1,161.988	0.997	81.00	73.3316	7.66839
COOPER ISD	-0.018	8,197	8,232.21	-35.208	0.033	76.00	75.7447	0.25533
COPPELL ISD	-0.086	7,793	7,961.14	-168.136	0.073	94.00	93.4366	0.56342
CORRIGAN-CAMDEN ISD	-0.249	8,579	9,068.09	-489.088	0.114	71.00	70.1205	0.87950
CROSS ROADS ISD	-0.469	8,605	9,526.81	-921.808	0.144	81.00	79.8901	1.10988
CROWLEY ISD	-0.007	7,173	7,186.37	-13.368	0.225	81.00	79.2694	1.73057
CUERO ISD	-0.245	7,531	8,012.70	-481.696	0.783	81.00	74.9792	6.02078
DALHART ISD	-0.792	7,862	9,419.54	-1,557.545	0.795	76.00	69.8906	6.10935
DANBURY ISD	-0.094	8,707	8,892.54	-185.540	1.358	86.00	75.5626	10.43744
DAWSON ISD	-0.280	7,978	8,528.22	-550.215	1.380	88.00	77.3909	10.60908
DEKALB ISD	-0.613	7,899	9,103.59	-1,204.591	0.512	88.00	84.0609	3.93915
DELL CITY ISD	-0.689	8,106	9,460.70	-1,354.699	0.418	72.00	68.7853	3.21468
DENTON ISD	-0.787	7,511	9,058.25	-1,547.248	0.629	82.00	77.1667	4.83327
DESOTO ISD	-0.619	11,568	12,785.18	-1,217.181	1.150	86.00	77.1594	8.84058
DEVINE ISD	-1.618	11,556	14,736.13	-3,180.129	1.855	94.00	79.7430	14.25704
DEWEYVILLE ISD	-2.720	12,047	17,392.94	-5,345.937	0.709	92.00	86.5477	5.45234
DIBOLL ISD	-0.515	7,534	8,545.83	-1,011.834	0.702	76.00	70.6057	5.39431
DICKINSON ISD	-0.412	7,496	8,306.68	-810.685	0.232	77.00	75.2128	1.78717
DODD CITY ISD	-0.008	7,856	7,872.51	-16.513	0.739	88.00	82.3215	5.67848
DOUGLASS ISD	-0.045	7,651	7,739.64	-88.636	0.668	88.00	82.8662	5.13384
DRIPPING SPRINGS ISD	-0.253	7,595	8,091.41	-496.406	0.302	91.00	88.6787	2.32132
DUMAS ISD	-1.289	6,435	8,967.86	-2,532.864	0.219	77.00	75.3181	1.68185
EAGLE PASS ISD	-0.865	7,006	8,706.58	-1,700.585	0.907	72.00	65.0248	6.97524

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL(2002-2003)	Predicted Value	Residual	Std. Residual	ALL GRADES MATH 2004	Predicted Value	Residual
EANES ISD	-0.045	9,555	9,643.77	-88.772	0.149	95.00	93.8528	1.14715
EAST BERNARD ISD	-0.115	7,604	7,829.62	-225.621	0.866	87.00	80.3439	6.65609
EDINBURG CONSOLIDATED	-0.138	8,263	8,534.95	-271.955	0.121	68.00	67.0694	0.93062
EL CAMPO ISD	-0.739	7,002	8,453.63	-1,451.627	0.505	76.00	72.1203	3.87969
ELYSIAN FIELDS ISD	-0.452	7,423	8,310.75	-887.747	0.401	82.00	78.9145	3.08552
ENNIS ISD	-0.500	7,798	8,779.83	-981.833	0.545	78.00	73.8065	4.19352
EUSTACE ISD	-1.470	7,063	9,951.93	-2,888.935	0.461	82.00	78.4540	3.54596
EVADALE ISD	-0.396	12,030	12,808.20	-778.202	0.340	90.00	87.3881	2.61187
EZZELL ISD	-1.148	10,441	12,696.51	-2,255.512	0.605	95.00	90.3506	4.64944
FAIRFIELD ISD	-1.413	8,350	11,127.89	-2,777.890	0.210	80.00	78.3861	1.61389
FARMERSVILLE ISD	-0.401	6,848	7,636.62	-788.623	0.140	82.00	80.9257	1.07431
FARWELL ISD	-0.035	8,776	8,844.97	-68.968	1.153	87.00	78.1333	8.86670
FERRIS ISD	-0.971	6,697	8,605.75	-1,908.746	0.060	74.00	73.5353	0.46466
FLORENCE ISD	-0.302	8,364	8,956.97	-592.968	0.221	81.00	79.3000	1.69997
FLOYDADA ISD	-0.195	8,155	8,539.17	-384.168	0.239	73.00	71.1588	1.84119
FRANKSTON ISD	-0.341	7,655	8,325.80	-670.802	0.069	79.00	78.4685	0.53151
FRENSHIP ISD	-0.399	6,986	7,769.56	-783.556	0.355	84.00	81.2699	2.73007
FRIONA ISD	-0.681	7,320	8,658.84	-1,338.841	0.111	73.00	72.1484	0.85165
GALENA PARK ISD	-0.190	7,813	8,187.11	-374.107	1.282	78.00	68.1406	9.85937
GALVESTON ISD	-0.319	7,957	8,583.11	-626.113	0.404	73.00	69.8915	3.10853
GANADO ISD	-0.124	7,966	8,209.03	-243.035	0.469	81.00	77.3941	3.60592
GARLAND ISD	-0.047	6,623	6,716.09	-93.092	0.023	79.00	78.8238	0.17623
GEORGE WEST ISD	-0.522	7,558	8,583.54	-1,025.539	0.472	81.00	77.3749	3.62514
GHOLSON ISD	-0.166	8,586	8,911.67	-325.665	2.344	92.00	73.9779	18.02213
GIDDINGS ISD	-0.155	7,513	7,817.48	-304.484	0.519	80.00	76.0124	3.98763
GLASSCOCK COUNTY ISD	-1.738	10,289	13,706.04	-3,417.036	1.491	94.00	82.5383	11.46171
GLEN ROSE ISD	-2.453	8,601	13,423.37	-4,822.373	0.287	86.00	83.7900	2.20995
GOLDTHWAITE ISD	-0.317	8,391	9,014.93	-623.934	0.697	85.00	79.6440	5.35597
GOLIAD ISD	-0.453	8,653	9,543.56	-890.559	0.781	84.00	77.9972	6.00283
GONZALES ISD	-0.591	7,235	8,397.06	-1,162.064	0.164	73.00	71.7399	1.26014
GOOSE CREEK CISD	-0.266	8,144	8,667.19	-523.188	0.347	76.00	73.3341	2.66590
GORMAN ISD	-0.469	8,797	9,718.76	-921.757	0.170	74.00	72.6896	1.31038
GRADY ISD	-0.021	10,218	10,258.78	-40.777	1.308	91.00	80.9472	10.05278
GRAHAM ISD	-0.529	7,090	8,129.94	-1,039.944	0.146	82.00	80.8781	1.12186
GRAND PRAIRIE ISD	-0.093	7,698	7,881.47	-183.466	0.126	74.00	73.0291	0.97087
GRANGER ISD	-0.073	8,221	8,363.86	-142.858	0.668	83.00	77.8629	5.13713
GRAPE CREEK ISD	-0.363	7,862	8,576.39	-714.388	0.115	78.00	77.1143	0.88569

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GRAPEVINE-COLLEYVILLE ISD	-0.115	7,777	8,003.89	-226.892	0.227	92.00	90.2556	1.74439
HALE CENTER ISD	-0.470	8,676	9,600.11	-924.114	0.966	76.00	68.5708	7.42925
HALLSBURG ISD	-0.498	9,976	10,954.01	-978.013	1.895	96.00	81.4345	14.56547
HALLSVILLE ISD	-0.793	7,063	8,621.84	-1,558.836	0.031	83.00	82.7637	0.23633
HAMLIN ISD	-0.201	9,714	10,108.72	-394.716	1.629	86.00	73.4796	12.52039
HARDIN ISD	-0.469	7,146	8,068.51	-922.510	0.703	87.00	81.5929	5.40706
HARLETON ISD	-0.208	7,540	7,948.95	-408.954	0.324	85.00	82.5087	2.49130
HARLINGEN CONS ISD	-0.362	7,656	8,367.03	-711.032	0.751	76.00	70.2301	5.76988
HARPER ISD	-0.071	9,272	9,412.08	-140.082	1.099	91.00	82.5537	8.44634
HARTS BLUFF ISD	-0.700	6,805	8,180.75	-1,375.746	0.399	82.00	78.9326	3.06742
HAWKINS ISD	-0.396	8,822	9,601.33	-779.327	0.458	82.00	78.4778	3.52220
HEMPHILL ISD	-0.136	8,958	9,226.19	-268.192	1.492	87.00	75.5311	11.46889
HENDERSON ISD	-0.563	7,577	8,683.52	-1,106.521	0.550	79.00	74.7693	4.23067
HICO ISD	-0.573	7,508	8,633.61	-1,125.605	0.750	84.00	78.2306	5.76944
HIGHLAND PARK ISD	-1.688	8,203	11,521.73	-3,318.727	0.428	98.00	94.7128	3.28722
HIGHLAND PARK ISD	-1.294	9,208	11,752.34	-2,544.342	0.438	84.00	80.6359	3.36408
HOOKS ISD	-0.163	7,474	7,793.94	-319.944	0.159	79.00	77.7794	1.22062
HUBBARD ISD	-0.511	7,299	8,302.59	-1,003.586	0.353	74.00	71.2889	2.71112
HUDSON ISD	-0.464	7,062	7,974.01	-912.015	1.253	87.00	77.3697	9.63034
HUGHES SPRINGS ISD	-0.608	7,655	8,850.23	-1,195.228	0.051	76.00	75.6081	0.39186
HUNTINGTON ISD	-0.417	7,539	8,359.63	-820.626	0.264	83.00	80.9733	2.02673
HURST-EULESS-BEDFORD ISD	-0.266	7,622	8,145.52	-523.519	0.233	84.00	82.2076	1.79236
IDALOU ISD	-0.168	7,726	8,055.54	-329.539	0.673	84.00	78.8239	5.17611
ITASCA ISD	-0.004	8,993	9,001.42	-8.416	2.842	94.00	72.1491	21.85088
JEFFERSON ISD	-0.462	8,380	9,288.59	-908.592	0.049	69.00	68.6212	0.37877
JOSHUA ISD	-0.331	7,337	7,988.27	-651.274	0.073	82.00	81.4421	0.55793
KARNES CITY ISD	-0.281	8,109	8,660.89	-551.894	0.687	79.00	73.7222	5.27784
KEENE ISD	-0.929	7,937	9,763.35	-1,826.349	0.572	78.00	73.6005	4.39952
KENEDY COUNTY WIDE CSD	-7.066	14,893	28,782.63	-13,889.626	1.384	95.00	84.3583	10.64169
KERENS ISD	-0.214	7,910	8,331.01	-421.008	0.005	72.00	71.9630	0.03702
KERRVILLE ISD	-0.567	7,694	8,808.03	-1,114.025	0.963	86.00	78.5932	7.40682
KLONDIKE ISD	-0.245	12,132	12,613.30	-481.302	0.092	82.00	81.2893	0.71071
KOUNTZE ISD	-0.166	7,448	7,774.24	-326.236	0.001	79.00	78.9945	0.00552
LA GRANGE ISD	-0.701	7,241	8,618.10	-1,377.098	0.259	81.00	79.0123	1.98772
LA JOYA ISD	-0.390	7,894	8,659.88	-765.884	0.852	72.00	65.4508	6.54915
LA PORTE ISD	-0.274	8,709	9,246.89	-537.890	0.103	83.00	82.2083	0.79172
LAGO VISTA ISD	-0.077	9,398	9,550.33	-152.325	0.428	91.00	87.7094	3.29062
LAMPASAS ISD	-0.728	6,972	8,402.87	-1,430.873	0.056	80.00	79.5693	0.43066
LAZBUDDIE ISD	-0.128	10,364	10,616.00	-252.000	1.449	83.00	71.8633	11.13670
LEONARD ISD	-0.165	7,586	7,909.38	-323.384	0.316	83.00	80.5673	2.43267

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LEVELLAND ISD	-0.898	7,571	9,335.64	-1,764.636	0.312	76.00	73.6006	2.39940
LEVERETTS CHAPEL ISD	-0.096	8,631	8,820.00	-189.000	1.301	84.00	73.9996	10.00036
LIBERTY ISD	-0.125	7,696	7,942.57	-246.568	0.831	91.00	84.6104	6.38965
LINDALE ISD	-0.295	7,273	7,851.92	-578.920	0.234	84.00	82.1988	1.80116
LINDEN-KILDARE CONS ISD	-0.314	7,965	8,582.30	-617.305	1.360	86.00	75.5434	10.45660
LLANO ISD	-0.831	10,037	11,670.87	-1,633.871	0.074	83.00	82.4314	0.56860
LOCKHART ISD	-0.237	7,870	8,336.70	-466.702	0.298	77.00	74.7075	2.29250
LOCKNEY ISD	-0.412	7,704	8,513.18	-809.184	0.404	76.00	72.8973	3.10274
LOMETA ISD	-0.304	9,498	10,094.95	-596.954	1.357	83.00	72.5696	10.43045
LONDON ISD	-0.104	8,300	8,503.83	-203.834	0.599	90.00	85.3915	4.60851
LONE OAK ISD	-0.398	7,386	8,169.28	-783.283	0.705	89.00	83.5836	5.41642
LONGVIEW ISD	-0.398	7,759	8,541.28	-782.276	0.945	74.00	66.7321	7.26791
LORENA ISD	-0.687	6,209	7,559.46	-1,350.458	0.062	87.00	86.5249	0.47512
LOS FRESNOS CONS ISD	-0.641	7,727	8,987.41	-1,260.412	1.211	76.00	66.6889	9.31111
LOUISE ISD	-0.546	7,903	8,975.71	-1,072.713	0.288	79.00	76.7886	2.21140
LUBBOCK ISD	-0.585	7,702	8,852.84	-1,150.836	0.850	86.00	79.4644	6.53565
LUFKIN ISD	-0.588	7,224	8,379.70	-1,155.704	1.511	82.00	70.3872	11.61279
MABANK ISD	-0.986	7,154	9,092.94	-1,938.941	0.336	82.00	79.4206	2.57944
MADISONVILLE CONS ISD	-0.232	7,791	8,246.85	-455.855	1.456	83.00	71.8097	11.19026
MALTA ISD	-0.457	8,384	9,282.48	-898.485	2.382	96.00	77.6904	18.30956
MARSHALL ISD	-0.527	7,313	8,349.23	-1,036.225	1.074	78.00	69.7423	8.25767
MARTINS MILL ISD	-0.166	8,435	8,760.73	-325.732	1.438	91.00	79.9471	11.05285
MARTINSVILLE ISD	-0.258	7,960	8,467.95	-507.949	0.161	77.00	75.7639	1.23608
MATAGORDA ISD	-0.332	15,949	16,602.22	-653.221	0.568	83.00	78.6326	4.36740
MAUD ISD	-0.318	7,608	8,233.21	-625.214	0.735	85.00	79.3530	5.64698
MCALLEN ISD	-0.381	7,395	8,143.38	-748.376	0.232	73.00	71.2181	1.78191
MCLEAN ISD	-0.291	9,156	9,728.70	-572.701	0.786	88.00	81.9544	6.04560
MCLEOD ISD	-0.082	7,865	8,025.62	-160.615	1.420	93.00	82.0830	10.91698
MEDINA ISD	-0.176	10,444	10,789.55	-345.546	0.733	85.00	79.3647	5.63535
MERIDIAN ISD	-0.713	7,221	8,623.32	-1,402.319	0.617	82.00	77.2564	4.74360
MEXIA ISD	-0.078	8,199	8,353.28	-154.280	0.576	73.00	68.5728	4.42722
MIDLAND ISD	-0.344	7,077	7,753.19	-676.190	0.192	78.00	76.5263	1.47366
MIDWAY ISD	-0.106	7,398	7,607.11	-209.111	0.229	88.00	86.2388	1.76118
MILDRED ISD	-0.136	8,093	8,359.58	-266.576	0.075	84.00	83.4201	0.57987
MINEOLA ISD	-0.280	8,257	8,807.05	-550.045	0.346	79.00	76.3390	2.66105
MONAHANS-WICKETT-PYOTE ISD	-1.090	7,266	9,409.03	-2,143.027	0.926	84.00	76.8796	7.12043
MORGAN ISD	-0.788	9,951	11,500.76	-1,549.757	0.182	71.00	69.6020	1.39800
MORGAN MILL ISD	-0.975	7,309	9,225.26	-1,916.262	0.863	87.00	80.3681	6.63190
MOULTON ISD	-0.318	7,770	8,394.16	-624.159	1.412	89.00	78.1414	10.85860

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MOUNT PLEASANT ISD	-0.783	7,857	9,395.76	-1,538.762	0.270	72.00	69.9208	2.07917
MOUNT VERNON ISD	-1.003	7,226	9,197.92	-1,971.919	0.715	87.00	81.5002	5.49978
MUENSTER ISD	-0.225	7,250	7,692.06	-442.057	0.494	91.00	87.2050	3.79503
MULESHOE ISD	-0.445	8,166	9,040.36	-874.363	0.469	75.00	71.3952	3.60478
MUMFORD ISD	-1.314	6,160	8,743.54	-2,583.536	2.465	88.00	69.0503	18.94967
MURCHISON ISD	-0.685	8,397	9,743.80	-1,346.803	0.651	83.00	77.9977	5.00232
NACOGDOCHES ISD	-0.309	7,331	7,937.40	-606.403	0.480	73.00	69.3074	3.69255
NAVARRO ISD	-0.247	7,603	8,088.48	-485.479	0.752	87.00	81.2212	5.77879
NECHES ISD	-0.720	7,488	8,903.79	-1,415.792	1.043	88.00	79.9832	8.01682
NEW BOSTON ISD	-0.821	6,960	8,573.39	-1,613.386	1.146	85.00	76.1881	8.81187
NEW BRAUNFELS ISD	-0.366	7,361	8,081.01	-720.008	0.063	81.00	80.5164	0.48356
NEW DEAL ISD	-0.562	7,944	9,048.68	-1,104.684	0.246	78.00	76.1061	1.89395
NEWCASTLE ISD	-0.212	8,658	9,075.34	-417.339	1.121	87.00	78.3843	8.61569
NIXON-SMILEY CONS ISD	-0.129	8,347	8,599.58	-252.584	0.282	73.00	70.8302	2.16975
NOCONA ISD	-0.229	8,624	9,073.59	-449.591	0.139	79.00	77.9313	1.06868
NUECES CANYON CISD	-0.307	10,306	10,908.83	-602.833	0.093	74.00	73.2827	0.71726
NURSERY ISD	-2.682	7,919	13,190.96	-5,271.964	0.574	89.00	84.5873	4.41267
OLNEY ISD	-0.490	8,225	9,188.45	-963.450	1.159	87.00	78.0918	8.90817
ORANGE GROVE ISD	-0.314	7,657	8,273.50	-616.497	0.718	79.00	73.4781	5.52195
ORE CITY ISD	-0.207	8,271	8,677.95	-406.947	1.513	88.00	76.3715	11.62845
PALACIOS ISD	-0.556	10,028	11,121.37	-1,093.370	0.309	80.00	77.6252	2.37480
PALESTINE ISD	-0.237	7,487	7,952.56	-465.556	0.238	72.00	70.1741	1.82591
PARIS ISD	-0.086	7,937	8,106.01	-169.011	0.706	74.00	68.5708	5.42924
PASADENA ISD	-0.073	7,170	7,313.81	-143.809	0.366	76.00	73.1855	2.81454
PERRYTON ISD	-0.641	7,332	8,592.80	-1,260.800	0.186	78.00	76.5684	1.43164
PEWITT ISD	-0.452	7,800	8,688.34	-888.344	0.787	80.00	73.9482	6.05176
PHARR-SAN JUAN-ALAMO ISD	-0.227	7,996	8,442.72	-446.724	0.288	68.00	65.7884	2.21155
PINE TREE ISD	-0.630	6,608	7,845.61	-1,237.609	0.477	84.00	80.3298	3.67019
PITTSBURG ISD	-0.676	7,593	8,921.61	-1,328.608	0.355	74.00	71.2721	2.72789
PLAINVIEW ISD	-1.091	6,334	8,478.89	-2,144.889	0.179	74.00	72.6248	1.37518
PLEASANT GROVE ISD	-0.071	6,787	6,926.54	-139.536	0.112	88.00	87.1403	0.85973
PLEASANTON ISD	-0.784	7,517	9,058.86	-1,541.862	0.695	79.00	73.6544	5.34557
PLEMONS-STINNETT-PHILLIPS CONS ISD	-1.968	11,152	15,021.21	-3,869.207	0.080	81.00	80.3827	0.61731
POINT ISABEL ISD	-1.682	8,726	12,032.70	-3,306.698	0.707	74.00	68.5612	5.43882
PORT ARTHUR ISD	-0.110	7,808	8,024.91	-216.912	0.531	67.00	62.9212	4.07878
POST ISD	-0.417	9,045	9,864.34	-819.342	0.182	76.00	74.6000	1.39995
POTTSBORO ISD	-0.139	8,292	8,565.34	-273.343	0.442	89.00	85.6020	3.39798

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PRAIRILAND ISD	-0.846	7,217	8,879.87	-1,662.870	0.843	85.00	78.5222	6.47776
PROSPER ISD	-0.049	7,918	8,013.44	-95.442	0.533	91.00	86.9047	4.09529
QUANAH ISD	-0.466	9,376	10,292.80	-916.798	0.440	79.00	75.6176	3.38244
QUEEN CITY ISD	-1.059	7,713	9,793.67	-2,080.669	0.330	78.00	75.4599	2.54008
RALLS ISD	-1.024	8,133	10,145.63	-2,012.630	1.107	78.00	69.4861	8.51395
RANGER ISD	-0.551	9,248	10,330.15	-1,082.153	0.600	80.00	75.3855	4.61446
RANKIN ISD	-0.554	14,580	15,668.28	-1,088.278	1.279	91.00	81.1636	9.83641
RED LICK ISD	-0.720	5,825	7,240.81	-1,415.807	0.908	94.00	87.0160	6.98399
RICARDO ISD	-0.741	7,891	9,346.73	-1,455.734	2.415	92.00	73.4352	18.56481
RICE ISD	-0.618	7,329	8,544.05	-1,215.048	0.362	79.00	76.2190	2.78095
RICHARDSON ISD	-0.119	8,160	8,394.37	-234.369	0.688	84.00	78.7130	5.28704
RIVERCREST ISD	-0.451	7,502	8,387.76	-885.759	0.619	84.00	79.2412	4.75884
ROCKDALE ISD	-1.166	6,947	9,238.38	-2,291.377	0.164	77.00	75.7407	1.25927
ROCKWALL ISD	-0.012	7,439	7,462.71	-23.711	0.315	89.00	86.5761	2.42395
ROGERS ISD	-0.064	7,817	7,943.43	-126.430	0.836	87.00	80.5736	6.42643
ROOSEVELT ISD	-0.420	8,335	9,160.08	-825.081	1.285	82.00	72.1214	9.87855
ROSEBUD-LOTT ISD	-0.357	7,623	8,324.14	-701.140	0.499	78.00	74.1651	3.83488
ROUND TOP-CARMINE ISD	-0.461	9,972	10,877.23	-905.231	0.574	91.00	86.5888	4.41122
ROYAL ISD	-0.089	8,436	8,611.42	-175.420	0.224	68.00	66.2791	1.72095
RUSK ISD	-0.597	7,074	8,247.38	-1,173.385	0.213	78.00	76.3646	1.63541
SABINAL ISD	-0.371	8,708	9,436.85	-728.847	0.703	77.00	71.5949	5.40514
SAINT JO ISD	-0.402	7,978	8,768.33	-790.333	1.549	94.00	82.0880	11.91202
SALTILLO ISD	-0.748	8,199	9,669.45	-1,470.454	0.946	84.00	76.7251	7.27493
SAM RAYBURN ISD	-0.464	7,372	8,284.35	-912.351	0.805	87.00	80.8108	6.18924
SAN BENITO CONS ISD	-0.516	7,727	8,741.36	-1,014.363	0.828	73.00	66.6382	6.36181
SAN ISIDRO ISD	-0.316	12,137	12,757.45	-620.453	2.534	89.00	69.5215	19.47847
SAN SABA ISD	-0.217	8,660	9,086.26	-426.256	0.404	79.00	75.8917	3.10827
SANDS CISD	-0.199	10,188	10,579.61	-391.614	1.889	89.00	74.4808	14.51923
SCHULENBURG ISD	-0.283	8,158	8,713.99	-555.993	1.880	90.00	75.5473	14.45268
SEMINOLE ISD	-1.438	9,870	12,697.23	-2,827.228	0.473	82.00	78.3665	3.63345
SHALLOWATER ISD	0.000	7,724	7,724.00	-0.003	0.681	85.00	79.7673	5.23271
SHARYLAND ISD	-0.308	6,986	7,592.03	-606.025	0.707	80.00	74.5668	5.43321
SHERMAN ISD	-0.573	7,560	8,685.97	-1,125.967	0.617	81.00	76.2548	4.74524
SHINER ISD	-0.006	8,570	8,580.83	-10.829	1.400	89.00	78.2358	10.76416
SINTON ISD	-0.646	7,457	8,726.31	-1,269.311	0.588	76.00	71.4800	4.51997
SKIDMORE-TYNAN ISD	-0.443	7,814	8,684.32	-870.322	0.267	75.00	72.9509	2.04913
SLATON ISD	-0.407	8,043	8,842.69	-799.694	0.008	72.00	71.9348	0.06521
SLOCUM ISD	-1.174	7,024	9,332.11	-2,308.114	0.575	84.00	79.5763	4.42375
SMITHVILLE ISD	-0.258	8,074	8,581.40	-507.400	0.169	79.00	77.7041	1.29587
SOUTHLAND ISD	-0.675	8,497	9,824.27	-1,327.275	0.216	73.00	71.3377	1.66232
SOUTHWEST ISD	-0.634	7,524	8,769.47	-1,245.468	0.039	68.00	67.7024	0.29758

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL(2002-2003)	Predicted Value	Residual	Std. Residual	ALL GRADES MATH 2004	Predicted Value	Residual
SPRING BRANCH ISD	-0.138	8,545	8,816.76	-271.764	0.969	85.00	77.5510	7.44905
SPRING CREEK ISD	-0.810	8,161	9,752.57	-1,591.567	0.994	85.00	77.3550	7.64497
SPRING HILL ISD	-0.205	6,338	6,740.00	-401.999	0.261	87.00	84.9972	2.00283
STAMFORD ISD	-0.099	8,652	8,846.33	-194.331	0.410	75.00	71.8500	3.15000
STANTON ISD	-0.189	8,645	9,016.36	-371.356	0.146	77.00	75.8776	1.12242
STEPHENVILLE	-0.562	6,889	7,994.48	-1,105.476	0.527	86.00	81.9474	4.05261
STRATFORD ISD	-0.344	9,172	9,848.00	-675.998	1.766	90.00	76.4257	13.57431
STRAWN ISD	-0.553	8,312	9,399.12	-1,087.122	1.189	87.00	77.8627	9.13733
SUDAN ISD	-0.411	13,550	14,358.73	-808.730	1.011	85.00	77.2257	7.77433
SULPHUR SPRINGS ISD	-0.428	7,344	8,185.13	-841.133	0.119	79.00	78.0864	0.91358
SWEENY ISD	-0.757	8,743	10,230.93	-1,487.928	0.595	85.00	80.4279	4.57213
TAYLOR ISD	-0.228	8,056	8,504.06	-448.057	0.092	73.00	72.2926	0.70740
TEMPLE ISD	-0.139	8,254	8,526.56	-272.556	0.281	74.00	71.8412	2.15883
TERRELL ISD	-0.315	8,071	8,690.28	-619.276	0.430	74.00	70.6977	3.30225
TEXARKANA ISD	-0.543	7,387	8,453.37	-1,066.374	0.696	73.00	67.6473	5.35268
TEXHOMA ISD	-1.295	6,276	8,822.10	-2,546.104	1.761	91.00	77.4648	13.53519
TIMPSON ISD	-0.197	7,961	8,348.33	-387.329	0.821	78.00	71.6863	6.31369
TORNILLO ISD	-0.545	7,598	8,669.31	-1,071.307	0.560	68.00	63.6953	4.30470
TULIA ISD	-0.242	7,951	8,427.53	-476.526	0.048	72.00	71.6299	0.37009
TULOSO-MIDWAY ISD	-0.604	7,622	8,809.52	-1,187.524	0.443	81.00	77.5953	3.40466
TURKEY-QUITAQUE ISD	-0.326	8,122	8,763.62	-641.625	0.878	80.00	73.2534	6.74657
TYLER ISD	-0.434	7,233	8,085.38	-852.384	0.508	75.00	71.0984	3.90164
UNION GROVE ISD	-0.274	7,596	8,134.64	-538.637	0.728	87.00	81.4045	5.59550
UTOPIA ISD	-0.315	9,348	9,966.82	-618.824	1.009	89.00	81.2399	7.76007
VALLEY MILLS ISD	-0.517	8,392	9,408.91	-1,016.911	0.729	85.00	79.3967	5.60326
VALLEY VIEW ISD	-0.327	8,386	9,028.33	-642.331	2.680	85.00	64.3979	20.60208
VAN ISD	-0.571	7,113	8,235.85	-1,122.846	0.069	81.00	80.4689	0.53107
VENUS ISD	-1.437	6,801	9,625.26	-2,824.264	0.108	76.00	75.1730	0.82695
VERIBEST ISD	-0.829	7,758	9,386.62	-1,628.615	0.190	76.00	74.5369	1.46313
VYSEHRAD ISD	-0.395	8,538	9,313.44	-775.441	1.546	96.00	84.1158	11.88420
WAELDER ISD	-0.826	8,842	10,465.80	-1,623.797	0.720	68.00	62.4639	5.53611
WALCOTT ISD	-0.538	7,729	8,785.81	-1,056.810	3.097	96.00	72.1917	23.80830
WAXAHACHIE ISD	-0.393	7,868	8,639.84	-771.841	0.189	79.00	77.5433	1.45675
WEBB CONS ISD	-0.041	20,119	20,200.26	-81.261	1.919	94.00	79.2460	14.75401
WELLS ISD	-0.262	7,929	8,444.53	-515.532	1.056	84.00	75.8804	8.11959
WESLACO ISD	-0.326	7,882	8,523.39	-641.391	1.121	75.00	66.3796	8.62037
WEST ISD	-0.801	7,384	8,957.66	-1,573.660	0.444	85.00	81.5865	3.41347
WEST RUSK ISD	-0.124	8,543	8,786.54	-243.535	0.093	76.00	75.2818	0.71823
WEST SABINE ISD	-0.750	7,758	9,232.78	-1,474.777	0.252	78.00	76.0589	1.94108
WHARTON ISD	-0.550	7,067	8,147.43	-1,080.431	0.416	73.00	69.8051	3.19487

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL(2002-2003)	Predicted Value	Residual	Std. Residual	ALL GRADES MATH 2004	Predicted Value	Residual
WHEELER ISD	-0.154	8,248	8,550.15	-302.148	0.609	83.00	78.3192	4.68084
WHITE OAK ISD	-0.202	6,530	6,926.13	-396.133	0.597	90.00	85.4097	4.59026
WHITEHOUSE ISD	-0.497	6,350	7,327.68	-977.677	0.182	85.00	83.6032	1.39682
WHITEWRIGHT ISD	-0.321	7,493	8,123.41	-630.412	1.646	93.00	80.3485	12.65154
WICHITA FALLS ISD	-0.432	7,329	8,177.58	-848.578	0.153	77.00	75.8250	1.17504
WINFIELD ISD	-1.193	7,782	10,127.11	-2,345.106	0.050	73.00	72.6158	0.38422
WINNSBORO ISD	-1.109	6,451	8,630.02	-2,179.021	0.404	84.00	80.8915	3.10850
WOODVILLE ISD	-0.108	8,699	8,911.15	-212.152	0.837	77.00	70.5636	6.43638
WYLIE ISD	-0.436	6,186	7,042.52	-856.522	0.344	91.00	88.3541	2.64587
YOAKUM ISD	-0.221	8,048	8,481.83	-433.834	0.846	81.00	74.4935	6.50650
YORKTOWN ISD	-0.356	7,274	7,973.83	-699.827	0.409	81.00	77.8592	3.14081
YSLETA ISD	-0.359	7,338	8,043.15	-705.146	0.703	74.00	68.5932	5.40680
ZEPHYR ISD	-0.637	8,336	9,587.97	-1,251.974	0.907	85.00	78.0269	6.97309

APPENDIX B

MODIFIED QUADRIFORM FORMATION

ALL GRADES READING 2004

QUADRANT I

SCHOOL DISTRICTS

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	ALL GRADES READING 2004	Predicted Value	Residual
ABERNATHY ISD	-0.228	8,712	9,160.68	-448.682	1.099	92.00	86.9073	5.09273
ABILENE ISD	-0.695	7,345	8,711.86	-1,366.856	0.897	90.00	85.8425	4.15752
ALAMO HEIGHTS ISD	-0.430	8,725	9,569.40	-844.399	0.329	94.00	92.4767	1.52331
ALPINE ISD	-0.792	7,142	8,698.50	-1,556.502	1.436	92.00	85.3423	6.65770
ALVIN ISD	-0.283	7,334	7,890.65	-556.650	0.388	89.00	87.2029	1.79707
AMARILLO ISD	-0.492	7,093	8,060.60	-967.604	0.145	86.00	85.3301	0.66985
ANGLETON ISD	-0.965	6,551	8,447.70	-1,896.703	1.315	93.00	86.9049	6.09509
ANSON ISD	-0.490	8,229	9,191.72	-962.720	0.773	90.00	86.4153	3.58471
ANTHONY	-0.023	9,904	9,949.49	-45.494	1.653	85.00	77.3406	7.65941
ARCHER CITY ISD	-0.030	8,144	8,203.66	-59.660	0.222	94.00	92.9713	1.02873
ATLANTA ISD	-0.608	7,337	8,532.97	-1,195.968	1.456	91.00	84.2528	6.74725
AUSTWELL-TIVOLI ISD	-1.882	11,235	14,934.13	-3,699.128	1.954	95.00	85.9418	9.05820
AXTELL ISD	-0.643	9,106	10,370.26	-1,264.258	0.036	90.00	89.8319	0.16809
BANDERA ISD	-0.399	7,952	8,736.66	-784.664	0.241	91.00	89.8811	1.11893
BANGS ISD	-0.489	7,839	8,799.27	-960.269	0.497	91.00	88.6960	2.30398
BANQUETE ISD	-0.043	8,781	8,864.74	-83.744	0.582	86.00	83.3012	2.69880
BARTLETT ISD	-0.327	8,164	8,806.79	-642.793	0.512	84.00	81.6291	2.37089
BELLVILLE ISD	-0.215	7,377	7,799.79	-422.789	0.513	92.00	89.6208	2.37916
BELTON ISD	-0.384	7,553	8,308.73	-755.725	0.015	88.00	87.9292	0.07080
BENAVIDES ISD	-0.189	10,033	10,405.01	-372.012	0.404	81.00	79.1283	1.87167
BIG SANDY ISD	-0.434	7,606	8,459.51	-853.507	0.535	89.00	86.5188	2.48116
BIG SANDY ISD	-1.115	9,060	11,251.37	-2,191.374	0.072	89.00	88.6641	0.33589
BIRDVILLE ISD	-0.371	7,288	8,016.83	-728.834	0.025	90.00	89.8830	0.11704
BISHOP CONS ISD	-0.766	8,215	9,721.44	-1,506.442	1.311	91.00	84.9251	6.07489
BLOOMINGTON ISD	-0.572	8,094	9,219.09	-1,125.087	0.213	82.00	81.0147	0.98534
BLUFF DALE ISD	-0.426	10,304	11,141.16	-837.162	0.945	97.00	92.6207	4.37928
BOERNE ISD	-0.256	7,862	8,365.75	-503.747	0.189	94.00	93.1247	0.87526
BOLING ISD	-0.139	7,527	7,800.83	-273.827	1.356	91.00	84.7142	6.28581
BOSQUEVILLE ISD	-0.118	8,297	8,528.77	-231.769	1.517	96.00	88.9683	7.03165
BRAZOS ISD	-0.536	7,976	9,028.57	-1,052.573	0.463	89.00	86.8529	2.14711
BRAZOSPORT ISD	-1.326	6,904	9,510.30	-2,606.302	0.575	90.00	87.3358	2.66423
BRENHAM ISD	-0.108	7,815	8,026.95	-211.945	0.878	90.00	85.9283	4.07168
BRIDGE CITY ISD	-0.641	6,706	7,965.89	-1,259.888	0.010	92.00	91.9527	0.04727
BROWNSVILLE ISD	-0.361	8,053	8,762.28	-709.283	0.236	79.00	77.9064	1.09359
BROWNWOOD ISD	-0.677	7,267	8,598.25	-1,331.246	0.418	88.00	86.0624	1.93762
BRYSON ISD	-0.562	8,367	9,471.72	-1,104.722	0.828	93.00	89.1625	3.83746
BUENA VISTA ISD	-0.251	17,414	17,906.43	-492.433	0.984	91.00	86.4403	4.55970
BUNA ISD	-0.208	7,615	8,024.02	-409.017	0.143	92.00	91.3359	0.66410
BURNET CONS ISD	-0.569	8,098	9,215.85	-1,117.845	0.267	91.00	89.7627	1.23733
BUSHLAND ISD	-0.383	9,177	9,929.39	-752.385	0.680	97.00	93.8506	3.14939
CALALLEN ISD	-0.603	6,840	8,026.10	-1,186.098	0.629	92.00	89.0834	2.91661
CALDWELL ISD	-0.293	7,561	8,137.45	-576.454	0.186	88.00	87.1373	0.86272

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	ALL GRADES READING 2004	Predicted Value	Residual
CALHOUN CO ISD	-1.939	8,004	11,814.47	-3,810.467	0.867	91.00	86.9832	4.01677
CANADIAN ISD	-0.049	11,681	11,778.29	-97.286	0.274	91.00	89.7279	1.27208
CANTON ISD	-0.240	7,066	7,537.43	-471.426	0.328	93.00	91.4793	1.52070
CARROLLTON-FARMERS BRANCH ISD	-0.249	8,258	8,747.80	-489.801	0.156	88.00	87.2773	0.72274
CAYUGA ISD	-1.016	7,280	9,276.55	-1,996.551	0.525	94.00	91.5689	2.43109
CELESTE ISD	-0.120	7,681	7,917.53	-236.525	1.120	96.00	90.8070	5.19299
CENTER ISD	-0.370	6,941	7,669.17	-728.173	0.428	85.00	83.0172	1.98277
CENTER POINT ISD	-0.185	8,703	9,066.12	-363.122	0.656	90.00	86.9607	3.03931
CENTRAL HEIGHTS ISD	-0.264	7,349	7,867.94	-518.945	0.813	93.00	89.2298	3.77022
CENTRAL ISD	-0.903	6,578	8,352.93	-1,774.934	0.009	90.00	89.9593	0.04069
CHANNING ISD	-0.097	11,800	11,991.64	-191.640	0.198	92.00	91.0838	0.91618
CHILLICOTHE ISD	-0.557	8,947	10,042.69	-1,095.689	0.794	89.00	85.3212	3.67884
CISCO ISD	-0.863	8,009	9,704.43	-1,695.428	0.128	88.00	87.4088	0.59118
CLARENDON ISD	-0.035	9,109	9,178.77	-69.766	1.173	92.00	86.5646	5.43544
CLARKSVILLE ISD	-0.151	8,501	8,798.59	-297.593	1.124	85.00	79.7918	5.20821
CLIFTON ISD	-0.290	8,313	8,882.99	-569.991	0.124	90.00	89.4262	0.57379
COAHOMA ISD	-0.471	7,603	8,529.17	-926.175	0.371	91.00	89.2802	1.71978
COLMESNEIL ISD	-0.521	7,166	8,189.18	-1,023.176	0.295	91.00	89.6335	1.36654
COMANCHE ISD	-0.902	6,882	8,654.03	-1,772.026	0.108	87.00	86.4979	0.50210
COMFORT ISD	-0.239	8,260	8,730.07	-470.071	0.397	89.00	87.1588	1.84122
COMMERCE ISD	-0.591	7,803	8,964.99	-1,161.988	1.225	91.00	85.3214	5.67863
CORPUS CHRISTI ISD	-0.355	7,416	8,114.33	-698.331	0.255	85.00	83.8163	1.18375
CROSS ROADS ISD	-0.469	8,605	9,526.81	-921.808	0.571	92.00	89.3529	2.64706
CROWLEY ISD	-0.007	7,173	7,186.37	-13.368	0.605	91.00	88.1942	2.80584
CUERO ISD	-0.245	7,531	8,012.70	-481.696	0.728	89.00	85.6243	3.37569
DALHART ISD	-0.792	7,862	9,419.54	-1,557.545	0.471	85.00	82.8183	2.18173
DANBURY ISD	-0.094	8,707	8,892.54	-185.540	0.902	90.00	85.8178	4.18223
DEKALB ISD	-0.613	7,899	9,103.59	-1,204.591	0.025	91.00	90.8859	0.11409
DELL CITY ISD	-0.689	8,106	9,460.70	-1,354.699	0.207	82.00	81.0408	0.95920
DENTON ISD	-0.787	7,511	9,058.25	-1,547.248	0.612	91.00	88.1618	2.83822
DESOTO ISD	-0.619	11,568	12,785.18	-1,217.181	1.240	92.00	86.2505	5.74945
DEVINE ISD	-1.618	11,556	14,736.13	-3,180.129	1.561	96.00	88.7632	7.23681
DIBOLL ISD	-0.515	7,534	8,545.83	-1,011.834	0.529	85.00	82.5481	2.45194
DODD CITY ISD	-0.008	7,856	7,872.51	-16.513	0.854	95.00	91.0435	3.95655
DOUGLASS ISD	-0.045	7,651	7,739.64	-88.636	0.633	94.00	91.0665	2.93348
DRIPPING SPRINGS ISD	-0.253	7,595	8,091.41	-496.406	0.044	95.00	94.7953	0.20468
DUMAS ISD	-1.289	6,435	8,967.86	-2,532.864	0.248	86.00	84.8493	1.15065
EAGLE PASS ISD	-0.865	7,006	8,706.58	-1,700.585	0.496	80.00	77.6992	2.30083
EAST BERNARD ISD	-0.115	7,604	7,829.62	-225.621	0.606	92.00	89.1908	2.80925

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	ALL GRADES READING 2004	Predicted Value	Residual
EAST CENTRAL ISD	-0.013	7,997	8,021.75	-24.745	0.097	85.00	84.5506	0.44936
EDINBURG CONSOLIDATED	-0.138	8,263	8,534.95	-271.955	0.268	80.00	78.7597	1.24033
EL CAMPO ISD	-0.739	7,002	8,453.63	-1,451.627	0.568	86.00	83.3692	2.63077
ELKHART ISD	-0.766	7,398	8,903.12	-1,505.123	0.125	90.00	89.4218	0.57816
ELYSIAN FIELDS ISD	-0.452	7,423	8,310.75	-887.747	0.516	91.00	88.6078	2.39219
ENNIS ISD	-0.500	7,798	8,779.83	-981.833	0.666	88.00	84.9148	3.08521
ERA ISD	-0.149	7,107	7,400.02	-293.018	0.666	95.00	91.9143	3.08566
EULA ISD	-0.218	8,962	9,391.06	-429.064	0.157	91.00	90.2705	0.72952
EVANT ISD	-0.539	7,279	8,338.91	-1,059.913	0.175	89.00	88.1910	0.80901
FARMERSVILLE ISD	-0.401	6,848	7,636.62	-788.623	0.498	92.00	89.6917	2.30832
FARWELL ISD	-0.035	8,776	8,844.97	-68.968	1.543	95.00	87.8472	7.15276
FERRIS ISD	-0.971	6,697	8,605.75	-1,908.746	0.468	87.00	84.8330	2.16697
FOLLETT ISD	-0.287	10,376	10,940.57	-564.572	0.301	90.00	88.6031	1.39692
FORSAN ISD	-0.499	7,206	8,187.54	-981.543	0.650	94.00	90.9855	3.01449
FRANKSTON ISD	-0.341	7,655	8,325.80	-670.802	0.795	92.00	88.3144	3.68563
FRENSHIP ISD	-0.399	6,986	7,769.56	-783.556	0.978	94.00	89.4673	4.53270
FRIONA ISD	-0.681	7,320	8,658.84	-1,338.841	1.315	89.00	82.9040	6.09600
GALENA PARK ISD	-0.190	7,813	8,187.11	-374.107	1.259	86.00	80.1651	5.83494
GANADO ISD	-0.124	7,966	8,209.03	-243.035	0.675	90.00	86.8712	3.12876
GARLAND ISD	-0.047	6,623	6,716.09	-93.092	0.258	88.00	86.8050	1.19504
GATESVILLE ISD	-0.940	6,455	8,303.39	-1,848.391	0.112	91.00	90.4792	0.52079
GEORGE WEST ISD	-0.522	7,558	8,583.54	-1,025.539	0.514	89.00	86.6170	2.38303
GHOLSON ISD	-0.166	8,586	8,911.67	-325.665	2.076	95.00	85.3773	9.62272
GLASSCOCK COUNTY ISD	-1.738	10,289	13,706.04	-3,417.036	0.257	91.00	89.8079	1.19210
GOLDTHWAITE ISD	-0.317	8,391	9,014.93	-623.934	0.518	92.00	89.5995	2.40050
GOLIAD ISD	-0.453	8,653	9,543.56	-890.559	0.948	92.00	87.6076	4.39239
GORMAN ISD	-0.469	8,797	9,718.76	-921.757	0.962	89.00	84.5420	4.45800
GRADY ISD	-0.021	10,218	10,258.78	-40.777	1.437	96.00	89.3399	6.66014
GRAHAM ISD	-0.529	7,090	8,129.94	-1,039.944	0.089	90.00	89.5868	0.41322
GRAND SALINE ISD	-1.025	5,950	7,964.41	-2,014.410	0.816	93.00	89.2176	3.78237
GRANGER ISD	-0.073	8,221	8,363.86	-142.858	0.521	90.00	87.5840	2.41601
GRAPEVINE-COLLEYVILLE ISD	-0.115	7,777	8,003.89	-226.892	0.068	95.00	94.6832	0.31681
GREENWOOD ISD	-0.428	6,723	7,564.73	-841.729	0.258	92.00	90.8052	1.19485
GREGORY-PORTLAND ISD	-0.504	6,669	7,659.65	-990.654	0.265	90.00	88.7714	1.22859
GROVETON ISD	-0.125	8,403	8,648.85	-245.846	0.270	89.00	87.7466	1.25343
GUSTINE ISD	-0.187	8,747	9,113.75	-366.752	1.048	90.00	85.1404	4.85958

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HALE CENTER ISD	-0.470	8,676	9,600.11	-924.114	1.863	90.00	81.3655	8.63450
HALLSBURG ISD	-0.498	9,976	10,954.01	-978.013	0.356	92.00	90.3499	1.65008
HAMILTON INDEPENDENT SCHOOL DISTRI	-0.127	8,699	8,948.23	-249.233	0.606	92.00	89.1927	2.80733
HAMLIN ISD	-0.201	9,714	10,108.72	-394.716	1.130	91.00	85.7644	5.23563
HAMSHIRE-FANNETT ISD	-0.220	7,202	7,635.34	-433.339	0.235	93.00	91.9119	1.08809
HARLANDALE ISD	-0.315	8,774	9,392.45	-618.446	0.928	83.00	78.6989	4.30110
HARLETON ISD	-0.208	7,540	7,948.95	-408.954	0.835	95.00	91.1294	3.87061
HARLINGEN CONS ISD	-0.362	7,656	8,367.03	-711.032	0.613	84.00	81.1580	2.84201
HARMONY ISD	-0.476	8,102	9,037.99	-935.994	0.040	91.00	90.8152	0.18475
HARPER ISD	-0.071	9,272	9,412.08	-140.082	0.365	93.00	91.3086	1.69144
HARTS BLUFF ISD	-0.700	6,805	8,180.75	-1,375.746	1.054	93.00	88.1136	4.88643
HAWKINS ISD	-0.396	8,822	9,601.33	-779.327	0.774	92.00	88.4148	3.58516
HEMPHILL ISD	-0.136	8,958	9,226.19	-268.192	1.173	92.00	86.5637	5.43625
HENDERSON ISD	-0.563	7,577	8,683.52	-1,106.521	0.440	88.00	85.9609	2.03908
HENRIETTA ISD	-0.290	7,709	8,279.49	-570.494	0.058	93.00	92.7333	0.26667
HIGHLAND PARK ISD	-1.294	9,208	11,752.34	-2,544.342	1.023	94.00	89.2585	4.74155
HOOKS ISD	-0.163	7,474	7,793.94	-319.944	0.766	92.00	88.4492	3.55079
HOWE ISD	-0.076	7,591	7,740.50	-149.496	0.543	95.00	92.4834	2.51663
HUBBARD ISD	-0.511	7,299	8,302.59	-1,003.586	0.156	88.00	87.2780	0.72204
HUDSON ISD	-0.464	7,062	7,974.01	-912.015	1.265	93.00	87.1386	5.86140
HUGHES SPRINGS ISD	-0.608	7,655	8,850.23	-1,195.228	0.254	88.00	86.8218	1.17820
HUNTSVILLE ISD	-0.302	7,079	7,672.33	-593.326	0.205	85.00	84.0506	0.94945
HURST-EULESS-BEDFORD ISD	-0.266	7,622	8,145.52	-523.519	0.344	91.00	89.4044	1.59557
IDALOU ISD	-0.168	7,726	8,055.54	-329.539	0.433	90.00	87.9913	2.00866
ITASCA ISD	-0.004	8,993	9,001.42	-8.416	2.530	96.00	84.2725	11.72753
JACKSBORO ISD	-0.610	7,690	8,888.97	-1,198.969	0.271	92.00	90.7453	1.25472
JARRELL ISD	-0.769	8,239	9,750.83	-1,511.829	0.317	90.00	88.5289	1.47112
JASPER ISD	-0.147	7,684	7,973.91	-289.909	0.471	84.00	81.8184	2.18157
JIM NED CONS ISD	-0.076	7,753	7,902.11	-149.105	0.277	93.00	91.7156	1.28439
JOURDANTON ISD	-0.701	7,667	9,044.04	-1,377.037	0.242	86.00	84.8802	1.11981
KARNES CITY ISD	-0.281	8,109	8,660.89	-551.894	1.008	89.00	84.3292	4.67075
KEENE ISD	-0.929	7,937	9,763.35	-1,826.349	0.717	88.00	84.6774	3.32257
KENEDY COUNTY WIDE CSD	-7.066	14,893	28,782.63	-13,889.626	1.065	95.00	90.0617	4.93825
KERRVILLE ISD	-0.567	7,694	8,808.03	-1,114.025	0.893	92.00	87.8632	4.13682
KIRBYVILLE CISD	-0.651	6,838	8,118.25	-1,280.246	0.277	89.00	87.7173	1.28270
KOPPERL ISD	-0.625	8,210	9,438.20	-1,228.204	0.591	92.00	89.2614	2.73865
LA FERIA ISD	-0.080	8,267	8,424.87	-157.870	1.123	85.00	79.7969	5.20312

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LA GRANGE ISD	-0.701	7,241	8,618.10	-1,377.098	0.171	89.00	88.2074	0.79264
LA JOYA ISD	-0.390	7,894	8,659.88	-765.884	0.456	80.00	77.8848	2.11522
LA PORTE ISD	-0.274	8,709	9,246.89	-537.890	0.027	90.00	89.8769	0.12306
LAMAR CONSOLIDATED ISD	-0.069	7,728	7,863.15	-135.155	0.063	86.00	85.7102	0.28981
LAZBUDDIE ISD	-0.128	10,364	10,616.00	-252.000	1.558	91.00	83.7796	7.22036
LEGGETT ISD	-0.410	9,444	10,249.71	-805.707	0.085	82.00	81.6066	0.39343
LEVELLAND ISD	-0.898	7,571	9,335.64	-1,764.636	0.088	85.00	84.5903	0.40971
LIBERTY ISD	-0.125	7,696	7,942.57	-246.568	0.461	94.00	91.8621	2.13785
LINDALE ISD	-0.295	7,273	7,851.92	-578.920	0.733	94.00	90.6022	3.39777
LINDEN-KILDARE CONS ISD	-0.314	7,965	8,582.30	-617.305	2.148	97.00	87.0437	9.95634
LINGLEVILLE ISD	-0.390	8,289	9,054.67	-765.668	0.013	85.00	84.9419	0.05806
LITTLEFIELD ISD	-0.714	7,083	8,486.26	-1,403.257	0.956	88.00	83.5699	4.43011
LLANO ISD	-0.831	10,037	11,670.87	-1,633.871	0.419	93.00	91.0580	1.94197
LOCKNEY ISD	-0.412	7,704	8,513.18	-809.184	0.280	85.00	83.7010	1.29904
LOMETA ISD	-0.304	9,498	10,094.95	-596.954	0.505	87.00	84.6591	2.34093
LONDON ISD	-0.104	8,300	8,503.83	-203.834	0.823	96.00	92.1852	3.81485
LONE OAK ISD	-0.398	7,386	8,169.28	-783.283	0.619	95.00	92.1321	2.86791
LONGVIEW ISD	-0.398	7,759	8,541.28	-782.276	0.544	83.00	80.4808	2.51922
LORENA ISD	-0.687	6,209	7,559.46	-1,350.458	0.032	94.00	93.8519	0.14813
LOS FRESNOS CONS ISD	-0.641	7,727	8,987.41	-1,260.412	1.496	86.00	79.0673	6.93268
LUBBOCK ISD	-0.585	7,702	8,852.84	-1,150.836	0.870	93.00	88.9673	4.03273
LUBBOCK-COOPER ISD	-0.302	7,610	8,203.99	-593.990	0.548	87.00	84.4621	2.53793
LUFKIN ISD	-0.588	7,224	8,379.70	-1,155.704	1.364	89.00	82.6793	6.32075
LYTLE ISD	-0.218	8,005	8,434.06	-429.061	0.463	85.00	82.8562	2.14376
MABANK ISD	-0.986	7,154	9,092.94	-1,938.941	0.403	91.00	89.1318	1.86818
MADISONVILLE CONS ISD	-0.232	7,791	8,246.85	-455.855	0.943	88.00	83.6287	4.37134
MARSHALL ISD	-0.527	7,313	8,349.23	-1,036.225	0.532	85.00	82.5325	2.46752
MARTINS MILL ISD	-0.166	8,435	8,760.73	-325.732	1.165	95.00	89.5989	5.40107
MARTINSVILLE ISD	-0.258	7,960	8,467.95	-507.949	0.122	87.00	86.4368	0.56323
MAUD ISD	-0.318	7,608	8,233.21	-625.214	0.778	93.00	89.3945	3.60552
MAY ISD	-0.510	9,108	10,111.08	-1,003.078	0.418	91.00	89.0623	1.93768
MCALLEN ISD	-0.381	7,395	8,143.38	-748.376	0.345	83.00	81.4004	1.59955
MCLEAN ISD	-0.291	9,156	9,728.70	-572.701	0.820	94.00	90.1974	3.80264
MCLEOD ISD	-0.082	7,865	8,025.62	-160.615	1.214	97.00	91.3739	5.62614
MEDINA ISD	-0.176	10,444	10,789.55	-345.546	1.057	95.00	90.0996	4.90038
MERIDIAN ISD	-0.713	7,221	8,623.32	-1,402.319	0.355	89.00	87.3527	1.64734
MERKEL ISD	-0.469	8,427	9,348.40	-921.398	0.284	90.00	88.6838	1.31623
MIDLAND ISD	-0.344	7,077	7,753.19	-676.190	0.241	87.00	85.8840	1.11597
MILDRED ISD	-0.136	8,093	8,359.58	-266.576	0.346	93.00	91.3976	1.60240

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MINEOLA ISD	-0.280	8,257	8,807.05	-550.045	0.666	90.00	86.9123	3.08774
MONAHANS-WICKETT-PYOTE ISD	-1.090	7,266	9,409.03	-2,143.027	1.158	92.00	86.6350	5.36502
MORGAN MILL ISD	-0.975	7,309	9,225.26	-1,916.262	1.619	97.00	89.4943	7.50573
MOULTON ISD	-0.318	7,770	8,394.16	-624.159	2.047	97.00	87.5127	9.48730
MOUNT CALM ISD	-0.083	8,815	8,977.84	-162.836	0.968	91.00	86.5150	4.48497
MOUNT PLEASANT ISD	-0.783	7,857	9,395.76	-1,538.762	0.416	84.00	82.0720	1.92803
MOUNT VERNON ISD	-1.003	7,226	9,197.92	-1,971.919	0.377	92.00	90.2546	1.74537
MUENSTER ISD	-0.225	7,250	7,692.06	-442.057	0.230	95.00	93.9349	1.06513
MULESHOE ISD	-0.445	8,166	9,040.36	-874.363	0.463	85.00	82.8526	2.14740
MUMFORD ISD	-1.314	6,160	8,743.54	-2,583.536	2.036	91.00	81.5620	9.43796
MURCHISON ISD	-0.685	8,397	9,743.80	-1,346.803	2.215	99.00	88.7343	10.26566
NAVARRO ISD	-0.247	7,603	8,088.48	-485.479	0.794	93.00	89.3213	3.67875
NECHES ISD	-0.720	7,488	8,903.79	-1,415.792	1.281	96.00	90.0640	5.93599
NEW BOSTON ISD	-0.821	6,960	8,573.39	-1,613.386	1.169	93.00	87.5839	5.41612
NEW DEAL ISD	-0.562	7,944	9,048.68	-1,104.684	0.900	91.00	86.8301	4.16992
NIXON-SMILEY CONS ISD	-0.129	8,347	8,599.58	-252.584	0.395	84.00	82.1690	1.83099
NOCONA ISD	-0.229	8,624	9,073.59	-449.591	0.347	90.00	88.3939	1.60612
NORMANGEE ISD	-0.087	7,950	8,121.54	-171.541	0.011	90.00	89.9470	0.05301
NUECES CANYON CISD	-0.307	10,306	10,908.83	-602.833	1.469	92.00	85.1924	6.80758
NURSERY ISD	-2.682	7,919	13,190.96	-5,271.964	1.099	97.00	91.9077	5.09225
OLNEY ISD	-0.490	8,225	9,188.45	-963.450	0.737	92.00	88.5846	3.41544
ORANGE GROVE ISD	-0.314	7,657	8,273.50	-616.497	1.268	90.00	84.1242	5.87576
ORE CITY ISD	-0.207	8,271	8,677.95	-406.947	1.031	92.00	87.2237	4.77631
PALACIOS ISD	-0.556	10,028	11,121.37	-1,093.370	0.095	86.00	85.5588	0.44117
PANHANDLE ISD	-0.335	8,604	9,261.96	-657.958	0.247	94.00	92.8567	1.14329
PARIS ISD	-0.086	7,937	8,106.01	-169.011	0.613	85.00	82.1577	2.84233
PASADENA ISD	-0.073	7,170	7,313.81	-143.809	0.518	85.00	82.5972	2.40276
PAWNEE ISD	-0.184	9,883	10,245.05	-362.047	0.401	89.00	87.1424	1.85759
PETTUS ISD	-0.159	9,688	10,000.48	-312.478	0.369	87.00	85.2914	1.70856
PEWITT ISD	-0.452	7,800	8,688.34	-888.344	0.463	88.00	85.8529	2.14706
PHARR-SAN JUAN-ALAMO ISD	-0.227	7,996	8,442.72	-446.724	0.026	78.00	77.8788	0.12124
PINE TREE ISD	-0.630	6,608	7,845.61	-1,237.609	0.215	90.00	89.0055	0.99451
PITTSBURG ISD	-0.676	7,593	8,921.61	-1,328.608	0.528	86.00	83.5510	2.44898
PLAINVIEW ISD	-1.091	6,334	8,478.89	-2,144.889	0.954	88.00	83.5799	4.42006
PLEASANT GROVE ISD	-0.071	6,787	6,926.54	-139.536	0.588	96.00	93.2765	2.72346
PLEASANTON ISD	-0.784	7,517	9,058.86	-1,541.862	0.277	86.00	84.7149	1.28514
POINT ISABEL ISD	-1.682	8,726	12,032.70	-3,306.698	0.813	84.00	80.2319	3.76815

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PORT ARTHUR ISD	-0.110	7,808	8,024.91	-216.912	0.051	77.00	76.7626	0.23743
POST ISD	-0.417	9,045	9,864.34	-819.342	0.783	89.00	85.3712	3.62881
POTTSBORO ISD	-0.139	8,292	8,565.34	-273.343	0.163	94.00	93.2456	0.75440
PRAIRILAND ISD	-0.846	7,217	8,879.87	-1,662.870	0.863	93.00	89.0014	3.99856
PROSPER ISD	-0.049	7,918	8,013.44	-95.442	0.103	94.00	93.5209	0.47912
QUANAH ISD	-0.466	9,376	10,292.80	-916.798	1.024	92.00	87.2555	4.74455
QUEEN CITY ISD	-1.059	7,713	9,793.67	-2,080.669	1.227	93.00	87.3126	5.68737
RAINS ISD	-0.550	7,848	8,928.96	-1,080.961	0.117	90.00	89.4579	0.54211
RANKIN ISD	-0.554	14,580	15,668.28	-1,088.278	1.666	97.00	89.2796	7.72035
REAGAN COUNTY ISD	-0.255	10,440	10,940.77	-500.770	0.242	87.00	85.8794	1.12062
RED LICK ISD	-0.720	5,825	7,240.81	-1,415.807	0.964	98.00	93.5330	4.46699
RED OAK ISD	-0.271	6,839	7,370.96	-531.955	0.074	92.00	91.6574	0.34265
REFUGIO ISD	-0.547	9,016	10,090.39	-1,074.385	0.061	86.00	85.7158	0.28423
RICARDO ISD	-0.741	7,891	9,346.73	-1,455.734	2.442	95.00	83.6840	11.31597
RICE ISD	-0.618	7,329	8,544.05	-1,215.048	0.001	87.00	86.9963	0.00370
RICHARDS ISD	-0.926	7,368	9,187.98	-1,819.979	0.925	91.00	86.7112	4.28881
RICHARDSON ISD	-0.119	8,160	8,394.37	-234.369	0.423	89.00	87.0400	1.95998
RIESEL ISD	-0.276	7,632	8,174.53	-542.531	0.343	93.00	91.4096	1.59035
RIO HONDO ISD	-0.025	9,249	9,297.70	-48.697	0.058	80.00	79.7324	0.26760
RIVERCREST ISD	-0.451	7,502	8,387.76	-885.759	0.864	93.00	88.9934	4.00664
ROCKWALL ISD	-0.012	7,439	7,462.71	-23.711	0.235	94.00	92.9111	1.08892
ROGERS ISD	-0.064	7,817	7,943.43	-126.430	0.967	94.00	89.5167	4.48328
ROOSEVELT ISD	-0.420	8,335	9,160.08	-825.081	0.895	88.00	83.8504	4.14964
ROSEBUD-LOTT ISD	-0.357	7,623	8,324.14	-701.140	0.044	86.00	85.7981	0.20189
ROUND TOP-CARMINE ISD	-0.461	9,972	10,877.23	-905.231	0.872	97.00	92.9605	4.03950
ROYAL ISD	-0.089	8,436	8,611.42	-175.420	0.119	80.00	79.4500	0.54999
ROYSE CITY ISD	-0.082	7,694	7,855.55	-161.545	0.123	90.00	89.4300	0.56998
SABINAL ISD	-0.371	8,708	9,436.85	-728.847	0.635	86.00	83.0570	2.94302
SALTILLO ISD	-0.748	8,199	9,669.45	-1,470.454	1.099	93.00	87.9078	5.09224
SAM RAYBURN ISD	-0.464	7,372	8,284.35	-912.351	1.281	96.00	90.0630	5.93703
SAN BENITO CONS ISD	-0.516	7,727	8,741.36	-1,014.363	0.441	81.00	78.9545	2.04552
SAN ISIDRO ISD	-0.316	12,137	12,757.45	-620.453	2.133	91.00	81.1125	9.88751
SAN MARCOS CONS ISD	-0.803	7,671	9,249.75	-1,578.755	0.299	85.00	83.6130	1.38701
SANDS CISD	-0.199	10,188	10,579.61	-391.614	1.667	93.00	85.2728	7.72719
SCHULENBURG ISD	-0.283	8,158	8,713.99	-555.993	2.112	96.00	86.2116	9.78836
SEMINOLE ISD	-1.438	9,870	12,697.23	-2,827.228	0.454	90.00	87.8972	2.10279
SHALLOWATER ISD	0.000	7,724	7,724.00	-0.003	0.257	90.00	88.8104	1.18957
SHARYLAND ISD	-0.308	6,986	7,592.03	-606.025	0.691	87.00	83.7979	3.20209
SHERMAN ISD	-0.573	7,560	8,685.97	-1,125.967	0.458	89.00	86.8794	2.12056

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	ALL GRADES READING 2004	Predicted Value	Residual
SIMMS ISD	-1.296	6,549	9,097.14	-2,548.144	0.559	92.00	89.4082	2.59181
SINTON ISD	-0.646	7,457	8,726.31	-1,269.311	0.273	84.00	82.7355	1.26452
SKIDMORE-TYNAN ISD	-0.443	7,814	8,684.32	-870.322	0.888	88.00	83.8824	4.11758
SLOCUM ISD	-1.174	7,024	9,332.11	-2,308.114	0.548	92.00	89.4579	2.54207
SMITHVILLE ISD	-0.258	8,074	8,581.40	-507.400	0.074	88.00	87.6581	0.34186
SOUTHWEST ISD	-0.634	7,524	8,769.47	-1,245.468	0.215	81.00	80.0032	0.99679
SPRING BRANCH ISD	-0.138	8,545	8,816.76	-271.764	0.674	89.00	85.8775	3.12246
SPRING CREEK ISD	-0.810	8,161	9,752.57	-1,591.567	2.070	97.00	87.4045	9.59551
STAMFORD ISD	-0.099	8,652	8,846.33	-194.331	1.105	89.00	83.8768	5.12323
STANTON ISD	-0.189	8,645	9,016.36	-371.356	0.873	90.00	85.9527	4.04731
STEPHENVILLE	-0.562	6,889	7,994.48	-1,105.476	0.412	92.00	90.0907	1.90928
STOCKDALE ISD	-0.084	8,007	8,172.26	-165.259	0.088	88.00	87.5928	0.40724
STRATFORD ISD	-0.344	9,172	9,848.00	-675.998	0.917	90.00	85.7484	4.25160
SUDAN ISD	-0.411	13,550	14,358.73	-808.730	1.129	92.00	86.7690	5.23104
SULPHUR SPRINGS ISD	-0.428	7,344	8,185.13	-841.133	0.447	90.00	87.9279	2.07215
SWEENY ISD	-0.757	8,743	10,230.93	-1,487.928	0.837	93.00	89.1217	3.87827
SWEETWATER ISD	-0.718	7,301	8,712.94	-1,411.943	0.319	87.00	85.5228	1.47723
TEAGUE ISD	-0.868	8,550	10,255.90	-1,705.902	0.100	89.00	88.5355	0.46449
TERRELL ISD	-0.315	8,071	8,690.28	-619.276	0.197	84.00	83.0856	0.91444
TEXARKANA ISD	-0.543	7,387	8,453.37	-1,066.374	0.953	86.00	81.5822	4.41783
TEXAS CITY ISD	-0.291	8,525	9,097.27	-572.267	0.229	86.00	84.9371	1.06292
TEXHOMA ISD	-1.295	6,276	8,822.10	-2,546.104	0.282	88.00	86.6940	1.30602
TIMPSON ISD	-0.197	7,961	8,348.33	-387.329	1.088	89.00	83.9580	5.04202
TOM BEAN ISD	-1.054	5,537	7,608.16	-2,071.158	0.099	93.00	92.5394	0.46060
TROY ISD	-0.380	7,674	8,421.14	-747.144	0.175	91.00	90.1876	0.81236
TULOSO-MIDWAY ISD	-0.604	7,622	8,809.52	-1,187.524	0.497	89.00	86.6963	2.30373
TURKEY-QUITAQUE ISD	-0.326	8,122	8,763.62	-641.625	0.421	86.00	84.0466	1.95345
TYLER ISD	-0.434	7,233	8,085.38	-852.384	0.262	84.00	82.7850	1.21496
UNION HILL ISD	-0.285	8,614	9,174.88	-560.884	0.604	89.00	86.1991	2.80090
UTOPIA ISD	-0.315	9,348	9,966.82	-618.824	0.896	94.00	89.8488	4.15123
VALLEY MILLS ISD	-0.517	8,392	9,408.91	-1,016.911	0.579	92.00	89.3180	2.68197
VALLEY VIEW ISD	-0.327	8,386	9,028.33	-642.331	3.381	93.00	77.3282	15.67181
VAN ISD	-0.571	7,113	8,235.85	-1,122.846	0.315	91.00	89.5381	1.46186
VAN VLECK ISD	-0.060	8,524	8,641.18	-117.178	0.845	90.00	86.0829	3.91706
VYSEHRAD ISD	-0.395	8,538	9,313.44	-775.441	1.355	98.00	91.7176	6.28236
WACO ISD	-0.509	7,633	8,634.00	-1,001.002	0.012	78.00	77.9433	0.05673
WALCOTT ISD	-0.538	7,729	8,785.81	-1,056.810	3.486	99.00	82.8443	16.15566
WAXAHACHIE ISD	-0.393	7,868	8,639.84	-771.841	0.106	88.00	87.5081	0.49191

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	ALL GRADES READING 2004	Predicted Value	Residual
WEBB CONS ISD	-0.041	20,119	20,200.26	-81.261	1.735	95.00	86.9582	8.04183
WESLACO ISD	-0.326	7,882	8,523.39	-641.391	0.766	82.00	78.4502	3.54984
WEST ISD	-0.801	7,384	8,957.66	-1,573.660	0.576	94.00	91.3293	2.67067
WEST RUSK ISD	-0.124	8,543	8,786.54	-243.535	0.412	88.00	86.0897	1.91032
WEST SABINE ISD	-0.750	7,758	9,232.78	-1,474.777	0.796	91.00	87.3084	3.69160
WHARTON ISD	-0.550	7,067	8,147.43	-1,080.431	0.210	83.00	82.0281	0.97189
WHEELER ISD	-0.154	8,248	8,550.15	-302.148	1.744	95.00	86.9164	8.08359
WHITE OAK ISD	-0.202	6,530	6,926.13	-396.133	0.573	95.00	92.3439	2.65609
WHITE SETTLEMENT ISD	-0.457	6,887	7,784.53	-897.533	0.049	89.00	88.7745	0.22553
WHITEWRIGHT ISD	-0.321	7,493	8,123.41	-630.412	0.656	93.00	89.9580	3.04200
WICHITA FALLS ISD	-0.432	7,329	8,177.58	-848.578	0.402	88.00	86.1358	1.86422
WINNSBORO ISD	-1.109	6,451	8,630.02	-2,179.021	0.628	93.00	90.0889	2.91112
WODEN ISD	-0.724	7,166	8,589.24	-1,423.237	0.425	92.00	90.0303	1.96967
WOODVILLE ISD	-0.108	8,699	8,911.15	-212.152	0.201	85.00	84.0704	0.92959
WYLIE ISD	-0.436	6,186	7,042.52	-856.522	0.131	95.00	94.3935	0.60650
YANTIS ISD	-0.824	7,979	9,598.95	-1,619.949	0.663	93.00	89.9289	3.07114
YOAKUM ISD	-0.221	8,048	8,481.83	-433.834	0.578	88.00	85.3191	2.68089
YORKTOWN ISD	-0.356	7,274	7,973.83	-699.827	0.369	89.00	87.2914	1.70858
YSLETA ISD	-0.359	7,338	8,043.15	-705.146	0.883	84.00	79.9094	4.09064

APPENDIX C

MODIFIED QUADRIFORM FORMATION

DISTRICT COMPLETION RATE

WITHOUT G.E.D. 2003

QUADRANT I

SCHOOL DISTRICTS

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT COMPLETION RATE W/O GED 2003	Predicted Value	Residual
ALAMO HEIGHTS ISD	-0.430	8,725	9,569.40	-844.399	0.775	98.80	94.8445	3.95547
ALPINE ISD	-0.792	7,142	8,698.50	-1,556.502	0.748	97.50	93.6789	3.82113
ALVARADO ISD	-0.586	7,055	8,205.92	-1,150.915	0.274	96.20	94.7992	1.40081
ANDREWS ISD	-0.580	9,859	10,998.97	-1,139.975	0.903	98.80	94.1901	4.60993
ANSON ISD	-0.490	8,229	9,191.72	-962.720	0.683	98.10	94.6107	3.48935
ANTHONY	-0.023	9,904	9,949.49	-45.494	0.646	95.80	92.5038	3.29616
ANTON ISD	-0.889	8,167	9,914.20	-1,747.201	1.132	100.00	94.2191	5.78090
ARP ISD	-0.328	7,695	8,340.45	-645.445	0.166	95.20	94.3508	0.84920
ATLANTA ISD	-0.608	7,337	8,532.97	-1,195.968	0.181	94.80	93.8742	0.92578
AUSTWELL-TIVOLI ISD	-1.882	11,235	14,934.13	-3,699.128	1.211	100.00	93.8155	6.18448
BANQUETE ISD	-0.043	8,781	8,864.74	-83.744	0.999	98.30	93.1976	5.10243
BARBERS HILL ISD	-0.099	8,874	9,067.62	-193.618	0.252	96.40	95.1130	1.28696
BECKVILLE ISD	-0.763	10,051	11,551.72	-1,500.724	0.423	97.10	94.9422	2.15780
BEEVILLE ISD	-0.305	7,692	8,291.36	-599.358	0.983	98.00	92.9803	5.01966
BELLVILLE ISD	-0.215	7,377	7,799.79	-422.789	0.818	98.70	94.5218	4.17822
BELTON ISD	-0.384	7,553	8,308.73	-755.725	0.253	95.80	94.5061	1.29394
BIG SANDY ISD	-0.434	7,606	8,459.51	-853.507	1.036	100.00	94.7092	5.29081
BIRDVILLE ISD	-0.371	7,288	8,016.83	-728.834	0.336	96.50	94.7869	1.71306
BLOOMBURG ISD	-0.576	8,104	9,236.09	-1,132.093	0.771	100.00	96.0630	3.93704
BLOOMINGTON ISD	-0.572	8,094	9,219.09	-1,125.087	1.368	100.00	93.0155	6.98454
BLUM ISD	-0.101	8,647	8,845.19	-198.191	0.000	95.20	95.1993	0.00075
BOLING ISD	-0.139	7,527	7,800.83	-273.827	0.670	96.90	93.4811	3.41891
BONHAM ISD	-0.737	7,447	8,895.70	-1,448.700	0.250	96.30	95.0246	1.27541
BOVINA ISD	-0.481	7,886	8,831.63	-945.633	0.928	97.40	92.6603	4.73972
BRADY ISD	-0.445	8,312	9,187.51	-875.514	0.226	95.50	94.3461	1.15391
BRAZOS ISD	-0.536	7,976	9,028.57	-1,052.573	0.074	94.40	94.0219	0.37807
BRENHAM ISD	-0.108	7,815	8,026.95	-211.945	0.483	96.20	93.7320	2.46796
BRIDGE CITY ISD	-0.641	6,706	7,965.89	-1,259.888	0.129	96.60	95.9425	0.65750
BROADDUS ISD	-0.555	8,773	9,863.18	-1,090.178	0.230	96.70	95.5274	1.17257
BROOKELAND ISD	-0.223	8,904	9,343.10	-439.096	0.004	95.70	95.6807	0.01925
BROOKS COUNTY ISD	-0.789	9,513	11,062.99	-1,549.993	0.936	97.40	92.6238	4.77625
BROWNFIELD ISD	-0.634	8,030	9,275.40	-1,245.396	0.471	95.90	93.4963	2.40370
BROWNSVILLE ISD	-0.361	8,053	8,762.28	-709.283	0.650	94.10	90.7805	3.31946
BUENA VISTA ISD	-0.251	17,414	17,906.43	-492.433	1.144	100.00	94.1595	5.84048
BURKEVILLE ISD	-0.109	10,118	10,332.68	-214.676	0.490	96.60	94.0979	2.50210
BURNET CONS ISD	-0.569	8,098	9,215.85	-1,117.845	0.404	97.20	95.1395	2.06053
BURTON ISD	-0.496	8,889	9,862.97	-973.966	0.568	97.10	94.1990	2.90095
CALHOUN CO ISD	-1.939	8,004	11,814.47	-3,810.467	0.594	97.50	94.4669	3.03312

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT COMPLETION RATE W/O GED 2003	Predicted Value	Residual
CANTON ISD	-0.240	7,066	7,537.43	-471.426	0.059	95.70	95.3998	0.30021
CARTHAGE ISD	-1.316	7,284	9,870.82	-2,586.823	0.303	95.70	94.1527	1.54725
CELESTE ISD	-0.120	7,681	7,917.53	-236.525	0.878	100.00	95.5179	4.48210
CENTER POINT ISD	-0.185	8,703	9,066.12	-363.122	0.158	95.50	94.6917	0.80828
CENTERVILLE ISD	-0.141	8,043	8,320.73	-277.728	0.976	100.00	95.0156	4.98444
CENTRAL ISD	-0.903	6,578	8,352.93	-1,774.934	0.016	95.50	95.4184	0.08157
CHANNING ISD	-0.097	11,800	11,991.64	-191.640	0.765	100.00	96.0930	3.90704
CHAPEL HILL ISD	-0.116	7,277	7,504.54	-227.538	0.059	93.60	93.2999	0.30014
CHICO ISD	-0.507	7,941	8,937.20	-996.199	0.368	97.40	95.5238	1.87624
CHILLICOTHE ISD	-0.557	8,947	10,042.69	-1,095.689	1.067	100.00	94.5513	5.44872
CHINA SPRING ISD	-0.600	6,739	7,918.60	-1,179.600	0.246	96.90	95.6459	1.25407
CHIRENO ISD	-0.407	7,958	8,757.49	-799.491	1.024	100.00	94.7722	5.22783
CHISUM ISD	-1.421	7,078	9,870.35	-2,792.346	0.031	95.50	95.3423	0.15769
CLARENDON ISD	-0.035	9,109	9,178.77	-69.766	0.550	97.70	94.8908	2.80920
CLINT ISD	-0.855	6,934	8,614.26	-1,680.264	0.044	92.30	92.0768	0.22322
COAHOMA ISD	-0.471	7,603	8,529.17	-926.175	1.006	100.00	94.8657	5.13431
COLMESNEIL ISD	-0.521	7,166	8,189.18	-1,023.176	0.024	95.70	95.5797	0.12025
COMFORT ISD	-0.239	8,260	8,730.07	-470.071	0.078	94.60	94.2011	0.39888
COMO-PICKTON CISD	-0.171	8,013	8,349.15	-336.146	0.116	95.20	94.6061	0.59388
COOPER ISD	-0.018	8,197	8,232.21	-35.208	1.037	100.00	94.7055	5.29451
COPPELL ISD	-0.086	7,793	7,961.14	-168.136	0.173	98.20	97.3154	0.88464
CORRIGAN-CAMDEN ISD	-0.249	8,579	9,068.09	-489.088	0.128	94.30	93.6457	0.65433
CROCKETT CO CONS CSD	-0.861	11,733	13,424.79	-1,691.792	1.234	100.00	93.7005	6.29953
CROWLEY ISD	-0.007	7,173	7,186.37	-13.368	0.453	96.30	93.9881	2.31193
CULBERSON COUNTY-ALLAMOORE ISD	-0.434	9,482	10,334.98	-852.980	0.492	95.90	93.3868	2.51320
DAWSON ISD	-0.280	7,978	8,528.22	-550.215	0.975	100.00	95.0203	4.97973
DEER PARK ISD	-0.219	7,808	8,238.97	-430.971	0.455	97.20	94.8792	2.32077
DEKALB ISD	-0.613	7,899	9,103.59	-1,204.591	0.291	96.00	94.5137	1.48634
DELL CITY ISD	-0.689	8,106	9,460.70	-1,354.699	0.249	93.90	92.6295	1.27047
DESOTO ISD	-0.619	11,568	12,785.18	-1,217.181	0.213	94.90	93.8102	1.08978
DEW ISD	-0.213	7,879	8,298.59	-419.593	0.019	94.00	93.9020	0.09797
D'HANIS ISD	-0.674	9,344	10,668.79	-1,324.786	0.321	97.60	95.9625	1.63748
DIBOLL ISD	-0.515	7,534	8,545.83	-1,011.834	0.623	96.60	93.4206	3.17941
DODD CITY ISD	-0.008	7,856	7,872.51	-16.513	0.837	100.00	95.7249	4.27509
DRIPPING SPRINGS ISD	-0.253	7,595	8,091.41	-496.406	0.498	98.00	95.4557	2.54425
DUBLIN ISD	-0.964	6,920	8,814.26	-1,894.258	0.319	95.80	94.1725	1.62753
DUMAS ISD	-1.289	6,435	8,967.86	-2,532.864	0.146	94.20	93.4540	0.74603
EANES ISD	-0.045	9,555	9,643.77	-88.772	0.426	98.70	96.5271	2.17293

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT COMPLETION RATE W/O GED 2003	Predicted Value	Residual
EAST BERNARD ISD	-0.115	7,604	7,829.62	-225.621	1.083	100.00	94.4733	5.52668
EDCOUCH-ELSA ISD	-0.246	8,209	8,693.36	-484.357	0.002	92.10	92.0909	0.00909
EDINBURG CONSOLIDATED	-0.138	8,263	8,534.95	-271.955	0.218	92.60	91.4846	1.11544
EDNA ISD	-0.470	6,880	7,803.64	-923.645	0.492	96.30	93.7896	2.51036
EL CAMPO ISD	-0.739	7,002	8,453.63	-1,451.627	0.776	97.20	93.2399	3.96009
ELKHART ISD	-0.766	7,398	8,903.12	-1,505.123	0.639	98.70	95.4391	3.26092
ELYSIAN FIELDS ISD	-0.452	7,423	8,310.75	-887.747	0.828	98.90	94.6719	4.22814
ENNIS ISD	-0.500	7,798	8,779.83	-981.833	0.200	94.60	93.5778	1.02218
EULA ISD	-0.218	8,962	9,391.06	-429.064	0.429	97.80	95.6078	2.19219
EVADALE ISD	-0.396	12,030	12,808.20	-778.202	0.779	100.00	96.0212	3.97884
EVANT ISD	-0.539	7,279	8,338.91	-1,059.913	0.967	100.00	95.0650	4.93496
FABENS ISD	-0.139	8,437	8,709.91	-272.910	0.434	94.40	92.1863	2.21366
FAIRFIELD ISD	-1.413	8,350	11,127.89	-2,777.890	0.102	94.80	94.2791	0.52094
FARWELL ISD	-0.035	8,776	8,844.97	-68.968	1.054	100.00	94.6178	5.38216
FERRIS ISD	-0.971	6,697	8,605.75	-1,908.746	0.161	94.60	93.7775	0.82253
FLORESVILLE ISD	-0.431	7,567	8,414.79	-847.790	0.089	94.20	93.7479	0.45212
FLOUR BLUFF ISD	-0.666	6,951	8,260.36	-1,309.361	0.215	96.00	94.9009	1.09908
FOLLETT ISD	-0.287	10,376	10,940.57	-564.572	0.819	100.00	95.8174	4.18260
FORSAN ISD	-0.499	7,206	8,187.54	-981.543	0.192	96.10	95.1223	0.97767
FRANKSTON ISD	-0.341	7,655	8,325.80	-670.802	0.292	96.30	94.8107	1.48927
FREDERICKSBURG ISD	-0.628	7,909	9,143.92	-1,234.916	0.554	97.30	94.4717	2.82826
FRENSHIP ISD	-0.399	6,986	7,769.56	-783.556	0.324	96.30	94.6465	1.65352
FRIONA ISD	-0.681	7,320	8,658.84	-1,338.841	0.568	96.10	93.2003	2.89966
FT STOCKTON ISD	-0.565	9,012	10,123.35	-1,111.353	0.229	94.20	93.0333	1.16667
GALENA PARK ISD	-0.190	7,813	8,187.11	-374.107	0.562	94.70	91.8322	2.86783
GARLAND ISD	-0.047	6,623	6,716.09	-93.092	0.587	95.60	92.6021	2.99788
GIDDINGS ISD	-0.155	7,513	7,817.48	-304.484	0.772	97.50	93.5607	3.93927
GILMER ISD	-0.739	7,344	8,795.81	-1,451.815	0.035	94.70	94.5193	0.18071
GLASSCOCK COUNTY ISD	-1.738	10,289	13,706.04	-3,417.036	1.054	100.00	94.6195	5.38051
GLEN ROSE ISD	-2.453	8,601	13,423.37	-4,822.373	0.457	97.60	95.2692	2.33081
GOLDTHWAITE ISD	-0.317	8,391	9,014.93	-623.934	0.959	100.00	95.1047	4.89528
GOLIAD ISD	-0.453	8,653	9,543.56	-890.559	0.935	99.00	94.2253	4.77469
GONZALES ISD	-0.591	7,235	8,397.06	-1,162.064	0.436	95.60	93.3761	2.22393
GORMAN ISD	-0.469	8,797	9,718.76	-921.757	1.047	100.00	94.6538	5.34616
GRAFORD ISD	-0.822	10,668	12,284.68	-1,616.682	0.852	100.00	95.6489	4.35108
GRAHAM ISD	-0.529	7,090	8,129.94	-1,039.944	0.740	98.90	95.1198	3.78022
GRANGER ISD	-0.073	8,221	8,363.86	-142.858	0.524	97.20	94.5271	2.67286
GRAPE CREEK ISD	-0.363	7,862	8,576.39	-714.388	1.011	100.00	94.8392	5.16080

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GRAPELAND ISD	-1.100	6,770	8,932.26	-2,162.260	0.754	98.00	94.1507	3.84927
GRAPEVINE-COLLEYVILLE ISD	-0.115	7,777	8,003.89	-226.892	0.353	97.40	95.5992	1.80079
GREENWOOD ISD	-0.428	6,723	7,564.73	-841.729	0.098	95.40	94.8978	0.50217
GREGORY-PORTLAND ISD	-0.504	6,669	7,659.65	-990.654	0.241	95.50	94.2687	1.23127
GROESBECK ISD	-0.934	8,384	10,220.82	-1,836.815	0.629	97.80	94.5862	3.21376
HALLSVILLE ISD	-0.793	7,063	8,621.84	-1,558.836	0.273	96.50	95.1080	1.39202
HARDIN ISD	-0.469	7,146	8,068.51	-922.510	0.425	97.20	95.0278	2.17224
HARLANDALE ISD	-0.315	8,774	9,392.45	-618.446	0.795	96.20	92.1419	4.05807
HARLETON ISD	-0.208	7,540	7,948.95	-408.954	0.355	97.30	95.4863	1.81372
HARLINGEN CONS ISD	-0.362	7,656	8,367.03	-711.032	0.178	93.10	92.1903	0.90974
HARMONY ISD	-0.476	8,102	9,037.99	-935.994	0.303	97.10	95.5511	1.54886
HARPER ISD	-0.071	9,272	9,412.08	-140.082	0.303	97.00	95.4524	1.54762
HAWKINS ISD	-0.396	8,822	9,601.33	-779.327	0.693	98.40	94.8636	3.53640
HEMPHILL ISD	-0.136	8,958	9,226.19	-268.192	0.334	96.60	94.8949	1.70511
HENDERSON ISD	-0.563	7,577	8,683.52	-1,106.521	0.533	96.70	93.9806	2.71935
HENRIETTA ISD	-0.290	7,709	8,279.49	-570.494	0.302	97.20	95.6572	1.54277
HICO ISD	-0.573	7,508	8,633.61	-1,125.605	0.524	97.80	95.1251	2.67494
HIGHLAND PARK ISD	-1.688	8,203	11,521.73	-3,318.727	0.703	99.50	95.9113	3.58874
HIGHLAND PARK ISD	-1.294	9,208	11,752.34	-2,544.342	0.922	100.00	95.2948	4.70518
HUBBARD ISD	-0.511	7,299	8,302.59	-1,003.586	1.216	100.00	93.7907	6.20933
HUDSON ISD	-0.464	7,062	7,974.01	-912.015	0.130	95.40	94.7381	0.66188
HUGHES SPRINGS ISD	-0.608	7,655	8,850.23	-1,195.228	0.530	97.50	94.7944	2.70558
HULL-DAISETTA ISD	-0.142	8,660	8,938.98	-278.985	0.554	97.60	94.7740	2.82595
HUNTINGTON ISD	-0.417	7,539	8,359.63	-820.626	0.606	98.70	95.6083	3.09170
HURST-EULESS-BEDFORD ISD	-0.266	7,622	8,145.52	-523.519	0.128	95.80	95.1459	0.65408
IDALOU ISD	-0.168	7,726	8,055.54	-329.539	1.127	100.00	94.2485	5.75153
IRVING ISD	-0.233	7,554	8,012.94	-458.939	0.529	95.30	92.5981	2.70187
ITASCA ISD	-0.004	8,993	9,001.42	-8.416	0.725	97.80	94.0985	3.70151
JACKSBORO ISD	-0.610	7,690	8,888.97	-1,198.969	0.180	96.40	95.4800	0.91999
JACKSONVILLE ISD	-0.402	7,618	8,408.60	-790.597	0.208	94.40	93.3378	1.06223
JASPER ISD	-0.147	7,684	7,973.91	-289.909	0.717	96.80	93.1376	3.66243
JEFFERSON ISD	-0.462	8,380	9,288.59	-908.592	0.323	95.00	93.3499	1.65007
JOHNSON CITY ISD	-0.310	8,687	9,296.98	-609.979	0.092	95.90	95.4327	0.46734
KARNES CITY ISD	-0.281	8,109	8,660.89	-551.894	0.144	94.40	93.6668	0.73324
KEENE ISD	-0.929	7,937	9,763.35	-1,826.349	0.790	100.00	95.9685	4.03155
KEMP ISD	-0.326	7,549	8,190.24	-641.243	0.717	99.00	95.3373	3.66270

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KERMIT ISD	-0.450	8,938	9,821.56	-883.557	0.817	97.90	93.7286	4.17139
KLONDIKE ISD	-0.245	12,132	12,613.30	-481.302	1.082	100.00	94.4753	5.52471
KOPPERL ISD	-0.625	8,210	9,438.20	-1,228.204	0.848	100.00	95.6730	4.32702
KRUM ISD	-0.066	8,597	8,726.10	-129.097	0.271	96.90	95.5177	1.38229
LA FERIA ISD	-0.080	8,267	8,424.87	-157.870	0.785	96.50	92.4919	4.00814
LA MARQUE ISD	-0.041	7,480	7,559.83	-79.829	1.038	96.70	91.4028	5.29717
LAGO VISTA ISD	-0.077	9,398	9,550.33	-152.325	0.043	95.60	95.3815	0.21851
LAKE DALLAS ISD	-0.029	7,607	7,664.45	-57.451	0.031	95.50	95.3402	0.15977
LAREDO ISD	-0.456	8,339	9,235.16	-896.157	0.047	91.80	91.5618	0.23817
LATEXO ISD	-0.059	7,975	8,091.46	-116.460	0.257	96.80	95.4890	1.31103
LAZBUDDIE ISD	-0.128	10,364	10,616.00	-252.000	1.076	100.00	94.5054	5.49457
LEONARD ISD	-0.165	7,586	7,909.38	-323.384	0.940	100.00	95.2030	4.79699
LEVELLAND ISD	-0.898	7,571	9,335.64	-1,764.636	0.010	93.70	93.6471	0.05293
LIBERTY ISD	-0.125	7,696	7,942.57	-246.568	0.402	97.30	95.2455	2.05448
LIBERTY-EYLAU ISD	-0.313	7,598	8,212.41	-614.409	0.068	94.30	93.9521	0.34789
LINDALE ISD	-0.295	7,273	7,851.92	-578.920	0.673	98.60	95.1655	3.43453
LINDEN-KILDARE CONS ISD	-0.314	7,965	8,582.30	-617.305	0.167	95.40	94.5474	0.85264
LINDSAY ISD	-0.100	6,615	6,810.63	-195.634	0.332	97.60	95.9031	1.69694
LITTLE CYPRESS-MAURICEVILLE CISD	-0.574	6,867	7,995.32	-1,128.324	0.274	96.90	95.4986	1.40141
LOCKNEY ISD	-0.412	7,704	8,513.18	-809.184	0.874	98.00	93.5374	4.46259
LONE OAK ISD	-0.398	7,386	8,169.28	-783.283	0.516	98.40	95.7670	2.63302
LORENA ISD	-0.687	6,209	7,559.46	-1,350.458	0.705	99.30	95.6987	3.60134
LOUISE ISD	-0.546	7,903	8,975.71	-1,072.713	1.138	100.00	94.1881	5.81188
LUBBOCK ISD	-0.585	7,702	8,852.84	-1,150.836	0.332	96.50	94.8025	1.69750
LUFKIN ISD	-0.588	7,224	8,379.70	-1,155.704	0.114	93.60	93.0167	0.58328
LYTLE ISD	-0.218	8,005	8,434.06	-429.061	0.881	97.80	93.3027	4.49732
MABANK ISD	-0.986	7,154	9,092.94	-1,938.941	0.129	96.10	95.4400	0.66003
MALAKOFF ISD	-0.784	9,304	10,845.06	-1,541.058	0.014	95.10	95.0275	0.07252
MARBLE FALLS ISD	-0.347	8,618	9,299.74	-681.735	0.043	94.80	94.5799	0.22008
MARTINS MILL ISD	-0.166	8,435	8,760.73	-325.732	0.873	100.00	95.5425	4.45747
MAUD ISD	-0.318	7,608	8,233.21	-625.214	0.334	97.10	95.3969	1.70312
MCCAMEY ISD	-2.294	11,351	15,859.39	-4,508.392	0.682	97.70	94.2194	3.48057
MCLEAN ISD	-0.291	9,156	9,728.70	-572.701	0.908	100.00	95.3639	4.63613
MCLEOD ISD	-0.082	7,865	8,025.62	-160.615	0.834	100.00	95.7433	4.25669
MEDINA ISD	-0.176	10,444	10,789.55	-345.546	0.848	100.00	95.6709	4.32910
MEDINA VALLEY ISD	-0.203	7,627	8,025.73	-398.734	0.487	96.50	94.0132	2.48683
MERIDIAN ISD	-0.713	7,221	8,623.32	-1,402.319	0.581	97.60	94.6346	2.96542
MERKEL ISD	-0.469	8,427	9,348.40	-921.398	0.031	95.50	95.3414	0.15862
MIDWAY ISD	-0.106	7,398	7,607.11	-209.111	0.928	100.00	95.2618	4.73824

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MILLSAP ISD	-0.035	8,752	8,820.79	-68.787	0.195	96.70	95.7023	0.99767
MINEOLA ISD	-0.280	8,257	8,807.05	-550.045	0.152	95.40	94.6257	0.77434
MORGAN ISD	-0.788	9,951	11,500.76	-1,549.757	1.069	100.00	94.5411	5.45894
MOULTON ISD	-0.318	7,770	8,394.16	-624.159	0.375	96.70	94.7863	1.91368
MOUNT PLEASANT ISD	-0.783	7,857	9,395.76	-1,538.762	0.076	93.50	93.1122	0.38781
MOUNT VERNON ISD	-1.003	7,226	9,197.92	-1,971.919	0.388	97.00	95.0192	1.98078
MUENSTER ISD	-0.225	7,250	7,692.06	-442.057	0.810	100.00	95.8636	4.13640
MUNDAY CISD	-0.245	7,717	8,197.91	-480.910	0.699	97.10	93.5319	3.56813
NATALIA ISD	-0.206	8,300	8,704.04	-404.036	0.492	95.80	93.2884	2.51158
NAVARRO ISD	-0.247	7,603	8,088.48	-485.479	0.822	98.60	94.4020	4.19795
NECHES ISD	-0.720	7,488	8,903.79	-1,415.792	0.914	100.00	95.3332	4.66679
NEW BOSTON ISD	-0.821	6,960	8,573.39	-1,613.386	1.032	100.00	94.7332	5.26677
NEW BRAUNFELS ISD	-0.366	7,361	8,081.01	-720.008	0.054	94.40	94.1226	0.27744
NEW CANEY ISD	-0.402	7,428	8,217.93	-789.930	0.084	95.20	94.7714	0.42859
NEW DEAL ISD	-0.562	7,944	9,048.68	-1,104.684	0.282	95.90	94.4616	1.43841
NORMANGEE ISD	-0.087	7,950	8,121.54	-171.541	0.926	100.00	95.2732	4.72677
NORTH LAMAR ISD	-0.918	6,323	8,126.83	-1,803.834	0.442	97.60	95.3438	2.25621
NUECES CANYON CISD	-0.307	10,306	10,908.83	-602.833	0.420	96.80	94.6570	2.14305
OLNEY ISD	-0.490	8,225	9,188.45	-963.450	0.574	98.20	95.2675	2.93252
ORANGE GROVE ISD	-0.314	7,657	8,273.50	-616.497	1.005	98.90	93.7677	5.13225
ORANGEFIELD ISD	-0.379	6,833	7,577.13	-744.125	0.140	96.60	95.8838	0.71625
PALESTINE ISD	-0.237	7,487	7,952.56	-465.556	0.586	96.00	93.0074	2.99261
PARIS ISD	-0.086	7,937	8,106.01	-169.011	0.239	94.40	93.1780	1.22197
PEARSALL ISD	-0.531	7,649	8,692.15	-1,043.151	0.787	96.70	92.6811	4.01891
PERRYTON ISD	-0.641	7,332	8,592.80	-1,260.800	0.417	96.10	93.9711	2.12891
PHARR-SAN JUAN-ALAMO ISD	-0.227	7,996	8,442.72	-446.724	0.785	95.30	91.2941	4.00588
PLEASANT GROVE ISD	-0.071	6,787	6,926.54	-139.536	0.191	96.50	95.5248	0.97523
PLEASANTON ISD	-0.784	7,517	9,058.86	-1,541.862	0.279	95.20	93.7771	1.42287
PLEMONS-STINNETT-PHILLIPS CONS ISD	-1.968	11,152	15,021.21	-3,869.207	0.050	95.80	95.5429	0.25715
PORT ARANSAS ISD	-1.368	11,218	13,906.53	-2,688.527	0.796	100.00	95.9359	4.06413
POTEET ISD	-0.481	7,884	8,829.97	-945.967	0.781	97.00	93.0140	3.98599
PRAIRIE LEA ISD	-0.780	8,314	9,848.11	-1,534.106	1.104	100.00	94.3627	5.63726
QUANAH ISD	-0.466	9,376	10,292.80	-916.798	1.006	100.00	94.8644	5.13561
QUEEN CITY ISD	-1.059	7,713	9,793.67	-2,080.669	0.185	95.80	94.8532	0.94682
RALLS ISD	-1.024	8,133	10,145.63	-2,012.630	0.830	97.90	93.6607	4.23933

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RANKIN ISD	-0.554	14,580	15,668.28	-1,088.278	0.150	95.50	94.7348	0.76521
REAGAN COUNTY ISD	-0.255	10,440	10,940.77	-500.770	1.218	100.00	93.7823	6.21774
RED OAK ISD	-0.271	6,839	7,370.96	-531.955	0.077	95.20	94.8058	0.39416
REDWATER ISD	-0.237	6,999	7,465.30	-466.302	0.527	98.40	95.7116	2.68839
REFUGIO ISD	-0.547	9,016	10,090.39	-1,074.385	0.520	96.30	93.6440	2.65598
RICHARDS ISD	-0.926	7,368	9,187.98	-1,819.979	1.075	100.00	94.5139	5.48609
RICHARDSON ISD	-0.119	8,160	8,394.37	-234.369	0.580	96.60	93.6375	2.96250
RIESEL ISD	-0.276	7,632	8,174.53	-542.531	0.269	97.10	95.7258	1.37416
RIO HONDO ISD	-0.025	9,249	9,297.70	-48.697	1.130	98.40	92.6324	5.76763
RIO VISTA ISD	-0.201	7,789	8,184.57	-395.566	0.540	98.50	95.7428	2.75716
RIVER ROAD ISD	-0.488	7,034	7,992.58	-958.578	0.016	95.50	95.4203	0.07972
RIVERCREST ISD	-0.451	7,502	8,387.76	-885.759	0.220	96.40	95.2746	1.12540
ROBSTOWN ISD	-0.512	8,581	9,586.47	-1,005.466	0.269	93.80	92.4263	1.37369
ROCKWALL ISD	-0.012	7,439	7,462.71	-23.711	0.169	95.80	94.9366	0.86339
ROGERS ISD	-0.064	7,817	7,943.43	-126.430	0.164	95.90	95.0612	0.83884
ROOSEVELT ISD	-0.420	8,335	9,160.08	-825.081	1.153	100.00	94.1130	5.88699
ROSEBUD-LOTT ISD	-0.357	7,623	8,324.14	-701.140	0.428	96.30	94.1149	2.18511
ROYAL ISD	-0.089	8,436	8,611.42	-175.420	1.026	97.60	92.3612	5.23875
RUSK ISD	-0.597	7,074	8,247.38	-1,173.385	0.166	95.50	94.6542	0.84581
SABINAL ISD	-0.371	8,708	9,436.85	-728.847	0.098	94.10	93.5982	0.50181
SALADO ISD	-0.435	7,119	7,973.88	-854.877	0.382	97.30	95.3505	1.94954
SALTILLO ISD	-0.748	8,199	9,669.45	-1,470.454	0.899	100.00	95.4093	4.59071
SAN BENITO CONS ISD	-0.516	7,727	8,741.36	-1,014.363	0.118	92.70	92.0956	0.60441
SAN ELIZARIO ISD	-0.489	8,240	9,200.21	-960.207	0.506	94.80	92.2165	2.58348
SAN SABA ISD	-0.217	8,660	9,086.26	-426.256	1.064	100.00	94.5685	5.43153
SANDS CISD	-0.199	10,188	10,579.61	-391.614	0.084	94.40	93.9717	0.42831
SANFORD ISD	-0.344	7,661	8,337.36	-676.357	0.003	95.60	95.5845	0.01552
SANTA ROSA ISD	-0.421	8,609	9,436.87	-827.869	1.210	98.60	92.4213	6.17868
SANTO ISD	-0.225	8,593	9,034.99	-441.994	0.366	97.40	95.5290	1.87103
SCHULENBURG ISD	-0.283	8,158	8,713.99	-555.993	1.168	100.00	94.0357	5.96432
SEALY ISD	-0.323	7,479	8,114.83	-635.828	0.808	98.10	93.9727	4.12729
SHALLOWATER ISD	0.000	7,724	7,724.00	-0.003	0.819	98.80	94.6173	4.18270
SHARYLAND ISD	-0.308	6,986	7,592.03	-606.025	0.214	93.90	92.8063	1.09368
SHEPHERD ISD	-0.166	7,996	8,322.26	-326.261	0.007	94.90	94.8635	0.03655
SIDNEY ISD	-0.003	10,062	10,067.40	-5.399	0.864	100.00	95.5885	4.41145
SIMMS ISD	-1.296	6,549	9,097.14	-2,548.144	0.222	96.90	95.7651	1.13490
SLATON ISD	-0.407	8,043	8,842.69	-799.694	1.033	98.70	93.4253	5.27470
SMITHVILLE ISD	-0.258	8,074	8,581.40	-507.400	0.087	95.10	94.6534	0.44656
SNYDER ISD	-0.683	8,034	9,376.79	-1,342.792	0.477	96.50	94.0626	2.43743
SOCORRO ISD	-0.329	7,318	7,963.92	-645.922	0.928	96.10	91.3610	4.73899

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT COMPLETION RATE W/O GED 2003	Predicted Value	Residual
SOMERSET ISD	-0.159	8,323	8,635.28	-312.280	0.382	94.80	92.8485	1.95146
SOUTHSIDE ISD	-0.714	7,718	9,121.62	-1,403.617	0.377	94.90	92.9736	1.92645
SPLENDORA ISD	-0.046	7,552	7,641.91	-89.914	0.538	97.70	94.9525	2.74750
SPRING BRANCH ISD	-0.138	8,545	8,816.76	-271.764	0.490	95.90	93.4001	2.49995
SPRING HILL ISD	-0.205	6,338	6,740.00	-401.999	0.180	96.30	95.3794	0.92064
STEPHENVILLE	-0.562	6,889	7,994.48	-1,105.476	0.595	98.00	94.9619	3.03814
STOCKDALE ISD	-0.084	8,007	8,172.26	-165.259	0.766	98.30	94.3904	3.90956
STRAWN ISD	-0.553	8,312	9,399.12	-1,087.122	0.952	100.00	95.1413	4.85868
SUDAN ISD	-0.411	13,550	14,358.73	-808.730	0.645	97.40	94.1096	3.29045
SULPHUR SPRINGS ISD	-0.428	7,344	8,185.13	-841.133	0.259	95.80	94.4782	1.32183
SWEETWATER ISD	-0.718	7,301	8,712.94	-1,411.943	0.309	95.60	94.0246	1.57537
TATUM ISD	-1.895	7,663	11,388.46	-3,725.456	0.086	94.30	93.8621	0.43792
TAYLOR ISD	-0.228	8,056	8,504.06	-448.057	0.019	93.30	93.2038	0.09615
TEAGUE ISD	-0.868	8,550	10,255.90	-1,705.902	0.867	98.90	94.4726	4.42743
TEXARKANA ISD	-0.543	7,387	8,453.37	-1,066.374	0.021	93.00	92.8929	0.10712
TOM BEAN ISD	-1.054	5,537	7,608.16	-2,071.158	0.552	98.50	95.6842	2.81583
TORNILLO ISD	-0.545	7,598	8,669.31	-1,071.307	0.595	95.20	92.1608	3.03922
TRENTON ISD	-0.510	6,834	7,836.57	-1,002.573	0.934	100.00	95.2327	4.76732
TROY ISD	-0.380	7,674	8,421.14	-747.144	0.732	98.90	95.1608	3.73923
TULOSO-MIDWAY ISD	-0.604	7,622	8,809.52	-1,187.524	0.596	96.80	93.7570	3.04297
TURKEY-QUITAQUE ISD	-0.326	8,122	8,763.62	-641.625	1.170	100.00	94.0256	5.97441
UNION HILL ISD	-0.285	8,614	9,174.88	-560.884	1.063	100.00	94.5755	5.42450
UNITED ISD	-0.621	7,363	8,582.70	-1,219.698	1.038	96.70	91.4022	5.29778
UTOPIA ISD	-0.315	9,348	9,966.82	-618.824	0.050	95.50	95.2443	0.25569
VALLEY MILLS ISD	-0.517	8,392	9,408.91	-1,016.911	0.023	95.50	95.3812	0.11875
VAN VLECK ISD	-0.060	8,524	8,641.18	-117.178	0.873	98.50	94.0428	4.45724
WAELDER ISD	-0.826	8,842	10,465.80	-1,623.797	0.748	96.00	92.1826	3.81740
WEBB CONS ISD	-0.041	20,119	20,200.26	-81.261	1.347	100.00	93.1214	6.87862
WEIMAR ISD	-0.055	8,522	8,629.54	-107.535	0.795	98.40	94.3434	4.05659
WELLS ISD	-0.262	7,929	8,444.53	-515.532	1.000	100.00	94.8923	5.10768
WESLACO ISD	-0.326	7,882	8,523.39	-641.391	0.389	93.80	91.8159	1.98409
WEST HARDIN COUNTY CONS ISD	-0.067	8,308	8,440.35	-132.354	0.436	97.90	95.6760	2.22402
WEST OSO ISD	-0.542	8,264	9,328.78	-1,064.778	0.008	92.20	92.1586	0.04144
WESTWOOD ISD	-1.190	5,754	8,093.41	-2,339.412	0.094	95.10	94.6219	0.47809
WHARTON ISD	-0.550	7,067	8,147.43	-1,080.431	0.745	96.70	92.8967	3.80333
WHEELER ISD	-0.154	8,248	8,550.15	-302.148	1.104	100.00	94.3615	5.63849
WHITE SETTLEMENT ISD	-0.457	6,887	7,784.53	-897.533	0.188	95.80	94.8382	0.96180
WHITEHOUSE ISD	-0.497	6,350	7,327.68	-977.677	0.083	95.50	95.0743	0.42571

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT COMPLETION RATE W/O GED 2003	Predicted Value	Residual
WHITEWRIGHT ISD	-0.321	7,493	8,123.41	-630.412	0.135	95.90	95.2089	0.69112
WILLS POINT ISD	-0.428	7,396	8,237.42	-841.422	0.520	97.60	94.9450	2.65500
WINNSBORO ISD	-1.109	6,451	8,630.02	-2,179.021	0.111	96.00	95.4314	0.56855
WINONA ISD	-0.098	7,733	7,926.29	-193.292	0.117	94.90	94.3050	0.59499
WYLIE ISD	-0.436	6,186	7,042.52	-856.522	0.427	97.80	95.6206	2.17937
YOAKUM ISD	-0.221	8,048	8,481.83	-433.834	0.153	94.70	93.9168	0.78321
YORKTOWN ISD	-0.356	7,274	7,973.83	-699.827	1.114	100.00	94.3109	5.68910
YSLETA ISD	-0.359	7,338	8,043.15	-705.146	0.421	93.00	90.8498	2.15016
ZAVALLA ISD	-0.512	7,913	8,918.62	-1,005.616	0.168	96.60	95.7413	0.85869
ZEPHYR ISD	-0.637	8,336	9,587.97	-1,251.974	0.834	100.00	95.7408	4.25918

APPENDIX D

MODIFIED QUADRIFORM FORMATION

DISTRICT MEAN SAT 2003

QUADRANT I

SCHOOL DISTRICTS

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT MEAN SAT 2003	Predicted Value	Residual
ABERNATHY ISD	-0.228	8,712	9,160.68	-448.682	0.721	1,014.00	966.9569	47.04305
ABILENE ISD	-0.695	7,345	8,711.86	-1,366.856	0.574	1,001.00	963.5070	37.49300
ACADEMY ISD	-0.382	7,651	8,401.94	-750.936	0.777	1,067.00	1,016.2555	50.74449
ALAMO HEIGHTS ISD	-0.430	8,725	9,569.40	-844.399	1.494	1,130.00	1,032.4842	97.51575
ALICE ISD	-0.315	7,766	8,385.59	-619.592	0.124	933.00	924.8895	8.11045
ALPINE ISD	-0.792	7,142	8,698.50	-1,556.502	0.509	988.00	954.7832	33.21684
ALVIN ISD	-0.283	7,334	7,890.65	-556.650	0.394	1,001.00	975.2746	25.72536
AMARILLO ISD	-0.492	7,093	8,060.60	-967.604	1.275	1,045.00	961.7336	83.26637
ANGLETON ISD	-0.965	6,551	8,447.70	-1,896.703	0.442	1,010.00	981.1546	28.84544
ANSON ISD	-0.490	8,229	9,191.72	-962.720	0.328	973.00	951.5875	21.41245
ANTHONY	-0.023	9,904	9,949.49	-45.494	0.985	921.00	856.7184	64.28161
ARANSAS COUNTY ISD	-0.934	8,193	10,029.08	-1,836.081	0.427	999.00	971.1007	27.89927
ARP ISD	-0.328	7,695	8,340.45	-645.445	0.314	969.00	948.5113	20.48871
ATHENS ISD	-0.381	7,633	8,382.33	-749.326	0.998	1,016.00	950.8454	65.15462
AUSTIN ISD	-0.127	8,415	8,665.28	-250.280	1.019	1,045.00	978.4891	66.51086
AXTELL ISD	-0.643	9,106	10,370.26	-1,264.258	0.668	1,028.00	984.3723	43.62769
BANGS ISD	-0.489	7,839	8,799.27	-960.269	0.663	1,017.00	973.6957	43.30434
BANQUETE ISD	-0.043	8,781	8,864.74	-83.744	1.299	1,018.00	933.2071	84.79294
BASTROP ISD	-0.422	7,582	8,410.60	-828.601	0.132	978.00	969.3504	8.64963
BAY CITY ISD	-0.248	8,080	8,567.06	-487.060	0.509	972.00	938.7529	33.24711
BEEVILLE ISD	-0.305	7,692	8,291.36	-599.358	0.809	975.00	922.1738	52.82624
BELLVILLE ISD	-0.215	7,377	7,799.79	-422.789	0.507	1,039.00	1,005.8798	33.12023
BELTON ISD	-0.384	7,553	8,308.73	-755.725	0.905	1,037.00	977.9485	59.05152
BIG SPRING ISD	-0.620	7,188	8,407.27	-1,219.266	1.310	1,025.00	939.5090	85.49096
BIRDVILLE ISD	-0.371	7,288	8,016.83	-728.834	0.034	1,017.00	1,014.7765	2.22345
BOERNE ISD	-0.256	7,862	8,365.75	-503.747	0.365	1,059.00	1,035.1853	23.81471
BONHAM ISD	-0.737	7,447	8,895.70	-1,448.700	0.192	985.00	972.4945	12.50546
BORGER ISD	-0.625	6,827	8,055.49	-1,228.489	2.453	1,144.00	983.8444	160.15557
BOWIE ISD	-0.445	7,373	8,246.80	-873.800	0.211	1,002.00	988.2160	13.78400
BRAZOSPORT ISD	-1.326	6,904	9,510.30	-2,606.302	0.750	1,030.00	981.0505	48.94952
BRECKENRIDGE ISD	-0.836	7,425	9,067.88	-1,642.881	0.569	989.00	951.8631	37.13687
BRENHAM ISD	-0.108	7,815	8,026.95	-211.945	0.792	1,027.00	975.2794	51.72056
BRIDGEPORT ISD	-0.711	7,411	8,808.66	-1,397.657	0.411	1,022.00	995.1767	26.82332
BROOKS COUNTY ISD	-0.789	9,513	11,062.99	-1,549.993	0.124	879.00	870.9318	8.06823
BROWNFIELD ISD	-0.634	8,030	9,275.40	-1,245.396	0.032	932.00	929.9095	2.09049
BROWNSVILLE ISD	-0.361	8,053	8,762.28	-709.283	0.195	892.00	879.2800	12.72003
BRYAN ISD	-0.235	7,524	7,986.80	-462.797	1.248	1,016.00	934.4944	81.50559

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT MEAN SAT 2003	Predicted Value	Residual
BURKBURNETT ISD	-0.030	7,554	7,613.28	-59.281	0.558	1,037.00	1,000.5735	36.42647
BURNET CONS ISD	-0.569	8,098	9,215.85	-1,117.845	0.391	1,011.00	985.4442	25.55578
CALHOUN CO ISD	-1.939	8,004	11,814.47	-3,810.467	1.355	1,060.00	971.5521	88.44792
CANADIAN ISD	-0.049	11,681	11,778.29	-97.286	1.372	1,078.00	988.4051	89.59488
CANTON ISD	-0.240	7,066	7,537.43	-471.426	0.025	1,006.00	1,004.3821	1.61789
CANYON INDEPENDENT SCHOOL DISTRICT	-0.545	6,424	7,495.74	-1,071.737	0.083	1,034.00	1,028.6133	5.38673
CARROLLTON-FARMERS BRANCH ISD	-0.249	8,258	8,747.80	-489.801	0.459	1,045.00	1,015.0221	29.97793
CARTHAGE ISD	-1.316	7,284	9,870.82	-2,586.823	2.248	1,128.00	981.2509	146.74912
CENTER ISD	-0.370	6,941	7,669.17	-728.173	0.974	998.00	934.4092	63.59083
CENTRAL HEIGHTS ISD	-0.264	7,349	7,867.94	-518.945	0.314	999.00	978.4949	20.50511
CHANNELVIEW ISD	-0.772	7,088	8,605.11	-1,517.107	0.196	948.00	935.2238	12.77619
CHILDRESS ISD	-0.040	8,502	8,580.86	-78.861	0.988	1,034.00	969.4933	64.50667
CHIRENO ISD	-0.407	7,958	8,757.49	-799.491	0.123	937.00	928.9606	8.03940
CISCO ISD	-0.863	8,009	9,704.43	-1,695.428	0.797	998.00	945.9980	52.00203
CLARENDON ISD	-0.035	9,109	9,178.77	-69.766	1.482	1,049.00	952.2584	96.74159
CLEBURNE ISD	-0.474	7,404	8,335.39	-931.388	0.751	1,025.00	975.9571	49.04294
CLYDE CONS ISD	-0.391	7,532	8,301.19	-769.185	1.350	1,079.00	990.8874	88.11260
COAHOMA ISD	-0.471	7,603	8,529.17	-926.175	1.618	1,087.00	981.3844	105.61563
COLMESNEIL ISD	-0.521	7,166	8,189.18	-1,023.176	0.079	970.00	964.8631	5.13686
COMANCHE ISD	-0.902	6,882	8,654.03	-1,772.026	1.508	1,048.00	949.5586	98.44140
COMMERCE ISD	-0.591	7,803	8,964.99	-1,161.988	0.387	981.00	955.7489	25.25113
COMO-PICKTON CISD	-0.171	8,013	8,349.15	-336.146	0.033	963.00	960.8198	2.18025
CORPUS CHRISTI ISD	-0.355	7,416	8,114.33	-698.331	0.012	962.00	961.2487	0.75131
CORSICANA ISD	-0.618	6,896	8,111.20	-1,215.198	0.845	1,008.00	952.8433	55.15671
CROSS ROADS ISD	-0.469	8,605	9,526.81	-921.808	0.868	1,017.00	960.3163	56.68375
CUERO ISD	-0.245	7,531	8,012.70	-481.696	2.598	1,129.00	959.3664	169.63356
DALHART ISD	-0.792	7,862	9,419.54	-1,557.545	0.593	980.00	941.2615	38.73854
DALLAS ISD	-1.064	7,160	9,251.73	-2,091.731	2.458	1,111.00	950.5431	160.45688
DEKALB ISD	-0.613	7,899	9,103.59	-1,204.591	0.081	1,022.00	1,016.7119	5.28812
DENTON ISD	-0.787	7,511	9,058.25	-1,547.248	0.984	1,044.00	979.7517	64.24827
DESOTO ISD	-0.619	11,568	12,785.18	-1,217.181	0.837	1,009.00	954.3487	54.65127
DOUGLASS ISD	-0.045	7,651	7,739.64	-88.636	0.692	1,051.00	1,005.8338	45.16619

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT MEAN SAT 2003	Predicted Value	Residual
DRIPPING SPRINGS ISD	-0.253	7,595	8,091.41	-496.406	0.724	1,103.00	1,055.7582	47.24181
EANES ISD	-0.045	9,555	9,643.77	-88.772	1.429	1,188.00	1,094.6775	93.32246
EASTLAND ISD	-0.460	7,547	8,450.67	-903.674	0.263	999.00	981.8203	17.17965
ECTOR COUNTY ISD	-0.901	6,336	8,106.35	-1,770.347	0.378	975.00	950.3089	24.69114
EDINBURG CONSOLIDATED	-0.138	8,263	8,534.95	-271.955	0.303	907.00	887.2424	19.75756
EDNA ISD	-0.470	6,880	7,803.64	-923.645	0.270	981.00	963.4016	17.59836
EL CAMPO ISD	-0.739	7,002	8,453.63	-1,451.627	0.816	991.00	937.7596	53.24036
ELKHART ISD	-0.766	7,398	8,903.12	-1,505.123	0.201	993.00	979.8874	13.11263
ENNIS ISD	-0.500	7,798	8,779.83	-981.833	1.749	1,070.00	955.8072	114.19281
ERA ISD	-0.149	7,107	7,400.02	-293.018	0.349	1,030.00	1,007.2075	22.79249
EUSTACE ISD	-1.470	7,063	9,951.93	-2,888.935	0.889	1,019.00	960.9374	58.06262
FAIRFIELD ISD	-1.413	8,350	11,127.89	-2,777.890	0.013	990.00	989.1371	0.86286
FARMERSVILLE ISD	-0.401	6,848	7,636.62	-788.623	0.203	1,010.00	996.7227	13.27735
FLOUR BLUFF ISD	-0.666	6,951	8,260.36	-1,309.361	0.581	1,026.00	988.0815	37.91847
FRANKSTON ISD	-0.341	7,655	8,325.80	-670.802	1.471	1,071.00	974.9396	96.06038
FREDERICKSBURG ISD	-0.628	7,909	9,143.92	-1,234.916	0.884	1,039.00	981.2883	57.71172
GAINESVILLE ISD	-0.302	8,228	8,822.33	-594.333	1.108	1,031.00	958.6857	72.31431
GALVESTON ISD	-0.319	7,957	8,583.11	-626.113	0.255	958.00	941.3285	16.67149
GATESVILLE ISD	-0.940	6,455	8,303.39	-1,848.391	0.322	1,019.00	997.9512	21.04885
GEORGE WEST ISD	-0.522	7,558	8,583.54	-1,025.539	1.682	1,073.00	963.1701	109.82993
GLEN ROSE ISD	-2.453	8,601	13,423.37	-4,822.373	0.102	1,004.00	997.3311	6.66893
GOLDTHWAITE ISD	-0.317	8,391	9,014.93	-623.934	0.933	1,054.00	993.0789	60.92109
GOLIAD ISD	-0.453	8,653	9,543.56	-890.559	0.467	1,008.00	977.5188	30.48122
GONZALES ISD	-0.591	7,235	8,397.06	-1,162.064	0.817	983.00	929.6454	53.35463
GOOSE CREEK CISD	-0.266	8,144	8,667.19	-523.188	0.451	978.00	948.5580	29.44199
GRAHAM ISD	-0.529	7,090	8,129.94	-1,039.944	0.466	1,012.00	981.5767	30.42335
GRANBURY ISD	-0.583	7,611	8,756.56	-1,145.563	0.328	1,022.00	1,000.5995	21.40050
GRAND PRAIRIE ISD	-0.093	7,698	7,881.47	-183.466	0.283	981.00	962.4946	18.50536
GRAND SALINE ISD	-1.025	5,950	7,964.41	-2,014.410	1.029	1,042.00	974.8106	67.18944
GRAPE CREEK ISD	-0.363	7,862	8,576.39	-714.388	0.182	967.00	955.1186	11.88143
GRAPELAND ISD	-1.100	6,770	8,932.26	-2,162.260	0.123	960.00	951.9753	8.02471
GRAPEVINE-COLLEYVILLE ISD	-0.115	7,777	8,003.89	-226.892	0.229	1,083.00	1,068.0392	14.96077
GREENVILLE ISD	-0.184	7,449	7,810.26	-361.263	0.548	996.00	960.2379	35.76214

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT MEAN SAT 2003	Predicted Value	Residual
GREGORY-PORTLAND ISD	-0.504	6,669	7,659.65	-990.654	0.358	1,022.00	998.6157	23.38433
GROESBECK ISD	-0.934	8,384	10,220.82	-1,836.815	0.601	1,004.00	964.7604	39.23963
GROVETON ISD	-0.125	8,403	8,648.85	-245.846	0.308	981.00	960.8859	20.11415
HALLSVILLE ISD	-0.793	7,063	8,621.84	-1,558.836	0.063	1,000.00	995.8759	4.12414
HARLINGEN CONS ISD	-0.362	7,656	8,367.03	-711.032	0.300	936.00	916.3923	19.60768
HAWKINS ISD	-0.396	8,822	9,601.33	-779.327	0.245	987.00	971.0072	15.99280
HAWLEY ISD	-0.500	7,518	8,501.77	-983.771	0.822	1,038.00	984.3292	53.67082
HEMPHILL ISD	-0.136	8,958	9,226.19	-268.192	0.704	989.00	943.0619	45.93808
HENDERSON ISD	-0.563	7,577	8,683.52	-1,106.521	0.926	1,027.00	966.5705	60.42949
HEREFORD ISD	-0.820	7,355	8,966.77	-1,611.768	1.336	1,002.00	914.7536	87.24641
HICO ISD	-0.573	7,508	8,633.61	-1,125.605	0.552	991.00	954.9819	36.01815
HIGHLAND PARK ISD	-1.688	8,203	11,521.73	-3,318.727	1.602	1,187.00	1,082.3936	104.60640
HIGHLAND PARK ISD	-1.294	9,208	11,752.34	-2,544.342	0.282	1,006.00	987.6053	18.39475
HOWE ISD	-0.076	7,591	7,740.50	-149.496	1.374	1,113.00	1,023.2770	89.72300
HUDSON ISD	-0.464	7,062	7,974.01	-912.015	0.795	1,003.00	951.1120	51.88802
HUGHES SPRINGS ISD	-0.608	7,655	8,850.23	-1,195.228	0.343	976.00	953.6298	22.37018
HUNTSVILLE ISD	-0.302	7,079	7,672.33	-593.326	0.567	990.00	952.9754	37.02459
HURST-EULESS-BEDFORD ISD	-0.266	7,622	8,145.52	-523.519	0.035	1,024.00	1,021.6953	2.30472
IDALOU ISD	-0.168	7,726	8,055.54	-329.539	0.796	1,038.00	986.0299	51.97012
INGLESIDE ISD	-1.406	6,278	9,042.44	-2,764.442	0.676	1,048.00	1,003.8537	44.14626
IOWA PARK CONS ISD	-0.551	6,517	7,601.00	-1,083.997	1.555	1,107.00	1,005.4705	101.52952
IRVING ISD	-0.233	7,554	8,012.94	-458.939	0.579	994.00	956.2098	37.79024
JACKSONVILLE ISD	-0.402	7,618	8,408.60	-790.597	2.322	1,075.00	923.4035	151.59646
JEFFERSON ISD	-0.462	8,380	9,288.59	-908.592	1.086	1,008.00	937.0999	70.90013
JIM NED CONS ISD	-0.076	7,753	7,902.11	-149.105	0.716	1,050.00	1,003.2369	46.76310
JOURDANTON ISD	-0.701	7,667	9,044.04	-1,377.037	1.020	1,008.00	941.4306	66.56944
KARNES CITY ISD	-0.281	8,109	8,660.89	-551.894	1.259	1,023.00	940.8030	82.19704
KEMP ISD	-0.326	7,549	8,190.24	-641.243	0.649	1,027.00	984.6302	42.36983
KERENS ISD	-0.214	7,910	8,331.01	-421.008	0.359	973.00	949.5782	23.42180
KERRVILLE ISD	-0.567	7,694	8,808.03	-1,114.025	0.730	1,025.00	977.3494	47.65060
KIRBYVILLE CISD	-0.651	6,838	8,118.25	-1,280.246	0.836	1,019.00	964.4024	54.59758
LA FERIA ISD	-0.080	8,267	8,424.87	-157.870	2.369	1,048.00	893.3235	154.67649
LA GRANGE ISD	-0.701	7,241	8,618.10	-1,377.098	0.678	1,025.00	980.7180	44.28197
LA JOYA ISD	-0.390	7,894	8,659.88	-765.884	0.462	905.00	874.8668	30.13321
LA PORTE ISD	-0.274	8,709	9,246.89	-537.890	0.036	1,009.00	1,006.6501	2.34993
LA VEGA ISD	-0.478	7,679	8,619.29	-940.288	0.398	950.00	924.0383	25.96165

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT MEAN SAT 2003	Predicted Value	Residual
LAGO VISTA ISD	-0.077	9,398	9,550.33	-152.325	0.794	1,096.00	1,044.1431	51.85692
LAMAR CONSOLIDATED ISD	-0.069	7,728	7,863.15	-135.155	0.193	993.00	980.3746	12.62539
LAMESA ISD	-0.790	6,985	8,537.23	-1,552.229	3.226	1,136.00	925.4185	210.58146
LEVELLAND ISD	-0.898	7,571	9,335.64	-1,764.636	0.998	1,012.00	946.8768	65.12321
LIBERTY HILL ISD	-0.296	7,504	8,085.51	-581.507	2.922	1,124.00	933.2337	190.76625
LIBERTY-EYLAU ISD	-0.313	7,598	8,212.41	-614.409	0.522	996.00	961.9233	34.07668
LINDSAY ISD	-0.100	6,615	6,810.63	-195.634	0.370	1,079.00	1,054.8487	24.15126
LOCKHART ISD	-0.237	7,870	8,336.70	-466.702	0.033	961.00	958.8619	2.13810
LONGVIEW ISD	-0.398	7,759	8,541.28	-782.276	1.019	1,002.00	935.4614	66.53859
LORENA ISD	-0.687	6,209	7,559.46	-1,350.458	0.762	1,089.00	1,039.2693	49.73071
LOS FRESNOS CONS ISD	-0.641	7,727	8,987.41	-1,260.412	0.023	887.00	885.5233	1.47669
LOUISE ISD	-0.546	7,903	8,975.71	-1,072.713	1.751	1,076.00	961.6588	114.34123
LUBBOCK ISD	-0.585	7,702	8,852.84	-1,150.836	0.488	1,017.00	985.1604	31.83956
LUBBOCK-COOPER ISD	-0.302	7,610	8,203.99	-593.990	0.798	1,013.00	960.8838	52.11619
LUFKIN ISD	-0.588	7,224	8,379.70	-1,155.704	0.211	956.00	942.2064	13.79360
MALAKOFF ISD	-0.784	9,304	10,845.06	-1,541.058	1.354	1,047.00	958.5837	88.41628
MARSHALL ISD	-0.527	7,313	8,349.23	-1,036.225	0.835	1,000.00	945.4977	54.50233
MATHIS ISD	-0.411	8,015	8,822.76	-807.761	0.981	956.00	891.9233	64.07673
MCALLEN ISD	-0.381	7,395	8,143.38	-748.376	0.536	960.00	924.9849	35.01505
MEDINA ISD	-0.176	10,444	10,789.55	-345.546	0.133	994.00	985.3292	8.67081
MERIDIAN ISD	-0.713	7,221	8,623.32	-1,402.319	0.052	968.00	964.6159	3.38411
MEXIA ISD	-0.078	8,199	8,353.28	-154.280	1.401	1,024.00	932.5659	91.43410
MIDLAND ISD	-0.344	7,077	7,753.19	-676.190	1.142	1,047.00	972.4356	74.56441
MINEOLA ISD	-0.280	8,257	8,807.05	-550.045	1.525	1,057.00	957.4268	99.57324
MINERAL WELLS ISD	-0.498	7,983	8,962.57	-979.566	0.353	981.00	957.9317	23.06830
MONAHANS-WICKETT-PYOTE ISD	-1.090	7,266	9,409.03	-2,143.027	2.111	1,109.00	971.2136	137.78644
MOULTON ISD	-0.318	7,770	8,394.16	-624.159	0.252	968.00	951.5625	16.43751
MOUNT PLEASANT ISD	-0.783	7,857	9,395.76	-1,538.762	1.308	1,008.00	922.5829	85.41705
MOUNT VERNON ISD	-1.003	7,226	9,197.92	-1,971.919	0.550	1,033.00	997.1247	35.87526
MUENSTER ISD	-0.225	7,250	7,692.06	-442.057	0.083	1,037.00	1,031.5622	5.43780
NACOGDOCHES ISD	-0.309	7,331	7,937.40	-606.403	1.160	1,000.00	924.2709	75.72906
NAVARRO ISD	-0.247	7,603	8,088.48	-485.479	1.023	1,064.00	997.2446	66.75538

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NECHES ISD	-0.720	7,488	8,903.79	-1,415.792	2.481	1,162.00	1,000.0356	161.96442
NEW BOSTON ISD	-0.821	6,960	8,573.39	-1,613.386	1.158	1,058.00	982.3860	75.61404
NEW BRAUNFELS ISD	-0.366	7,361	8,081.01	-720.008	0.194	1,005.00	992.3474	12.65255
NEW DEAL ISD	-0.562	7,944	9,048.68	-1,104.684	0.593	1,002.00	963.2969	38.70314
NOCONA ISD	-0.229	8,624	9,073.59	-449.591	0.374	993.00	968.6074	24.39260
NORTH LAMAR ISD	-0.918	6,323	8,126.83	-1,803.834	0.474	1,037.00	1,006.0840	30.91596
OLNEY ISD	-0.490	8,225	9,188.45	-963.450	0.390	997.00	971.5662	25.43380
ORANGE GROVE ISD	-0.314	7,657	8,273.50	-616.497	2.747	1,110.00	930.6327	179.36728
PALESTINE ISD	-0.237	7,487	7,952.56	-465.556	0.065	937.00	932.7620	4.23805
PAMPA ISD	-0.540	7,256	8,316.82	-1,060.824	0.901	1,035.00	976.2038	58.79619
PARIS ISD	-0.086	7,937	8,106.01	-169.011	2.116	1,077.00	938.8783	138.12167
PASADENA ISD	-0.073	7,170	7,313.81	-143.809	0.383	972.00	946.9718	25.02824
PEARSALL ISD	-0.531	7,649	8,692.15	-1,043.151	0.676	942.00	897.8651	44.13492
PERRYTON ISD	-0.641	7,332	8,592.80	-1,260.800	2.127	1,092.00	953.1484	138.85156
PINE TREE ISD	-0.630	6,608	7,845.61	-1,237.609	0.938	1,058.00	996.7351	61.26489
PLAINVIEW ISD	-1.091	6,334	8,478.89	-2,144.889	0.278	963.00	944.8734	18.12661
PLEASANT GROVE ISD	-0.071	6,787	6,926.54	-139.536	1.082	1,114.00	1,043.3580	70.64201
PLEASANTON ISD	-0.784	7,517	9,058.86	-1,541.862	0.308	968.00	947.9194	20.08063
PLEMONS-STINNETT-PHILLIPS CONS ISD	-1.968	11,152	15,021.21	-3,869.207	0.719	1,015.00	968.0592	46.94081
PORT ARANSAS ISD	-1.368	11,218	13,906.53	-2,688.527	0.596	1,072.00	1,033.0688	38.93121
POTEET ISD	-0.481	7,884	8,829.97	-945.967	0.094	922.00	915.8604	6.13960
POTTSBORO ISD	-0.139	8,292	8,565.34	-273.343	0.105	1,033.00	1,026.1632	6.83681
PROSPER ISD	-0.049	7,918	8,013.44	-95.442	0.222	1,060.00	1,045.5385	14.46150
QUEEN CITY ISD	-1.059	7,713	9,793.67	-2,080.669	0.916	1,026.00	966.1689	59.83111
RAINS ISD	-0.550	7,848	8,928.96	-1,080.961	0.029	980.00	978.1214	1.87862
RALLS ISD	-1.024	8,133	10,145.63	-2,012.630	0.529	948.00	913.4657	34.53426
RICE CONS ISD	-0.692	8,190	9,549.89	-1,359.890	0.239	949.00	933.3888	15.61123
RICHARDSON ISD	-0.119	8,160	8,394.37	-234.369	0.776	1,067.00	1,016.3119	50.68805
RIESEL ISD	-0.276	7,632	8,174.53	-542.531	0.905	1,063.00	1,003.8980	59.10198
RIO HONDO ISD	-0.025	9,249	9,297.70	-48.697	0.412	923.00	896.1210	26.87899
RIVER ROAD ISD	-0.488	7,034	7,992.58	-958.578	0.720	1,032.00	985.0161	46.98392
ROBSTOWN ISD	-0.512	8,581	9,586.47	-1,005.466	1.224	956.00	876.0952	79.90479
ROCKSPRINGS ISD	-0.045	10,875	10,964.34	-89.338	0.845	959.00	903.8459	55.15414
ROCKWALL ISD	-0.012	7,439	7,462.71	-23.711	0.373	1,067.00	1,042.6486	24.35140
ROOSEVELT ISD	-0.420	8,335	9,160.08	-825.081	0.297	945.00	925.6304	19.36956
ROSEBUD-LOTT ISD	-0.357	7,623	8,324.14	-701.140	1.633	1,069.00	962.3705	106.62950

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ROUND TOP-CARMINE ISD	-0.461	9,972	10,877.23	-905.231	0.332	1,043.00	1,021.3473	21.65270
RUSK ISD	-0.597	7,074	8,247.38	-1,173.385	0.316	981.00	960.4010	20.59900
S AND S CONS ISD	-0.192	7,934	8,311.57	-377.570	0.656	1,056.00	1,013.1560	42.84402
SAINT JO ISD	-0.402	7,978	8,768.33	-790.333	1.347	1,076.00	988.0414	87.95863
SALADO ISD	-0.435	7,119	7,973.88	-854.877	0.921	1,086.00	1,025.8593	60.14069
SAN ANGELO ISD	-0.697	6,686	8,055.30	-1,369.304	0.303	984.00	964.2143	19.78568
SAN FELIPE-DEL RIO CONS ISD	-0.486	7,660	8,614.42	-954.419	0.544	942.00	906.4652	35.53482
SAN MARCOS CONS ISD	-0.803	7,671	9,249.75	-1,578.755	0.635	980.00	938.5564	41.44357
SANTO ISD	-0.225	8,593	9,034.99	-441.994	0.375	1,009.00	984.4935	24.50651
SCHULENBURG ISD	-0.283	8,158	8,713.99	-555.993	0.652	1,011.00	968.4557	42.54430
SEALY ISD	-0.323	7,479	8,114.83	-635.828	0.584	1,014.00	975.8513	38.14873
SEGUIN ISD	-0.414	7,890	8,703.19	-813.189	0.592	987.00	948.3751	38.62487
SHARYLAND ISD	-0.308	6,986	7,592.03	-606.025	0.485	987.00	955.3310	31.66900
SHERMAN ISD	-0.573	7,560	8,685.97	-1,125.967	1.211	1,055.00	975.9166	79.08340
SHINER ISD	-0.006	8,570	8,580.83	-10.829	0.802	1,033.00	980.6481	52.35191
SIDNEY ISD	-0.003	10,062	10,067.40	-5.399	0.886	1,024.00	966.1481	57.85189
SIMMS ISD	-1.296	6,549	9,097.14	-2,548.144	0.012	966.00	965.2293	0.77075
SLATON ISD	-0.407	8,043	8,842.69	-799.694	0.667	979.00	935.4607	43.53927
SNYDER ISD	-0.683	8,034	9,376.79	-1,342.792	1.939	1,094.00	967.3817	126.61829
SPRING BRANCH ISD	-0.138	8,545	8,816.76	-271.764	1.552	1,081.00	979.7020	101.29797
SPRING HILL ISD	-0.205	6,338	6,740.00	-401.999	0.783	1,072.00	1,020.8760	51.12405
STAMFORD ISD	-0.099	8,652	8,846.33	-194.331	0.226	949.00	934.2709	14.72913
STEPHENVILLE	-0.562	6,889	7,994.48	-1,105.476	0.522	1,027.00	992.8981	34.10188
SULPHUR SPRINGS ISD	-0.428	7,344	8,185.13	-841.133	0.303	997.00	977.2209	19.77908
TATUM ISD	-1.895	7,663	11,388.46	-3,725.456	0.896	1,037.00	978.5233	58.47675
TAYLOR ISD	-0.228	8,056	8,504.06	-448.057	1.127	1,020.00	946.4165	73.58350
TEMPLE ISD	-0.139	8,254	8,526.56	-272.556	0.879	1,015.00	957.6146	57.38538
TERRELL ISD	-0.315	8,071	8,690.28	-619.276	0.007	948.00	947.5198	0.48023
TEXARKANA ISD	-0.543	7,387	8,453.37	-1,066.374	2.294	1,090.00	940.2536	149.74635
TRINITY ISD	-0.581	7,777	8,918.96	-1,141.955	1.472	1,014.00	917.8707	96.12933
TULIA ISD	-0.242	7,951	8,427.53	-476.526	3.057	1,123.00	923.4193	199.58070
TULOSO-MIDWAY ISD	-0.604	7,622	8,809.52	-1,187.524	1.511	1,071.00	972.3610	98.63903
TYLER ISD	-0.434	7,233	8,085.38	-852.384	0.780	1,006.00	955.0519	50.94812
UTOPIA ISD	-0.315	9,348	9,966.82	-618.824	0.825	1,029.00	975.1311	53.86892
UVALDE CONS ISD	-0.481	7,750	8,695.30	-945.300	0.580	944.00	906.1056	37.89444
VALLEY MILLS ISD	-0.517	8,392	9,408.91	-1,016.911	0.070	981.00	976.4465	4.55348

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT MEAN SAT 2003	Predicted Value	Residual
VALLEY VIEW ISD	-0.327	8,386	9,028.33	-642.331	2.974	1,056.00	861.8113	194.18872
VAN ISD	-0.571	7,113	8,235.85	-1,122.846	0.313	999.00	978.5931	20.40688
VERNON ISD	-1.115	7,161	9,352.02	-2,191.019	0.995	1,022.00	957.0629	64.93711
VICTORIA ISD	-0.435	7,375	8,231.00	-855.999	0.321	981.00	960.0400	20.96004
WACO ISD	-0.509	7,633	8,634.00	-1,001.002	0.182	908.00	896.1332	11.86675
WALNUT SPRINGS ISD	-0.710	8,036	9,432.15	-1,396.155	0.412	962.00	935.1072	26.89275
WAXAHACHIE ISD	-0.393	7,868	8,639.84	-771.841	0.716	1,031.00	984.2325	46.76748
WEATHERFORD ISD	-0.305	7,580	8,180.06	-600.059	0.511	1,035.00	1,001.6559	33.34413
WEIMAR ISD	-0.055	8,522	8,629.54	-107.535	0.373	1,007.00	982.6390	24.36097
WESLACO ISD	-0.326	7,882	8,523.39	-641.391	0.981	945.00	880.9291	64.07088
WHARTON ISD	-0.550	7,067	8,147.43	-1,080.431	1.122	1,012.00	938.7780	73.22204
WHITE OAK ISD	-0.202	6,530	6,926.13	-396.133	0.961	1,078.00	1,015.2323	62.76773
WHITEWRIGHT ISD	-0.321	7,493	8,123.41	-630.412	0.899	1,051.00	992.3053	58.69465
WICHITA FALLS ISD	-0.432	7,329	8,177.58	-848.578	0.772	1,023.00	972.5795	50.42047
WILLIS ISD	-0.519	7,496	8,516.92	-1,020.921	0.167	980.00	969.1244	10.87558
WINNSBORO ISD	-1.109	6,451	8,630.02	-2,179.021	0.987	1,051.00	986.5485	64.45149
WODEN ISD	-0.724	7,166	8,589.24	-1,423.237	0.084	982.00	976.5433	5.45669
YOAKUM ISD	-0.221	8,048	8,481.83	-433.834	0.884	1,012.00	954.3072	57.69280

APPENDIX E

MODIFIED QUADRIFORM FORMATION

DISTRICT MEAN ACT 2003

QUADRANT I

SCHOOL DISTRICTS

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT MEAN ACT 2003	Predicted Value	Residual
ABERNATHY ISD	-0.228	8,712	9,160.68	-448.682	0.183	19.80	19.5544	0.24561
ABILENE ISD	-0.695	7,345	8,711.86	-1,366.856	1.041	20.80	19.4031	1.39692
ACADEMY ISD	-0.382	7,651	8,401.94	-750.936	1.048	22.10	20.6937	1.40630
ALAMO HEIGHTS ISD	-0.430	8,725	9,569.40	-844.399	2.179	24.10	21.1764	2.92361
ALBANY ISD	-0.275	8,539	9,079.09	-540.094	1.474	22.00	20.0222	1.97780
ALPINE ISD	-0.792	7,142	8,698.50	-1,556.502	0.346	19.80	19.3362	0.46381
ALVIN ISD	-0.283	7,334	7,890.65	-556.650	0.954	21.20	19.9199	1.28010
AMARILLO ISD	-0.492	7,093	8,060.60	-967.604	0.633	20.40	19.5506	0.84937
ANDERSON-SHIRO CONS ISD	-1.031	8,054	10,079.75	-2,025.755	0.924	21.50	20.2605	1.23948
ANGLETON ISD	-0.965	6,551	8,447.70	-1,896.703	0.304	20.20	19.7917	0.40827
ANSON ISD	-0.490	8,229	9,191.72	-962.720	0.855	20.40	19.2535	1.14652
ARANSAS COUNTY ISD	-0.934	8,193	10,029.08	-1,836.081	0.257	20.20	19.8551	0.34489
ARCHER CITY ISD	-0.030	8,144	8,203.66	-59.660	0.176	21.20	20.9641	0.23586
ATHENS ISD	-0.381	7,633	8,382.33	-749.326	0.618	20.10	19.2712	0.82877
ATLANTA ISD	-0.608	7,337	8,532.97	-1,195.968	0.819	20.00	18.9018	1.09818
AUSTIN ISD	-0.127	8,415	8,665.28	-250.280	0.183	20.00	19.7540	0.24596
AUSTWELL-TIVOLI ISD	-1.882	11,235	14,934.13	-3,699.128	2.028	21.70	18.9792	2.72079
AXTELL ISD	-0.643	9,106	10,370.26	-1,264.258	0.721	20.70	19.7328	0.96725
BAIRD ISD	-0.154	8,984	9,286.42	-302.420	1.190	21.60	20.0038	1.59617
BANDERA ISD	-0.399	7,952	8,736.66	-784.664	0.486	20.90	20.2479	0.65214
BANGS ISD	-0.489	7,839	8,799.27	-960.269	1.557	21.90	19.8119	2.08814
BARTLETT ISD	-0.327	8,164	8,806.79	-642.793	0.577	19.10	18.3264	0.77361
BAY CITY ISD	-0.248	8,080	8,567.06	-487.060	2.973	22.80	18.8122	3.98784
BELLVILLE ISD	-0.215	7,377	7,799.79	-422.789	0.136	20.60	20.4173	0.18265
BIG SANDY ISD	-0.434	7,606	8,459.51	-853.507	0.859	20.50	19.3471	1.15294
BIG SPRING ISD	-0.620	7,188	8,407.27	-1,219.266	0.929	20.30	19.0533	1.24667
BOERNE ISD	-0.256	7,862	8,365.75	-503.747	0.339	21.70	21.2456	0.45440
BONHAM ISD	-0.737	7,447	8,895.70	-1,448.700	0.909	21.00	19.7812	1.21877
BORGER ISD	-0.625	6,827	8,055.49	-1,228.489	1.324	21.80	20.0241	1.77591
BOWIE ISD	-0.445	7,373	8,246.80	-873.800	0.056	20.50	20.4247	0.07525
BRADY ISD	-0.445	8,312	9,187.51	-875.514	0.664	20.00	19.1098	0.89016
BRAZOSPORT ISD	-1.326	6,904	9,510.30	-2,606.302	1.673	22.10	19.8562	2.24376
BRECKENRIDGE ISD	-0.836	7,425	9,067.88	-1,642.881	1.344	21.30	19.4967	1.80329
BRENHAM ISD	-0.108	7,815	8,026.95	-211.945	0.502	20.30	19.6263	0.67366
BRIDGEPORT ISD	-0.711	7,411	8,808.66	-1,397.657	0.429	20.90	20.3243	0.57568
BROWNFIELD ISD	-0.634	8,030	9,275.40	-1,245.396	0.524	19.40	18.6972	0.70284
BROWNSBORO ISD	-0.644	6,719	7,984.67	-1,265.673	0.133	20.20	20.0213	0.17875
BROWNSVILLE ISD	-0.361	8,053	8,762.28	-709.283	0.642	18.50	17.6392	0.86083
BROWNWOOD ISD	-0.677	7,267	8,598.25	-1,331.246	0.233	19.70	19.3871	0.31293

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT MEAN ACT 2003	Predicted Value	Residual
BRYAN ISD	-0.235	7,524	7,986.80	-462.797	0.561	19.50	18.7473	0.75271
BULLARD ISD	-0.578	7,067	8,203.86	-1,136.861	0.377	21.10	20.5942	0.50581
BURNET CONS ISD	-0.569	8,098	9,215.85	-1,117.845	0.328	20.60	20.1596	0.44036
CALALLEN ISD	-0.603	6,840	8,026.10	-1,186.098	0.804	21.40	20.3219	1.07810
CANADIAN ISD	-0.049	11,681	11,778.29	-97.286	1.247	21.80	20.1275	1.67249
CANTON ISD	-0.240	7,066	7,537.43	-471.426	1.244	22.50	20.8315	1.66850
CANYON INDEPENDENT SCHOOL DISTRICT	-0.545	6,424	7,495.74	-1,071.737	0.323	21.60	21.1666	0.43342
CARROLLTON-FARMERS BRANCH ISD	-0.249	8,258	8,747.80	-489.801	0.099	20.90	20.7678	0.13215
CARTHAGE ISD	-1.316	7,284	9,870.82	-2,586.823	0.435	20.30	19.7171	0.58288
CASTLEBERRY ISD	-0.323	7,437	8,071.98	-634.976	0.796	20.20	19.1321	1.06787
CENTER ISD	-0.370	6,941	7,669.17	-728.173	0.507	19.50	18.8193	0.68074
CENTER POINT ISD	-0.185	8,703	9,066.12	-363.122	0.418	20.00	19.4391	0.56095
CHANNELVIEW ISD	-0.772	7,088	8,605.11	-1,517.107	0.318	19.20	18.7737	0.42625
CHIRENO ISD	-0.407	7,958	8,757.49	-799.491	0.622	19.80	18.9656	0.83436
CISCO ISD	-0.863	8,009	9,704.43	-1,695.428	1.251	21.00	19.3213	1.67867
CLARENDON ISD	-0.035	9,109	9,178.77	-69.766	2.145	22.20	19.3221	2.87794
CLARKSVILLE ISD	-0.151	8,501	8,798.59	-297.593	0.487	18.60	17.9468	0.65317
CLEBURNE ISD	-0.474	7,404	8,335.39	-931.388	0.487	20.60	19.9473	0.65274
CLINT ISD	-0.855	6,934	8,614.26	-1,680.264	0.279	18.00	17.6259	0.37406
CLYDE CONS ISD	-0.391	7,532	8,301.19	-769.185	0.783	21.40	20.3494	1.05056
COMAL ISD	-0.164	8,353	8,674.72	-321.718	0.727	21.80	20.8254	0.97460
COMANCHE ISD	-0.902	6,882	8,654.03	-1,772.026	1.628	21.60	19.4162	2.18379
COMFORT ISD	-0.239	8,260	8,730.07	-470.071	0.447	20.30	19.7000	0.60003
COMMERCE ISD	-0.591	7,803	8,964.99	-1,161.988	0.304	19.60	19.1922	0.40781
CORSICANA ISD	-0.618	6,896	8,111.20	-1,215.198	1.516	21.10	19.0663	2.03371
CROCKETT CO CONS CSD	-0.861	11,733	13,424.79	-1,691.792	0.197	19.80	19.5355	0.26450
CROSS PLAINS ISD	-0.504	7,808	8,798.57	-990.573	0.949	21.20	19.9275	1.27252
CROSS ROADS ISD	-0.469	8,605	9,526.81	-921.808	0.850	21.00	19.8603	1.13966
CUERO ISD	-0.245	7,531	8,012.70	-481.696	0.394	19.90	19.3709	0.52913
DALHART ISD	-0.792	7,862	9,419.54	-1,557.545	0.273	19.00	18.6342	0.36580
DALLAS ISD	-1.064	7,160	9,251.73	-2,091.731	1.578	21.50	19.3837	2.11635
DE LEON ISD	-0.643	6,583	7,845.97	-1,262.967	1.501	22.00	19.9868	2.01321
DEKALB ISD	-0.613	7,899	9,103.59	-1,204.591	0.336	21.30	20.8489	0.45112
DENTON ISD	-0.787	7,511	9,058.25	-1,547.248	0.385	20.30	19.7842	0.51583
DESOTO ISD	-0.619	11,568	12,785.18	-1,217.181	0.010	19.30	19.2865	0.01345
DEW ISD	-0.213	7,879	8,298.59	-419.593	0.215	19.50	19.2113	0.28867

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT MEAN ACT 2003	Predicted Value	Residual
DIMMITT ISD	-0.533	7,944	8,992.61	-1,048.613	0.281	18.60	18.2236	0.37642
DOUGLASS ISD	-0.045	7,651	7,739.64	-88.636	0.536	21.40	20.6806	0.71940
DRIPPING SPRINGS ISD	-0.253	7,595	8,091.41	-496.406	0.837	22.80	21.6774	1.12263
DUBLIN ISD	-0.964	6,920	8,814.26	-1,894.258	1.726	21.30	18.9842	2.31579
DUMAS ISD	-1.289	6,435	8,967.86	-2,532.864	0.666	20.20	19.3062	0.89377
EANES ISD	-0.045	9,555	9,643.77	-88.772	1.795	25.10	22.6919	2.40806
EAST BERNARD ISD	-0.115	7,604	7,829.62	-225.621	0.085	20.40	20.2863	0.11372
EAST CENTRAL ISD	-0.013	7,997	8,021.75	-24.745	0.209	19.50	19.2202	0.27980
EASTLAND ISD	-0.460	7,547	8,450.67	-903.674	0.323	20.60	20.1673	0.43266
ECTOR COUNTY ISD	-0.901	6,336	8,106.35	-1,770.347	1.324	21.00	19.2241	1.77592
EL CAMPO ISD	-0.739	7,002	8,453.63	-1,451.627	0.633	19.70	18.8513	0.84866
ERA ISD	-0.149	7,107	7,400.02	-293.018	0.035	20.90	20.8529	0.04714
EUSTACE ISD	-1.470	7,063	9,951.93	-2,888.935	1.367	21.50	19.6658	1.83416
EVANT ISD	-0.539	7,279	8,338.91	-1,059.913	0.181	20.10	19.8569	0.24309
FAIRFIELD ISD	-1.413	8,350	11,127.89	-2,777.890	0.996	21.20	19.8640	1.33601
FLOUR BLUFF ISD	-0.666	6,951	8,260.36	-1,309.361	0.079	20.30	20.1946	0.10543
FLOYDADA ISD	-0.195	8,155	8,539.17	-384.168	1.801	21.00	18.5839	2.41609
FOLLETT ISD	-0.287	10,376	10,940.57	-564.572	1.044	21.30	19.8993	1.40069
FORSAN ISD	-0.499	7,206	8,187.54	-981.543	0.064	20.80	20.7141	0.08588
FRANKSTON ISD	-0.341	7,655	8,325.80	-670.802	1.492	21.90	19.8986	2.00144
FRENSHIP ISD	-0.399	6,986	7,769.56	-783.556	0.390	21.00	20.4764	0.52356
FRIONA ISD	-0.681	7,320	8,658.84	-1,338.841	1.098	20.20	18.7270	1.47302
FT STOCKTON ISD	-0.565	9,012	10,123.35	-1,111.353	1.153	20.30	18.7529	1.54711
GAINESVILLE ISD	-0.302	8,228	8,822.33	-594.333	0.240	19.70	19.3776	0.32238
GATESVILLE ISD	-0.940	6,455	8,303.39	-1,848.391	0.467	21.00	20.3733	0.62666
GEORGE WEST ISD	-0.522	7,558	8,583.54	-1,025.539	0.497	20.30	19.6334	0.66662
GIDDINGS ISD	-0.155	7,513	7,817.48	-304.484	0.913	20.80	19.5756	1.22443
GLEN ROSE ISD	-2.453	8,601	13,423.37	-4,822.373	1.292	22.10	20.3672	1.73284
GOLDTHWAITE ISD	-0.317	8,391	9,014.93	-623.934	2.328	23.20	20.0769	3.12305
GOLIAD ISD	-0.453	8,653	9,543.56	-890.559	0.190	20.00	19.7457	0.25431
GONZALES ISD	-0.591	7,235	8,397.06	-1,162.064	1.154	20.30	18.7516	1.54841
GOOSE CREEK CISD	-0.266	8,144	8,667.19	-523.188	0.725	20.10	19.1273	0.97266
GORMAN ISD	-0.469	8,797	9,718.76	-921.757	0.688	19.60	18.6775	0.92253
GRAHAM ISD	-0.529	7,090	8,129.94	-1,039.944	1.102	21.70	20.2212	1.47877
GRANBURY ISD	-0.583	7,611	8,756.56	-1,145.563	1.258	22.30	20.6129	1.68708
GRAND PRAIRIE ISD	-0.093	7,698	7,881.47	-183.466	0.200	19.60	19.3313	0.26874
GRAND SALINE ISD	-1.025	5,950	7,964.41	-2,014.410	0.587	20.90	20.1122	0.78782
GRANGER ISD	-0.073	8,221	8,363.86	-142.858	0.245	20.10	19.7709	0.32908
GRAPELAND ISD	-1.100	6,770	8,932.26	-2,162.260	0.078	19.20	19.0954	0.10455

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT MEAN ACT 2003	Predicted Value	Residual
GRAPEVINE-COLLEYVILLE ISD	-0.115	7,777	8,003.89	-226.892	0.176	22.40	22.1634	0.23656
GREENVILLE ISD	-0.184	7,449	7,810.26	-361.263	0.269	19.70	19.3388	0.36117
GREENWOOD ISD	-0.428	6,723	7,564.73	-841.729	1.509	22.70	20.6759	2.02405
GREGORY-PORTLAND ISD	-0.504	6,669	7,659.65	-990.654	0.493	21.00	20.3390	0.66097
HALE CENTER ISD	-0.470	8,676	9,600.11	-924.114	1.421	20.00	18.0943	1.90570
HALLETTSVILLE ISD	-0.683	7,867	9,208.88	-1,341.881	0.102	20.50	20.3630	0.13700
HALLSVILLE ISD	-0.793	7,063	8,621.84	-1,558.836	0.120	20.70	20.5394	0.16063
HAMLIN ISD	-0.201	9,714	10,108.72	-394.716	1.307	20.70	18.9463	1.75372
HAMSHIRE-FANNETT ISD	-0.220	7,202	7,635.34	-433.339	0.286	21.30	20.9169	0.38310
HARMONY ISD	-0.476	8,102	9,037.99	-935.994	0.027	20.40	20.3631	0.03685
HAWKINS ISD	-0.396	8,822	9,601.33	-779.327	1.427	21.70	19.7864	1.91364
HAWLEY ISD	-0.500	7,518	8,501.77	-983.771	0.425	20.80	20.2297	0.57029
HENDERSON ISD	-0.563	7,577	8,683.52	-1,106.521	0.453	20.00	19.3925	0.60751
HEREFORD ISD	-0.820	7,355	8,966.77	-1,611.768	0.902	19.60	18.3899	1.21006
HIGHLAND PARK ISD	-1.688	8,203	11,521.73	-3,318.727	1.923	25.00	22.4198	2.58021
HIGHLAND PARK ISD	-1.294	9,208	11,752.34	-2,544.342	1.469	22.10	20.1300	1.97000
HONDO ISD	-0.201	7,646	8,041.15	-395.146	0.477	20.00	19.3601	0.63986
HONEY GROVE ISD	-0.143	8,080	8,360.96	-280.964	0.129	19.70	19.5267	0.17331
HOWE ISD	-0.076	7,591	7,740.50	-149.496	0.380	21.50	20.9903	0.50975
HUBBARD ISD	-0.511	7,299	8,302.59	-1,003.586	0.478	20.80	20.1594	0.64060
IDALOU ISD	-0.168	7,726	8,055.54	-329.539	1.055	21.40	19.9847	1.41527
INGLESIDE ISD	-1.406	6,278	9,042.44	-2,764.442	0.461	21.10	20.4812	0.61882
IOWA PARK CONS ISD	-0.551	6,517	7,601.00	-1,083.997	0.365	21.30	20.8099	0.49009
IRVING ISD	-0.233	7,554	8,012.94	-458.939	0.480	20.00	19.3557	0.64433
JACKSBORO ISD	-0.610	7,690	8,888.97	-1,198.969	0.674	21.30	20.3961	0.90391
JACKSONVILLE ISD	-0.402	7,618	8,408.60	-790.597	0.858	19.70	18.5487	1.15127
JASPER ISD	-0.147	7,684	7,973.91	-289.909	0.147	18.70	18.5035	0.19654
JEFFERSON ISD	-0.462	8,380	9,288.59	-908.592	0.479	19.10	18.4578	0.64223
JIM NED CONS ISD	-0.076	7,753	7,902.11	-149.105	0.891	21.90	20.7051	1.19485
JOURDANTON ISD	-0.701	7,667	9,044.04	-1,377.037	0.661	20.00	19.1133	0.88670
KARNES CITY ISD	-0.281	8,109	8,660.89	-551.894	0.352	19.50	19.0272	0.47281
KEENE ISD	-0.929	7,937	9,763.35	-1,826.349	0.562	20.20	19.4461	0.75391
KERENS ISD	-0.214	7,910	8,331.01	-421.008	0.025	19.00	18.9671	0.03288
KERMIT ISD	-0.450	8,938	9,821.56	-883.557	0.147	19.30	19.1030	0.19697
KERRVILLE ISD	-0.567	7,694	8,808.03	-1,114.025	0.158	20.10	19.8885	0.21146
KLONDIKE ISD	-0.245	12,132	12,613.30	-481.302	0.675	20.90	19.9939	0.90612
LA FERIA ISD	-0.080	8,267	8,424.87	-157.870	0.512	18.70	18.0130	0.68701

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT MEAN ACT 2003	Predicted Value	Residual
LA VEGA ISD	-0.478	7,679	8,619.29	-940.288	0.602	19.30	18.4918	0.80821
LAGO VISTA ISD	-0.077	9,398	9,550.33	-152.325	0.073	21.50	21.4019	0.09810
LAMESA ISD	-0.790	6,985	8,537.23	-1,552.229	1.092	20.10	18.6347	1.46530
LAMPASAS ISD	-0.728	6,972	8,402.87	-1,430.873	0.225	20.40	20.0978	0.30220
LAZBUDDIE ISD	-0.128	10,364	10,616.00	-252.000	0.665	19.30	18.4084	0.89156
LEVELLAND ISD	-0.898	7,571	9,335.64	-1,764.636	0.579	19.80	19.0235	0.77648
LIBERTY HILL ISD	-0.296	7,504	8,085.51	-581.507	1.326	20.20	18.4214	1.77860
LIBERTY-EYLAU ISD	-0.313	7,598	8,212.41	-614.409	0.934	20.70	19.4475	1.25247
LINDEN-KILDARE CONS ISD	-0.314	7,965	8,582.30	-617.305	0.143	19.70	19.5083	0.19168
LINDSAY ISD	-0.100	6,615	6,810.63	-195.634	0.289	22.30	21.9119	0.38814
LINGLEVILLE ISD	-0.390	8,289	9,054.67	-765.668	0.356	19.50	19.0223	0.47766
LITTLE CYPRESS-MAURICEVILLE CISD	-0.574	6,867	7,995.32	-1,128.324	0.043	20.90	20.8424	0.05757
LITTLEFIELD ISD	-0.714	7,083	8,486.26	-1,403.257	0.795	19.90	18.8339	1.06609
LOCKHART ISD	-0.237	7,870	8,336.70	-466.702	0.439	19.90	19.3113	0.58871
LOCKNEY ISD	-0.412	7,704	8,513.18	-809.184	1.511	20.90	18.8736	2.02644
LONE OAK ISD	-0.398	7,386	8,169.28	-783.283	0.059	20.80	20.7211	0.07889
LONGVIEW ISD	-0.398	7,759	8,541.28	-782.276	0.669	19.20	18.3027	0.89729
LOS FRESNOS CONS ISD	-0.641	7,727	8,987.41	-1,260.412	0.991	19.10	17.7700	1.32997
LUBBOCK ISD	-0.585	7,702	8,852.84	-1,150.836	0.137	20.20	20.0158	0.18418
LUBBOCK-COOPER ISD	-0.302	7,610	8,203.99	-593.990	1.017	20.70	19.3362	1.36383
LUMBERTON ISD	-0.377	6,793	7,534.41	-741.410	0.378	21.40	20.8931	0.50692
MABANK ISD	-0.986	7,154	9,092.94	-1,938.941	0.295	20.30	19.9045	0.39546
MALAKOFF ISD	-0.784	9,304	10,845.06	-1,541.058	1.860	22.00	19.5048	2.49518
MARBLE FALLS ISD	-0.347	8,618	9,299.74	-681.735	0.113	20.10	19.9485	0.15145
MARSHALL ISD	-0.527	7,313	8,349.23	-1,036.225	0.588	19.50	18.7117	0.78827
MARTINS MILL ISD	-0.166	8,435	8,760.73	-325.732	0.560	20.80	20.0489	0.75109
MARTINSVILLE ISD	-0.258	7,960	8,467.95	-507.949	0.471	19.90	19.2684	0.63157
MCALLEN ISD	-0.381	7,395	8,143.38	-748.376	0.065	18.80	18.7127	0.08731
MCLEOD ISD	-0.082	7,865	8,025.62	-160.615	0.310	20.90	20.4841	0.41586
MEDINA ISD	-0.176	10,444	10,789.55	-345.546	0.681	20.80	19.8867	0.91329
MEXIA ISD	-0.078	8,199	8,353.28	-154.280	0.630	19.30	18.4544	0.84555
MIDLAND ISD	-0.344	7,077	7,753.19	-676.190	1.261	21.40	19.7082	1.69177
MINEOLA ISD	-0.280	8,257	8,807.05	-550.045	1.060	20.90	19.4775	1.42252
MINERAL WELLS ISD	-0.498	7,983	8,962.57	-979.566	2.421	22.70	19.4521	3.24791
MONAHANS-WICKETT-PYOTE ISD	-1.090	7,266	9,409.03	-2,143.027	0.160	19.80	19.5849	0.21513
MOODY ISD	-0.914	6,474	8,269.68	-1,795.681	0.373	20.40	19.9001	0.49986
MOULTON ISD	-0.318	7,770	8,394.16	-624.159	0.566	20.40	19.6408	0.75916

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT MEAN ACT 2003	Predicted Value	Residual
MOUNT PLEASANT ISD	-0.783	7,857	9,395.76	-1,538.762	1.829	20.90	18.4459	2.45411
MOUNT VERNON ISD	-1.003	7,226	9,197.92	-1,971.919	1.607	22.50	20.3445	2.15555
MULESHOE ISD	-0.445	8,166	9,040.36	-874.363	0.618	19.40	18.5714	0.82864
MUNDAY CISD	-0.245	7,717	8,197.91	-480.910	0.074	18.90	18.8002	0.09984
NACOGDOCHES ISD	-0.309	7,331	7,937.40	-606.403	1.089	20.00	18.5386	1.46140
NATALIA ISD	-0.206	8,300	8,704.04	-404.036	0.658	19.40	18.5171	0.88289
NAVASOTA ISD	-0.444	7,297	8,170.20	-873.199	0.372	19.20	18.7004	0.49963
NECHES ISD	-0.720	7,488	8,903.79	-1,415.792	1.551	22.30	20.2189	2.08108
NEW BOSTON ISD	-0.821	6,960	8,573.39	-1,613.386	0.814	20.80	19.7074	1.09258
NEW DEAL ISD	-0.562	7,944	9,048.68	-1,104.684	0.038	19.50	19.4489	0.05109
NUECES CANYON CISD	-0.307	10,306	10,908.83	-602.833	2.122	21.60	18.7538	2.84625
OLNEY ISD	-0.490	8,225	9,188.45	-963.450	0.111	19.90	19.7514	0.14856
ORANGE GROVE ISD	-0.314	7,657	8,273.50	-616.497	0.565	19.70	18.9422	0.75777
PALESTINE ISD	-0.237	7,487	7,952.56	-465.556	0.903	19.90	18.6884	1.21156
PAMPA ISD	-0.540	7,256	8,316.82	-1,060.824	0.981	21.30	19.9844	1.31561
PARIS ISD	-0.086	7,937	8,106.01	-169.011	0.990	19.90	18.5720	1.32803
PEARSALL ISD	-0.531	7,649	8,692.15	-1,043.151	0.223	18.40	18.1015	0.29849
PECOS-BARSTOW-TOYAH ISD	-0.647	7,717	8,988.31	-1,271.306	0.220	18.70	18.4046	0.29537
PERRYTON ISD	-0.641	7,332	8,592.80	-1,260.800	0.691	20.40	19.4728	0.92723
PEWITT ISD	-0.452	7,800	8,688.34	-888.344	0.072	19.30	19.2029	0.09709
PINE TREE ISD	-0.630	6,608	7,845.61	-1,237.609	1.150	21.90	20.3574	1.54257
PLAINVIEW ISD	-1.091	6,334	8,478.89	-2,144.889	0.559	19.70	18.9503	0.74971
PLEASANT GROVE ISD	-0.071	6,787	6,926.54	-139.536	0.914	22.80	21.5743	1.22575
PLEASANTON ISD	-0.784	7,517	9,058.86	-1,541.862	1.313	20.80	19.0386	1.76143
PLEMONS-STINNETT-PHILLIPS CONS ISD	-1.968	11,152	15,021.21	-3,869.207	1.290	21.40	19.6699	1.73012
POINT ISABEL ISD	-1.682	8,726	12,032.70	-3,306.698	1.944	20.40	17.7919	2.60813
POST ISD	-0.417	9,045	9,864.34	-819.342	0.364	19.60	19.1121	0.48788
PROSPER ISD	-0.049	7,918	8,013.44	-95.442	0.599	22.20	21.3965	0.80350
RANKIN ISD	-0.554	14,580	15,668.28	-1,088.278	1.033	21.10	19.7144	1.38563
RAYMONDVILLE ISD	-0.935	7,354	9,191.10	-1,837.104	0.098	17.60	17.4691	0.13088
REAGAN COUNTY ISD	-0.255	10,440	10,940.77	-500.770	0.188	19.50	19.2475	0.25249
REDWATER ISD	-0.237	6,999	7,465.30	-466.302	0.698	22.00	21.0632	0.93680
REFUGIO ISD	-0.547	9,016	10,090.39	-1,074.385	0.529	20.00	19.2902	0.70984
RICE CONS ISD	-0.692	8,190	9,549.89	-1,359.890	1.561	20.60	18.5066	2.09338
RICHARDSON ISD	-0.119	8,160	8,394.37	-234.369	1.302	22.30	20.5531	1.74689
RIO HONDO ISD	-0.025	9,249	9,297.70	-48.697	0.867	19.00	17.8373	1.16271

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT MEAN ACT 2003	Predicted Value	Residual
ROCKDALE ISD	-1.166	6,947	9,238.38	-2,291.377	0.801	20.50	19.4258	1.07421
ROCKSPRINGS ISD	-0.045	10,875	10,964.34	-89.338	0.273	18.60	18.2333	0.36672
ROCKWALL ISD	-0.012	7,439	7,462.71	-23.711	0.717	22.40	21.4375	0.96251
ROOSEVELT ISD	-0.420	8,335	9,160.08	-825.081	0.729	19.70	18.7218	0.97822
ROSEBUD-LOTT ISD	-0.357	7,623	8,324.14	-701.140	1.648	21.50	19.2897	2.21035
ROUND TOP-CARMINE ISD	-0.461	9,972	10,877.23	-905.231	2.067	23.80	21.0273	2.77271
ROYAL ISD	-0.089	8,436	8,611.42	-175.420	1.203	19.60	17.9865	1.61346
S AND S CONS ISD	-0.192	7,934	8,311.57	-377.570	0.908	22.00	20.7823	1.21772
SABINAL ISD	-0.371	8,708	9,436.85	-728.847	0.050	18.70	18.6327	0.06726
SAM RAYBURN ISD	-0.464	7,372	8,284.35	-912.351	1.401	22.10	20.2211	1.87894
SAN ANGELO ISD	-0.697	6,686	8,055.30	-1,369.304	0.562	20.30	19.5466	0.75340
SAN BENITO CONS ISD	-0.516	7,727	8,741.36	-1,014.363	0.157	18.00	17.7899	0.21010
SAN ISIDRO ISD	-0.316	12,137	12,757.45	-620.453	0.009	18.00	17.9882	0.01179
SAN MARCOS CONS ISD	-0.803	7,671	9,249.75	-1,578.755	0.260	19.30	18.9508	0.34922
SANDS CISD	-0.199	10,188	10,579.61	-391.614	0.355	19.50	19.0243	0.47566
SCHULENBURG ISD	-0.283	8,158	8,713.99	-555.993	0.678	20.40	19.4909	0.90910
SEGUIN ISD	-0.414	7,890	8,703.19	-813.189	0.389	19.60	19.0782	0.52181
SEMINOLE ISD	-1.438	9,870	12,697.23	-2,827.228	0.965	20.80	19.5055	1.29455
SHELDON ISD	-0.253	8,987	9,483.42	-496.421	0.510	19.20	18.5154	0.68457
SHERMAN ISD	-0.573	7,560	8,685.97	-1,125.967	1.589	21.80	19.6688	2.13120
SHINER ISD	-0.006	8,570	8,580.83	-10.829	1.789	22.30	19.9006	2.39944
SIDNEY ISD	-0.003	10,062	10,067.40	-5.399	0.019	19.60	19.5744	0.02555
SLATON ISD	-0.407	8,043	8,842.69	-799.694	0.025	18.80	18.7665	0.03347
SLOCUM ISD	-1.174	7,024	9,332.11	-2,308.114	1.002	21.20	19.8561	1.34387
SNYDER ISD	-0.683	8,034	9,376.79	-1,342.792	0.659	20.40	19.5154	0.88458
SOCORRO ISD	-0.329	7,318	7,963.92	-645.922	0.647	19.30	18.4315	0.86847
SPLENDORA ISD	-0.046	7,552	7,641.91	-89.914	0.283	20.10	19.7209	0.37908
SPRING BRANCH ISD	-0.138	8,545	8,816.76	-271.764	2.316	23.10	19.9930	3.10698
SPRING HILL ISD	-0.205	6,338	6,740.00	-401.999	0.053	21.20	21.1286	0.07135
SPRINGTOWN ISD	-0.199	7,629	8,019.75	-390.751	0.224	20.70	20.3998	0.30022
STEPHENVILLE	-0.562	6,889	7,994.48	-1,105.476	0.263	20.80	20.4475	0.35250
STRATFORD ISD	-0.344	9,172	9,848.00	-675.998	1.520	21.30	19.2615	2.03847
STRAWN ISD	-0.553	8,312	9,399.12	-1,087.122	0.210	19.90	19.6184	0.28163
SUDAN ISD	-0.411	13,550	14,358.73	-808.730	0.600	20.00	19.1947	0.80532
SULPHUR SPRINGS ISD	-0.428	7,344	8,185.13	-841.133	0.764	20.90	19.8751	1.02491
SWEENY ISD	-0.757	8,743	10,230.93	-1,487.928	0.405	20.70	20.1566	0.54341
SWEETWATER ISD	-0.718	7,301	8,712.94	-1,411.943	1.031	20.60	19.2165	1.38351
TATUM ISD	-1.895	7,663	11,388.46	-3,725.456	0.127	19.90	19.7293	0.17066

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT MEAN ACT 2003	Predicted Value	Residual
TAYLOR ISD	-0.228	8,056	8,504.06	-448.057	0.492	19.60	18.9404	0.65964
TEMPLE ISD	-0.139	8,254	8,526.56	-272.556	1.382	20.90	19.0455	1.85447
TERRELL ISD	-0.315	8,071	8,690.28	-619.276	0.500	19.50	18.8286	0.67136
TEXARKANA ISD	-0.543	7,387	8,453.37	-1,066.374	1.523	20.50	18.4566	2.04336
TRINITY ISD	-0.581	7,777	8,918.96	-1,141.955	1.234	20.30	18.6440	1.65605
TULIA ISD	-0.242	7,951	8,427.53	-476.526	1.135	20.20	18.6771	1.52288
TULOSO-MIDWAY ISD	-0.604	7,622	8,809.52	-1,187.524	1.039	21.10	19.7062	1.39377
TYLER ISD	-0.434	7,233	8,085.38	-852.384	0.316	19.40	18.9757	0.42427
UTOPIA ISD	-0.315	9,348	9,966.82	-618.824	1.877	22.60	20.0822	2.51778
UVALDE CONS ISD	-0.481	7,750	8,695.30	-945.300	0.933	19.50	18.2487	1.25129
VALLEY VIEW ISD	-0.327	8,386	9,028.33	-642.331	4.092	22.80	17.3111	5.48892
VAN ISD	-0.571	7,113	8,235.85	-1,122.846	1.900	22.70	20.1507	2.54929
VENUS ISD	-1.437	6,801	9,625.26	-2,824.264	1.541	21.40	19.3322	2.06777
VERIBEST ISD	-0.829	7,758	9,386.62	-1,628.615	1.707	21.40	19.1106	2.28937
VERNON ISD	-1.115	7,161	9,352.02	-2,191.019	0.890	20.50	19.3056	1.19435
VICTORIA ISD	-0.435	7,375	8,231.00	-855.999	0.152	19.60	19.3959	0.20410
VIDOR ISD	-0.918	7,065	8,869.16	-1,804.157	0.590	20.90	20.1083	0.79169
WASKOM ISD	-0.913	7,323	9,117.58	-1,794.584	0.219	19.50	19.2059	0.29408
WAXAHACHIE ISD	-0.393	7,868	8,639.84	-771.841	0.940	21.10	19.8390	1.26101
WEIMAR ISD	-0.055	8,522	8,629.54	-107.535	1.330	21.60	19.8164	1.78362
WEST OSO ISD	-0.542	8,264	9,328.78	-1,064.778	0.127	17.60	17.4292	0.17084
WEST RUSK ISD	-0.124	8,543	8,786.54	-243.535	0.604	20.10	19.2891	0.81087
WHARTON ISD	-0.550	7,067	8,147.43	-1,080.431	0.478	19.30	18.6586	0.64144
WHEELER ISD	-0.154	8,248	8,550.15	-302.148	0.458	20.30	19.6863	0.61373
WHITE SETTLEMENT ISD	-0.457	6,887	7,784.53	-897.533	0.076	20.40	20.2984	0.10165
WHITEHOUSE ISD	-0.497	6,350	7,327.68	-977.677	1.069	22.30	20.8665	1.43353
WHITESBORO ISD	-0.151	8,091	8,388.50	-297.497	1.274	22.30	20.5911	1.70887
WICHITA FALLS ISD	-0.432	7,329	8,177.58	-848.578	0.687	20.60	19.6784	0.92159
WILLS POINT ISD	-0.428	7,396	8,237.42	-841.422	0.281	20.20	19.8231	0.37692
WINNSBORO ISD	-1.109	6,451	8,630.02	-2,179.021	0.266	20.60	20.2425	0.35749
WODEN ISD	-0.724	7,166	8,589.24	-1,423.237	1.137	21.60	20.0743	1.52570
YOAKUM ISD	-0.221	8,048	8,481.83	-433.834	1.528	21.30	19.2500	2.05003
ZEPHYR ISD	-0.637	8,336	9,587.97	-1,251.974	0.330	20.00	19.5569	0.44311

APPENDIX F

MODIFIED QUADRIFORM FORMATION

DISTRICT SAT / ACT

TESTED 2003

QUADRANT I

SCHOOL DISTRICTS

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT SAT/ACT TESTED 2003	Predicted Value	Residual
ABERNATHY ISD	-0.228	8,712	9,160.68	-448.682	0.870	77.10	63.1187	13.98126
ABILENE ISD	-0.695	7,345	8,711.86	-1,366.856	0.167	62.40	59.7174	2.68256
ALAMO HEIGHTS ISD	-0.430	8,725	9,569.40	-844.399	1.015	89.30	72.9831	16.31687
ALBANY ISD	-0.275	8,539	9,079.09	-540.094	1.199	80.60	61.3214	19.27856
ALICE ISD	-0.315	7,766	8,385.59	-619.592	1.596	87.30	61.6375	25.66252
ALPINE ISD	-0.792	7,142	8,698.50	-1,556.502	0.134	65.70	63.5399	2.16010
ANSON ISD	-0.490	8,229	9,191.72	-962.720	0.313	64.30	59.2662	5.03382
ANTHONY	-0.023	9,904	9,949.49	-45.494	1.216	75.00	55.4557	19.54430
ANTON ISD	-0.889	8,167	9,914.20	-1,747.201	0.881	75.00	60.8411	14.15888
ARANSAS COUNTY ISD	-0.934	8,193	10,029.08	-1,836.081	0.158	67.80	65.2579	2.54205
ARCHER CITY ISD	-0.030	8,144	8,203.66	-59.660	0.676	75.60	64.7253	10.87470
ATLANTA ISD	-0.608	7,337	8,532.97	-1,195.968	1.163	74.80	56.1036	18.69636
AUSTIN ISD	-0.127	8,415	8,665.28	-250.280	0.446	70.40	63.2378	7.16219
AVERY ISD	-0.524	7,796	8,825.71	-1,029.709	2.053	90.90	57.8972	33.00277
BAIRD ISD	-0.154	8,984	9,286.42	-302.420	1.108	79.20	61.3904	17.80957
BANDERA ISD	-0.399	7,952	8,736.66	-784.664	0.160	66.00	63.4244	2.57555
BANGS ISD	-0.489	7,839	8,799.27	-960.269	0.949	75.00	59.7368	15.26315
BANQUETE ISD	-0.043	8,781	8,864.74	-83.744	1.972	93.80	62.0926	31.70741
BARTLETT ISD	-0.327	8,164	8,806.79	-642.793	0.770	69.70	57.3255	12.37446
BEAUMONT ISD	-0.079	7,404	7,558.85	-154.853	0.353	63.00	57.3222	5.67777
BECKVILLE ISD	-0.763	10,051	11,551.72	-1,500.724	1.486	91.70	67.8130	23.88700
BELLVILLE ISD	-0.215	7,377	7,799.79	-422.789	0.620	74.50	64.5371	9.96295
BENAVIDES ISD	-0.189	10,033	10,405.01	-372.012	1.003	76.00	59.8703	16.12967
BIG SANDY ISD	-0.434	7,606	8,459.51	-853.507	0.275	61.90	57.4734	4.42660
BIG SANDY ISD	-1.115	9,060	11,251.37	-2,191.374	0.762	78.90	66.6454	12.25457
BISHOP CONS ISD	-0.766	8,215	9,721.44	-1,506.442	2.029	98.10	65.4825	32.61752
BLOOMBURG ISD	-0.576	8,104	9,236.09	-1,132.093	0.716	72.20	60.6955	11.50445
BOERNE ISD	-0.256	7,862	8,365.75	-503.747	1.446	92.40	69.1496	23.25038
BOVINA ISD	-0.481	7,886	8,831.63	-945.633	0.057	60.70	59.7775	0.92250
BOWIE ISD	-0.445	7,373	8,246.80	-873.800	0.471	70.30	62.7318	7.56816
BOYD ISD	-0.507	7,642	8,639.18	-997.185	0.315	69.70	64.6315	5.06848
BRADY ISD	-0.445	8,312	9,187.51	-875.514	0.488	67.50	59.6626	7.83742
BRECKENRIDGE ISD	-0.836	7,425	9,067.88	-1,642.881	0.607	70.40	60.6399	9.76013
BRIDGE CITY ISD	-0.641	6,706	7,965.89	-1,259.888	0.486	73.50	65.6892	7.81081
BROADDUS ISD	-0.555	8,773	9,863.18	-1,090.178	1.173	73.10	54.2477	18.85227
BROOKS COUNTY ISD	-0.789	9,513	11,062.99	-1,549.993	0.374	64.10	58.0848	6.01521
BUENA VISTA ISD	-0.251	17,414	17,906.43	-492.433	0.740	85.70	73.8111	11.88887
BUNA ISD	-0.208	7,615	8,024.02	-409.017	0.238	65.90	62.0730	3.82699
BURKBURNETT ISD	-0.030	7,554	7,613.28	-59.281	0.217	67.00	63.5143	3.48565
BURKEVILLE ISD	-0.109	10,118	10,332.68	-214.676	1.509	78.30	54.0454	24.25461
CALALLEN ISD	-0.603	6,840	8,026.10	-1,186.098	0.691	77.20	66.0852	11.11481

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT SAT/ACT TESTED 2003	Predicted Value	Residual
CANTON ISD	-0.240	7,066	7,537.43	-471.426	0.075	66.20	65.0022	1.19783
CANYON INDEPENDENT SCHOOL DISTRICT	-0.545	6,424	7,495.74	-1,071.737	0.049	67.50	66.7149	0.78510
CARLISLE ISD	-0.160	7,752	8,067.01	-315.011	1.278	78.90	58.3518	20.54822
CELESTE ISD	-0.120	7,681	7,917.53	-236.525	1.336	83.30	61.8219	21.47810
CENTER ISD	-0.370	6,941	7,669.17	-728.173	0.513	65.70	57.4486	8.25136
CENTER POINT ISD	-0.185	8,703	9,066.12	-363.122	0.180	63.30	60.4113	2.88874
CENTRAL HEIGHTS ISD	-0.264	7,349	7,867.94	-518.945	0.322	65.40	60.2257	5.17428
CHICO ISD	-0.507	7,941	8,937.20	-996.199	0.970	79.40	63.8028	15.59719
CHILDRESS ISD	-0.040	8,502	8,580.86	-78.861	1.048	77.80	60.9463	16.85368
CHISUM ISD	-1.421	7,078	9,870.35	-2,792.346	1.222	85.30	65.6589	19.64108
CLARENDON ISD	-0.035	9,109	9,178.77	-69.766	1.456	81.60	58.1891	23.41092
CLARKSVILLE ISD	-0.151	8,501	8,798.59	-297.593	1.315	75.00	53.8588	21.14118
CLIFTON ISD	-0.290	8,313	8,882.99	-569.991	0.653	74.60	64.1073	10.49269
CLYDE CONS ISD	-0.391	7,532	8,301.19	-769.185	0.692	72.40	61.2766	11.12338
COAHOMA ISD	-0.471	7,603	8,529.17	-926.175	0.626	73.70	63.6321	10.06794
COLMESNEIL ISD	-0.521	7,166	8,189.18	-1,023.176	0.540	68.40	59.7177	8.68231
COLUMBUS ISD	-0.803	6,871	8,450.22	-1,579.223	1.274	84.00	63.5241	20.47591
COMAL ISD	-0.164	8,353	8,674.72	-321.718	0.190	70.30	67.2491	3.05090
COMFORT ISD	-0.239	8,260	8,730.07	-470.071	0.526	72.40	63.9396	8.46041
COMMERCE ISD	-0.591	7,803	8,964.99	-1,161.988	1.213	77.90	58.4054	19.49464
COPPELL ISD	-0.086	7,793	7,961.14	-168.136	0.849	96.40	82.7523	13.64766
CORRIGAN-CAMDEN ISD	-0.249	8,579	9,068.09	-489.088	0.283	61.90	57.3434	4.55657
CROWLEY ISD	-0.007	7,173	7,186.37	-13.368	0.253	70.80	66.7283	4.07170
DALLAS ISD	-1.064	7,160	9,251.73	-2,091.731	0.241	64.80	60.9230	3.87695
DAWSON ISD	-0.280	7,978	8,528.22	-550.215	0.877	72.70	58.5968	14.10324
DE LEON ISD	-0.643	6,583	7,845.97	-1,262.967	0.723	73.00	61.3742	11.62581
DIBOLL ISD	-0.515	7,534	8,545.83	-1,011.834	1.102	75.20	57.4813	17.71873
DIMMITT ISD	-0.533	7,944	8,992.61	-1,048.613	0.129	61.50	59.4242	2.07576
DOUGLASS ISD	-0.045	7,651	7,739.64	-88.636	0.441	71.40	64.3098	7.09025
DRIPPING SPRINGS ISD	-0.253	7,595	8,091.41	-496.406	0.996	86.60	70.5857	16.01427
DUBLIN ISD	-0.964	6,920	8,814.26	-1,894.258	1.015	75.40	59.0791	16.32086
EAST BERNARD ISD	-0.115	7,604	7,829.62	-225.621	0.274	68.80	64.3944	4.40559
EAST CENTRAL ISD	-0.013	7,997	8,021.75	-24.745	0.486	68.90	61.0925	7.80755
EASTLAND ISD	-0.460	7,547	8,450.67	-903.674	0.086	64.10	62.7141	1.38585
EDCOUCH-ELSA ISD	-0.246	8,209	8,693.36	-484.357	0.732	68.30	56.5298	11.77016
EDINBURG CONSOLIDATED	-0.138	8,263	8,534.95	-271.955	0.907	72.40	57.8138	14.58617
ELKHART ISD	-0.766	7,398	8,903.12	-1,505.123	0.041	60.00	59.3335	0.66650

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ELYSIAN FIELDS ISD	-0.452	7,423	8,310.75	-887.747	0.973	77.80	62.1511	15.64890
ERA ISD	-0.149	7,107	7,400.02	-293.018	0.672	75.00	64.1926	10.80742
EVANT ISD	-0.539	7,279	8,338.91	-1,059.913	0.012	61.10	60.9041	0.19594
FAIRFIELD ISD	-1.413	8,350	11,127.89	-2,777.890	0.128	69.10	67.0471	2.05293
FARWELL ISD	-0.035	8,776	8,844.97	-68.968	2.051	95.20	62.2295	32.97048
FLORENCE ISD	-0.302	8,364	8,956.97	-592.968	0.747	73.60	61.5906	12.00937
FOLLETT ISD	-0.287	10,376	10,940.57	-564.572	2.159	100.00	65.2989	34.70113
FRIONA ISD	-0.681	7,320	8,658.84	-1,338.841	0.227	64.90	61.2574	3.64257
GANADO ISD	-0.124	7,966	8,209.03	-243.035	0.630	72.70	62.5651	10.13489
GARY ISD	-0.332	9,701	10,352.88	-651.876	1.458	85.70	62.2543	23.44567
GILMER ISD	-0.739	7,344	8,795.81	-1,451.815	0.609	69.30	59.5138	9.78618
GLADEWATER ISD	-0.467	7,896	8,814.80	-918.798	0.223	62.00	58.4197	3.58031
GLEN ROSE ISD	-2.453	8,601	13,423.37	-4,822.373	0.661	82.50	71.8754	10.62460
GOLDTHWAITE ISD	-0.317	8,391	9,014.93	-623.934	0.991	78.30	62.3673	15.93267
GOLIAD ISD	-0.453	8,653	9,543.56	-890.559	2.036	97.50	64.7627	32.73733
GORMAN ISD	-0.469	8,797	9,718.76	-921.757	0.173	59.30	56.5166	2.78340
GRADY ISD	-0.021	10,218	10,258.78	-40.777	0.615	76.90	67.0132	9.88677
GRAFORD ISD	-0.822	10,668	12,284.68	-1,616.682	0.490	75.00	67.1201	7.87994
GRAPELAND ISD	-1.100	6,770	8,932.26	-2,162.260	0.811	70.70	57.6588	13.04123
GRAPEVINE-COLLEYVILLE ISD	-0.115	7,777	8,003.89	-226.892	0.785	87.90	75.2885	12.61154
GREENWOOD ISD	-0.428	6,723	7,564.73	-841.729	1.102	83.30	65.5802	17.71976
GREGORY-PORTLAND ISD	-0.504	6,669	7,659.65	-990.654	1.764	94.30	65.9468	28.35318
GROVETON ISD	-0.125	8,403	8,648.85	-245.846	0.717	70.50	58.9812	11.51875
GUSTINE ISD	-0.187	8,747	9,113.75	-366.752	0.855	72.70	58.9518	13.74823
HALLETTSVILLE ISD	-0.683	7,867	9,208.88	-1,341.881	0.251	69.00	64.9671	4.03294
HALLSVILLE ISD	-0.793	7,063	8,621.84	-1,558.836	0.433	71.80	64.8314	6.96863
HAMLIN ISD	-0.201	9,714	10,108.72	-394.716	0.886	72.00	57.7565	14.24355
HAMSHIRE-FANNETT ISD	-0.220	7,202	7,635.34	-433.339	0.795	78.20	65.4229	12.77710
HARDIN ISD	-0.469	7,146	8,068.51	-922.510	1.115	81.20	63.2698	17.93021
HARLETON ISD	-0.208	7,540	7,948.95	-408.954	0.341	67.70	62.2227	5.47727
HARMONY ISD	-0.476	8,102	9,037.99	-935.994	0.966	78.60	63.0635	15.53648
HARPER ISD	-0.071	9,272	9,412.08	-140.082	1.074	81.80	64.5271	17.27289
HAWLEY ISD	-0.500	7,518	8,501.77	-983.771	1.267	80.90	60.5401	20.35987
HEMPHILL ISD	-0.136	8,958	9,226.19	-268.192	0.200	60.90	57.6927	3.20730
HENDERSON ISD	-0.563	7,577	8,683.52	-1,106.521	0.110	61.90	60.1354	1.76460
HICO ISD	-0.573	7,508	8,633.61	-1,125.605	1.014	75.70	59.3934	16.30658
HONDO ISD	-0.201	7,646	8,041.15	-395.146	0.263	67.00	62.7648	4.23524
HONEY GROVE ISD	-0.143	8,080	8,360.96	-280.964	1.032	75.60	59.0021	16.59795
HOOKS ISD	-0.163	7,474	7,793.94	-319.944	0.261	64.50	60.3072	4.19278

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HOWE ISD	-0.076	7,591	7,740.50	-149.496	0.659	75.40	64.8112	10.58885
HUGHES SPRINGS ISD	-0.608	7,655	8,850.23	-1,195.228	1.978	89.60	57.8005	31.79952
IDALOU ISD	-0.168	7,726	8,055.54	-329.539	0.866	78.30	64.3757	13.92435
INGRAM ISD	-0.232	8,096	8,551.37	-455.369	0.511	68.80	60.5874	8.21261
ITASCA ISD	-0.004	8,993	9,001.42	-8.416	2.165	91.90	57.0975	34.80252
JARRELL ISD	-0.769	8,239	9,750.83	-1,511.829	0.370	71.10	65.1592	5.94083
JASPER ISD	-0.147	7,684	7,973.91	-289.909	0.843	68.80	55.2466	13.55338
JEFFERSON ISD	-0.462	8,380	9,288.59	-908.592	1.427	78.70	55.7634	22.93656
JIM NED CONS ISD	-0.076	7,753	7,902.11	-149.105	0.069	64.60	63.4917	1.10831
JOURDANTON ISD	-0.701	7,667	9,044.04	-1,377.037	0.857	75.80	62.0215	13.77846
KARNES CITY ISD	-0.281	8,109	8,660.89	-551.894	0.818	74.40	61.2542	13.14579
KERRVILLE ISD	-0.567	7,694	8,808.03	-1,114.025	0.185	66.90	63.9211	2.97892
KINGSVILLE ISD	-0.455	7,834	8,728.79	-894.790	0.153	63.60	61.1413	2.45871
KIRBYVILLE CISD	-0.651	6,838	8,118.25	-1,280.246	0.427	64.90	58.0360	6.86400
KOUNTZE ISD	-0.166	7,448	7,774.24	-326.236	0.386	66.70	60.4996	6.20035
KRUM ISD	-0.066	8,597	8,726.10	-129.097	0.066	66.70	65.6386	1.06136
LA GRANGE ISD	-0.701	7,241	8,618.10	-1,377.098	0.005	63.90	63.8173	0.08272
LA MARQUE ISD	-0.041	7,480	7,559.83	-79.829	0.851	71.20	57.5117	13.68827
LAGO VISTA ISD	-0.077	9,398	9,550.33	-152.325	0.773	84.50	72.0761	12.42385
LAKE WORTH ISD	-0.314	8,400	9,017.33	-617.327	0.011	58.00	57.8158	0.18419
LAMESA ISD	-0.790	6,985	8,537.23	-1,552.229	0.035	61.00	60.4379	0.56211
LATEXO ISD	-0.059	7,975	8,091.46	-116.460	0.635	74.10	63.8969	10.20311
LEGGETT ISD	-0.410	9,444	10,249.71	-805.707	2.318	91.70	54.4441	37.25592
LEONARD ISD	-0.165	7,586	7,909.38	-323.384	0.477	68.80	61.1252	7.67477
LIBERTY HILL ISD	-0.296	7,504	8,085.51	-581.507	0.092	55.60	54.1287	1.47134
LINDEN-KILDARE CONS ISD	-0.314	7,965	8,582.30	-617.305	1.036	75.00	58.3515	16.64846
LITTLEFIELD ISD	-0.714	7,083	8,486.26	-1,403.257	0.160	62.50	59.9356	2.56440
LLANO ISD	-0.831	10,037	11,670.87	-1,633.871	0.313	71.90	66.8700	5.02995
LOCKNEY ISD	-0.412	7,704	8,513.18	-809.184	0.830	73.80	60.4537	13.34632
LONE OAK ISD	-0.398	7,386	8,169.28	-783.283	0.153	65.30	62.8422	2.45776
LONGVIEW ISD	-0.398	7,759	8,541.28	-782.276	0.457	64.30	56.9578	7.34216
LUBBOCK ISD	-0.585	7,702	8,852.84	-1,150.836	0.049	63.80	63.0079	0.79215
LULING ISD	-0.072	8,139	8,280.19	-141.189	0.172	62.10	59.3309	2.76915
LUMBERTON ISD	-0.377	6,793	7,534.41	-741.410	0.284	68.10	63.5418	4.55819
LYTLE ISD	-0.218	8,005	8,434.06	-429.061	0.037	60.80	60.2098	0.59024
MADISONVILLE CONS ISD	-0.232	7,791	8,246.85	-455.855	0.509	65.20	57.0120	8.18797
MARTINS MILL ISD	-0.166	8,435	8,760.73	-325.732	1.194	80.00	60.8089	19.19107
MAUD ISD	-0.318	7,608	8,233.21	-625.214	1.585	84.60	59.1227	25.47728
MAY ISD	-0.510	9,108	10,111.08	-1,003.078	0.131	61.50	59.3988	2.10121
MCALLEN ISD	-0.381	7,395	8,143.38	-748.376	0.459	69.40	62.0200	7.37998
MCLEAN ISD	-0.291	9,156	9,728.70	-572.701	1.273	84.60	64.1355	20.46454

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT SAT/ACT TESTED 2003	Predicted Value	Residual
MEDINA VALLEY ISD	-0.203	7,627	8,025.73	-398.734	0.041	64.60	63.9434	0.65658
MERIDIAN ISD	-0.713	7,221	8,623.32	-1,402.319	1.858	90.90	61.0266	29.87343
MERKEL ISD	-0.469	8,427	9,348.40	-921.398	0.511	67.40	59.1815	8.21851
MEXIA ISD	-0.078	8,199	8,353.28	-154.280	0.645	66.10	55.7275	10.37246
MILDRED ISD	-0.136	8,093	8,359.58	-266.576	0.435	71.40	64.4097	6.99026
MONAHANS-WICKETT-PYOTE ISD	-1.090	7,266	9,409.03	-2,143.027	0.269	69.10	64.7803	4.31968
MOODY ISD	-0.914	6,474	8,269.68	-1,795.681	0.481	68.20	60.4689	7.73113
MORGAN ISD	-0.788	9,951	11,500.76	-1,549.757	0.036	55.60	55.0241	0.57594
MOULTON ISD	-0.318	7,770	8,394.16	-624.159	0.756	72.70	60.5540	12.14596
MUENSTER ISD	-0.225	7,250	7,692.06	-442.057	1.073	84.00	66.7529	17.24715
MULESHOE ISD	-0.445	8,166	9,040.36	-874.363	0.128	61.40	59.3363	2.06375
MUMFORD ISD	-1.314	6,160	8,743.54	-2,583.536	1.504	80.00	55.8259	24.17408
MUNDAY CISD	-0.245	7,717	8,197.91	-480.910	0.888	72.70	58.4315	14.26854
NAVARRO ISD	-0.247	7,603	8,088.48	-485.479	1.071	83.60	66.3767	17.22325
NEDERLAND ISD	-0.740	6,506	7,960.36	-1,454.364	0.851	81.90	68.2221	13.67793
NEW BOSTON ISD	-0.821	6,960	8,573.39	-1,613.386	1.703	86.80	59.4279	27.37214
NEW BRAUNFELS ISD	-0.366	7,361	8,081.01	-720.008	0.082	67.20	65.8898	1.31018
NOCONA ISD	-0.229	8,624	9,073.59	-449.591	1.113	78.00	60.1094	17.89057
OLNEY ISD	-0.490	8,225	9,188.45	-963.450	1.031	76.60	60.0216	16.57836
ORANGE GROVE ISD	-0.314	7,657	8,273.50	-616.497	1.220	79.20	59.5862	19.61376
ORANGEFIELD ISD	-0.379	6,833	7,577.13	-744.125	0.012	65.60	65.4125	0.18753
PERRYTON ISD	-0.641	7,332	8,592.80	-1,260.800	0.002	63.20	63.1709	0.02914
PHARR-SAN JUAN-ALAMO ISD	-0.227	7,996	8,442.72	-446.724	1.184	75.40	56.3621	19.03790
PINE TREE ISD	-0.630	6,608	7,845.61	-1,237.609	0.414	71.20	64.5514	6.64864
PITTSBURG ISD	-0.676	7,593	8,921.61	-1,328.608	0.300	62.40	57.5694	4.83062
PLEASANT GROVE ISD	-0.071	6,787	6,926.54	-139.536	1.334	90.80	69.3480	21.45203
PLEMONS-STINNETT-PHILLIPS CONS ISD	-1.968	11,152	15,021.21	-3,869.207	0.309	73.20	68.2402	4.95983
PORT ARANSAS ISD	-1.368	11,218	13,906.53	-2,688.527	0.797	89.30	76.4835	12.81648
PRESIDIO ISD	-0.472	7,965	8,892.31	-927.314	2.277	92.90	56.2942	36.60585
PROSPER ISD	-0.049	7,918	8,013.44	-95.442	0.818	83.00	69.8523	13.14770
QUANAH ISD	-0.466	9,376	10,292.80	-916.798	1.987	91.70	59.7610	31.93902
QUEEN CITY ISD	-1.059	7,713	9,793.67	-2,080.669	0.850	72.20	58.5360	13.66396
RAINS ISD	-0.550	7,848	8,928.96	-1,080.961	0.327	66.30	61.0452	5.25482
RALLS ISD	-1.024	8,133	10,145.63	-2,012.630	0.356	63.40	57.6805	5.71948
RANGER ISD	-0.551	9,248	10,330.15	-1,082.153	1.876	87.00	56.8477	30.15231
RANKIN ISD	-0.554	14,580	15,668.28	-1,088.278	1.615	100.00	74.0367	25.96329

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT SAT/ACT TESTED 2003	Predicted Value	Residual
REAGAN COUNTY ISD	-0.255	10,440	10,940.77	-500.770	0.047	66.70	65.9453	0.75467
RED OAK ISD	-0.271	6,839	7,370.96	-531.955	0.139	68.40	66.1729	2.22713
REDWATER ISD	-0.237	6,999	7,465.30	-466.302	1.469	87.90	64.2890	23.61097
REFUGIO ISD	-0.547	9,016	10,090.39	-1,074.385	0.056	65.20	64.2935	0.90648
RICHARDSON ISD	-0.119	8,160	8,394.37	-234.369	0.965	84.40	68.8881	15.51195
RIESEL ISD	-0.276	7,632	8,174.53	-542.531	0.618	72.40	62.4669	9.93310
RIVERCREST ISD	-0.451	7,502	8,387.76	-885.759	1.717	88.00	60.3908	27.60922
ROBSTOWN ISD	-0.512	8,581	9,586.47	-1,005.466	1.085	73.70	56.2569	17.44308
ROCKWALL ISD	-0.012	7,439	7,462.71	-23.711	0.210	72.90	69.5182	3.38180
ROMA ISD	-0.435	7,729	8,583.28	-854.284	0.100	58.70	57.0952	1.60479
ROOSEVELT ISD	-0.420	8,335	9,160.08	-825.081	0.047	58.70	57.9416	0.75836
ROSEBUD-LOTT ISD	-0.357	7,623	8,324.14	-701.140	0.028	59.10	58.6449	0.45511
ROUND TOP-CARMINE ISD	-0.461	9,972	10,877.23	-905.231	0.624	82.40	72.3609	10.03906
S AND S CONS ISD	-0.192	7,934	8,311.57	-377.570	0.588	73.50	64.0517	9.44825
SALADO ISD	-0.435	7,119	7,973.88	-854.877	0.147	70.60	68.2313	2.36871
SAM RAYBURN ISD	-0.464	7,372	8,284.35	-912.351	0.691	72.00	60.8938	11.10623
SAN ELIZARIO ISD	-0.489	8,240	9,200.21	-960.207	1.002	71.50	55.3918	16.10818
SAN ISIDRO ISD	-0.316	12,137	12,757.45	-620.453	2.176	100.00	65.0144	34.98558
SAN SABA ISD	-0.217	8,660	9,086.26	-426.256	0.668	70.60	59.8561	10.74386
SANDS CISD	-0.199	10,188	10,579.61	-391.614	1.933	94.10	63.0233	31.07674
SANTA ROSA ISD	-0.421	8,609	9,436.87	-827.869	1.370	77.30	55.2843	22.01574
SCHULENBURG ISD	-0.283	8,158	8,713.99	-555.993	0.648	72.00	61.5865	10.41355
SCURRY-ROSSER ISD	-0.003	8,275	8,281.13	-6.132	0.941	78.00	62.8780	15.12196
SHALLOWATER ISD	0.000	7,724	7,724.00	-0.003	0.191	65.80	62.7237	3.07628
SHARYLAND ISD	-0.308	6,986	7,592.03	-606.025	0.490	73.20	65.3260	7.87398
SHELDON ISD	-0.253	8,987	9,483.42	-496.421	0.283	65.20	60.6433	4.55666
SHINER ISD	-0.006	8,570	8,580.83	-10.829	1.473	85.70	62.0225	23.67747
SIDNEY ISD	-0.003	10,062	10,067.40	-5.399	0.655	69.20	58.6680	10.53195
SIMMS ISD	-1.296	6,549	9,097.14	-2,548.144	0.611	67.90	58.0827	9.81725
SINTON ISD	-0.646	7,457	8,726.31	-1,269.311	0.308	65.70	60.7411	4.95885
SKIDMORE-TYNAN ISD	-0.443	7,814	8,684.32	-870.322	0.106	62.20	60.5030	1.69702
SOUTHLAND ISD	-0.675	8,497	9,824.27	-1,327.275	1.235	80.00	60.1536	19.84635
SPRING BRANCH ISD	-0.138	8,545	8,816.76	-271.764	0.197	70.10	66.9400	3.16001
SPRING HILL ISD	-0.205	6,338	6,740.00	-401.999	0.800	78.80	65.9333	12.86667
STAMFORD ISD	-0.099	8,652	8,846.33	-194.331	0.918	72.50	57.7471	14.75286
STEPHENVILLE	-0.562	6,889	7,994.48	-1,105.476	0.877	78.40	64.2975	14.10249
STOCKDALE ISD	-0.084	8,007	8,172.26	-165.259	0.583	71.70	62.3207	9.37933
STRAWN ISD	-0.553	8,312	9,399.12	-1,087.122	0.355	66.70	60.9874	5.71260

District Name	Std. Residual	TOTAL EXPENDITURES PER PUPIL (2002-2003)	Predicted Value	Residual	Std. Residual	DISTRICT SAT/ACT TESTED 2003	Predicted Value	Residual
SULPHUR SPRINGS ISD	-0.428	7,344	8,185.13	-841.133	0.069	62.40	61.2973	1.10269
TEXARKANA ISD	-0.543	7,387	8,453.37	-1,066.374	0.300	60.40	55.5851	4.81495
TIMPSON ISD	-0.197	7,961	8,348.33	-387.329	0.054	57.10	56.2259	0.87414
TORNILLO ISD	-0.545	7,598	8,669.31	-1,071.307	0.683	66.70	55.7208	10.97919
TROY ISD	-0.380	7,674	8,421.14	-747.144	0.127	64.90	62.8629	2.03714
TULIA ISD	-0.242	7,951	8,427.53	-476.526	0.215	62.30	58.8438	3.45617
TURKEY-QUITAQUE ISD	-0.326	8,122	8,763.62	-641.625	2.136	92.90	58.5644	34.33562
UNION GROVE ISD	-0.274	7,596	8,134.64	-538.637	0.124	63.60	61.6023	1.99774
VAN VLECK ISD	-0.060	8,524	8,641.18	-117.178	0.327	65.60	60.3472	5.25280
VIDOR ISD	-0.918	7,065	8,869.16	-1,804.157	0.407	66.00	59.4580	6.54200
WALNUT SPRINGS ISD	-0.710	8,036	9,432.15	-1,396.155	0.810	71.40	58.3812	13.01876
WASKOM ISD	-0.913	7,323	9,117.58	-1,794.584	1.664	85.70	58.9542	26.74583
WEIMAR ISD	-0.055	8,522	8,629.54	-107.535	0.858	76.50	62.7088	13.79117
WESLACO ISD	-0.326	7,882	8,523.39	-641.391	0.168	60.10	57.3992	2.70076
WEST HARDIN COUNTY CONS ISD	-0.067	8,308	8,440.35	-132.354	0.020	60.50	60.1795	0.32048
WEST SABINE ISD	-0.750	7,758	9,232.78	-1,474.777	1.499	80.60	56.5083	24.09169
WHEELER ISD	-0.154	8,248	8,550.15	-302.148	1.191	82.90	63.7509	19.14907
WHITEWRIGHT ISD	-0.321	7,493	8,123.41	-630.412	0.391	67.60	61.3094	6.29056
WINNSBORO ISD	-1.109	6,451	8,630.02	-2,179.021	0.601	71.60	61.9458	9.65422
WODEN ISD	-0.724	7,166	8,589.24	-1,423.237	1.170	78.40	59.5961	18.80389
WOODVILLE ISD	-0.108	8,699	8,911.15	-212.152	0.776	68.90	56.4233	12.47672
WYLIE ISD	-0.436	6,186	7,042.52	-856.522	1.054	86.60	69.6559	16.94407
YANTIS ISD	-0.824	7,979	9,598.95	-1,619.949	0.967	80.00	64.4519	15.54814
YSLETA ISD	-0.359	7,338	8,043.15	-705.146	2.437	96.80	57.6245	39.17553
ZEPHYR ISD	-0.637	8,336	9,587.97	-1,251.974	2.643	100.00	57.5129	42.48707

APPENDIX G

TEST OF EQUALITY OF GROUP MEANS

ALL GRADES MATH 2004

QUADRANT I

SCHOOL DISTRICTS

Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	1.000	.004	1	1033	.949
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	.997	2.938	1	1033	.087
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	.999	.654	1	1033	.419
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	1.000	.022	1	1033	.882
AVG. SALARY TEACHER	.999	1.207	1	1033	.272
AVERAGE YEARS EXPERIENCE FOR TEACHERS	.992	8.018	1	1033	.005
NUMBER OF STUDENTS PER TEACHER	.973	28.342	1	1033	.000
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	.990	10.248	1	1033	.001
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	.996	4.123	1	1033	.043
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	.996	4.616	1	1033	.032
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	.999	1.201	1	1033	.273
TEACHER TURNOVER RATE	.990	10.355	1	1033	.001

APPENDIX H

STANDARDIZED FUNCTION COEFFICIENTS

ALL GRADES MATH 2004

QUADRANT I

SCHOOL DISTRICTS

Standardized Canonical Discriminant Function Coefficients

	Function 1
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	-.102
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	.474
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	.139
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	-.002
AVG. SALARY TEACHER	-.307
AVERAGE YEARS EXPERIENCE FOR TEACHERS	.498
NUMBER OF STUDENTS PER TEACHER	.921
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	-.007
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	-.027
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	.279
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	-.012
TEACHER TURNOVER RATE	-.261

APPENDIX I

CORRELATION COEFFICIENTS WITH DISCRIMINANT FUNCTION

ALL GRADES MATH 2004

QUADRANT I

SCHOOL DISTRICTS

Structure Matrix

	Function 1
NUMBER OF STUDENTS PER TEACHER	.661
TEACHER TURNOVER RATE	-.399
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	-.397
AVERAGE YEARS EXPERIENCE FOR TEACHERS	.351
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	.267
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	.252
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	.213
AVG. SALARY TEACHER	.136
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	.136
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	-.100
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	-.018
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	.008

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions. Variables ordered by absolute size of correlation within function.

APPENDIX J

TEST OF EQUALITY OF GROUP MEANS

ALL GRADES READING 2004

QUADRANT I

SCHOOL DISTRICTS

Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	1.000	.093	1	1032	.760
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	1.000	.039	1	1032	.843
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	1.000	.233	1	1032	.630
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	.999	.739	1	1032	.390
AVG. SALARY TEACHER	.998	1.907	1	1032	.168
AVERAGE YEARS EXPERIENCE FOR TEACHERS	.987	13.215	1	1032	.000
NUMBER OF STUDENTS PER TEACHER	.972	29.650	1	1032	.000
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	.986	14.385	1	1032	.000
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	.998	2.542	1	1032	.111
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	.998	1.915	1	1032	.167
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	.997	3.479	1	1032	.062
TEACHER TURNOVER RATE	.983	18.151	1	1032	.000

APPENDIX K

STANDARDIZED FUNCTION COEFFICIENTS

ALL GRADES READING 2004

QUADRANT I

SCHOOL DISTRICTS

Standardized Canonical Discriminant Function Coefficients

	Function 1
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	-.010
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	.295
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	.179
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	-.102
AVG. SALARY TEACHER	-.385
AVERAGE YEARS EXPERIENCE FOR TEACHERS	.572
NUMBER OF STUDENTS PER TEACHER	.819
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	-.134
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	-.074
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	.192
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	.068
TEACHER TURNOVER RATE	-.323

APPENDIX L

CORRELATION COEFFICIENTS WITH DISCRIMINANT FUNCTION

ALL GRADES READING 2004

QUADRANT I

SCHOOL DISTRICTS

Structure Matrix

	Function 1
NUMBER OF STUDENTS PER TEACHER	.648
TEACHER TURNOVER RATE	-.507
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	-.452
AVERAGE YEARS EXPERIENCE FOR TEACHERS	.433
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	.222
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	.190
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	.165
AVG. SALARY TEACHER	.164
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	-.102
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	.057
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	.036
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	.024

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions. Variables ordered by absolute size of correlation within function.

APPENDIX M

TEST OF EQUALITY OF GROUP MEANS

DISTRICT COMPLETION RATE

WITHOUT G.E.D. 2003

QUADRANT I

SCHOOL DISTRICTS

Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	1.000	.481	1	1003	.488
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	1.000	.163	1	1003	.686
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	1.000	.091	1	1003	.762
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	1.000	.060	1	1003	.807
AVG. SALARY TEACHER	1.000	.225	1	1003	.635
AVERAGE YEARS EXPERIENCE FOR TEACHERS	.996	4.030	1	1003	.045
NUMBER OF STUDENTS PER TEACHER	.983	17.819	1	1003	.000
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	.984	16.705	1	1003	.000
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	.998	2.432	1	1003	.119
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	.998	1.763	1	1003	.184
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	.999	1.387	1	1003	.239
TEACHER TURNOVER RATE	.993	6.951	1	1003	.009

APPENDIX N

STANDARDIZED FUNCTION COEFFICIENTS

DISTRICT COMPLETION RATE

WITHOUT G.E.D. 2003

QUADRANT I

SCHOOL DISTRICTS

Standardized Canonical Discriminant Function Coefficients

	Function 1
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	.003
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	.167
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	-.012
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	-.180
AVG. SALARY TEACHER	-.468
AVERAGE YEARS EXPERIENCE FOR TEACHERS	.483
NUMBER OF STUDENTS PER TEACHER	.688
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	-.424
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	-.067
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	.218
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	-.003
TEACHER TURNOVER RATE	-.232

APPENDIX O

CORRELATION COEFFICIENTS WITH DISCRIMINANT FUNCTION

DISTRICT COMPLETION RATE

WITHOUT G.E.D. 2003

QUADRANT I

SCHOOL DISTRICTS

Structure Matrix

	Function 1
NUMBER OF STUDENTS PER TEACHER	.671
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	-.649
TEACHER TURNOVER RATE	-.419
AVERAGE YEARS EXPERIENCE FOR TEACHERS	.319
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	.248
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	.211
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	.187
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	.110
AVG. SALARY TEACHER	.075
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	.064
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	-.048
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	-.039

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions. Variables ordered by absolute size of correlation within function.

APPENDIX P

TEST OF EQUALITY OF GROUP MEANS

DISTRICT MEAN SAT 2003

QUADRANT I

SCHOOL DISTRICTS

Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	.996	3.163	1	898	.076
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	1.000	.045	1	898	.832
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	1.000	.285	1	898	.593
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	.996	3.388	1	898	.066
AVG. SALARY TEACHER	.996	3.721	1	898	.054
AVERAGE YEARS EXPERIENCE FOR TEACHERS	.986	13.142	1	898	.000
NUMBER OF STUDENTS PER TEACHER	.930	67.890	1	898	.000
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	.924	73.542	1	898	.000
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	.973	25.227	1	898	.000
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	1.000	.423	1	898	.516
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	.996	3.918	1	898	.048
TEACHER TURNOVER RATE	.976	21.867	1	898	.000

APPENDIX Q

STANDARDIZED FUNCTION COEFFICIENTS

DISTRICT MEAN SAT 2003

QUADRANT I

SCHOOL DISTRICTS

Standardized Canonical Discriminant Function Coefficients

	Function 1
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	.096
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	.235
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	.214
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	.116
AVG. SALARY TEACHER	-.494
AVERAGE YEARS EXPERIENCE FOR TEACHERS	.539
NUMBER OF STUDENTS PER TEACHER	.555
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	-.474
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	.149
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	.053
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	-.013
TEACHER TURNOVER RATE	-.200

APPENDIX R

CORRELATION COEFFICIENTS WITH DISCRIMINANT FUNCTION

DISTRICT MEAN SAT 2003

QUADRANT I

SCHOOL DISTRICTS

Structure Matrix

	Function 1
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	-.742
NUMBER OF STUDENTS PER TEACHER	.713
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	.435
TEACHER TURNOVER RATE	-.405
AVERAGE YEARS EXPERIENCE FOR TEACHERS	.314
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	.171
AVG. SALARY TEACHER	.167
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	.159
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	.154
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	.056
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	-.046
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	-.018

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions. Variables ordered by absolute size of correlation within function.

APPENDIX S

TEST OF EQUALITY OF GROUP MEANS

DISTRICT MEAN ACT 2003

QUADRANT I

SCHOOL DISTRICTS

Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	.998	2.002	1	976	.157
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	1.000	.252	1	976	.616
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	.996	4.092	1	976	.043
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	.994	6.226	1	976	.013
AVG. SALARY TEACHER	.995	4.773	1	976	.029
AVERAGE YEARS EXPERIENCE FOR TEACHERS	.982	18.000	1	976	.000
NUMBER OF STUDENTS PER TEACHER	.958	42.968	1	976	.000
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	.957	43.986	1	976	.000
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	.981	18.491	1	976	.000
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	1.000	.469	1	976	.494
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	.989	10.931	1	976	.001
TEACHER TURNOVER RATE	.984	16.225	1	976	.000

APPENDIX T

STANDARDIZED FUNCTION COEFFICIENTS

ALL GRADES MATH 2004

QUADRANT I

SCHOOL DISTRICTS

Standardized Canonical Discriminant Function Coefficients

	Function 1
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	.014
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	.175
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	-.021
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	.158
AVG. SALARY TEACHER	-.397
AVERAGE YEARS EXPERIENCE FOR TEACHERS	.637
NUMBER OF STUDENTS PER TEACHER	.529
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	-.334
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	.153
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	.063
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	.162
TEACHER TURNOVER RATE	-.183

APPENDIX U

CORRELATION COEFFICIENTS WITH DISCRIMINANT FUNCTION

DISTRICT MEAN ACT 2003

QUADRANT I

SCHOOL DISTRICTS

Structure Matrix

	Function 1
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	-.661
NUMBER OF STUDENTS PER TEACHER	.653
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	.428
AVERAGE YEARS EXPERIENCE FOR TEACHERS	.423
TEACHER TURNOVER RATE	-.401
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	.329
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	.249
AVG. SALARY TEACHER	.218
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	-.201
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	.141
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	.068
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	.050

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions. Variables ordered by absolute size of correlation within function.

APPENDIX V

TEST OF EQUALITY OF GROUP MEANS

DISTRICT SAT / ACT

TESTED 2003

QUADRANT I

SCHOOL DISTRICTS

Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	1.000	.404	1	995	.525
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	1.000	.005	1	995	.945
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	1.000	.379	1	995	.538
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	.999	.942	1	995	.332
AVG. SALARY TEACHER	.997	2.997	1	995	.084
AVERAGE YEARS EXPERIENCE FOR TEACHERS	.982	18.164	1	995	.000
NUMBER OF STUDENTS PER TEACHER	.990	10.385	1	995	.001
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	.989	11.402	1	995	.001
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	1.000	.132	1	995	.716
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	1.000	.059	1	995	.809
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	.999	.661	1	995	.416
TEACHER TURNOVER RATE	.990	9.994	1	995	.002

APPENDIX W

STANDARDIZED FUNCTION COEFFICIENTS

DISTRICT SAT / ACT

TESTED 2003

QUADRANT I

SCHOOL DISTRICTS

Standardized Canonical Discriminant Function Coefficients

	Function 1
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	-.014
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	.026
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	.096
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	-.080
AVG. SALRY TEACHER	.808
AVERAGE YEARS EXPERIENCE FOR TEACHERS	-.788
NUMBER OF STUDENTS PER TEACHER	-.622
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	.321
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	.203
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	-.011
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	.027
TEACHER TURNOVER RATE	.209

APPENDIX X

CORRELATION COEFFICIENTS WITH DISCRIMINANT FUNCTION

DISTRICT SAT / ACT

TESTED 2003

QUADRANT I

SCHOOL DISTRICTS

Structure Matrix

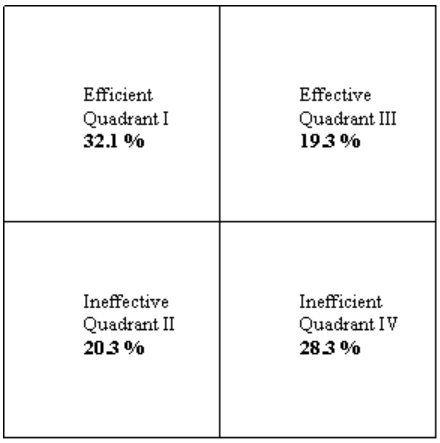
	Function 1
AVERAGE YEARS EXPERIENCE FOR TEACHERS	-.490
TOTAL EXPENDITURE BY FUNCTION - CENTRAL ADMINISTRATION PERCENT	.388
NUMBER OF STUDENTS PER TEACHER	-.371
TEACHER TURNOVER RATE	.364
AVG. SALARY TEACHER	.199
EXPENDITURES BY PROGRAM SPECIAL EDUCATION PERCENT	-.112
EXPENDITURES BY PROGRAM GIFTED AND TALENTED PERCENT	-.094
EXPENDITURES BY PROGRAM BILINGUAL / ESL EDUCATION PERCENT	.073
EXPENDITURES BY PROGRAM REGULAR EDUCATION PERCENT	.071
TOTAL EXPENDITURE BY FUNCTION - INSTRUCTIONAL LEADERSHIP PERCENT	.042
TOTAL EXPENDITURE BY FUNCTION - SCHOOL LEADERSHIP PERCENT	-.028
EXPENDITURES BY PROGRAM COMPENSATORY EDUCATION PERCENT	.008

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions. Variables ordered by absolute size of correlation within function.

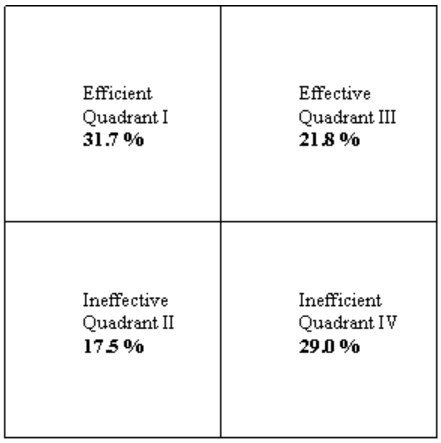
APPENDIX Y

MODIFIED QUADRIFORM ANALYSIS

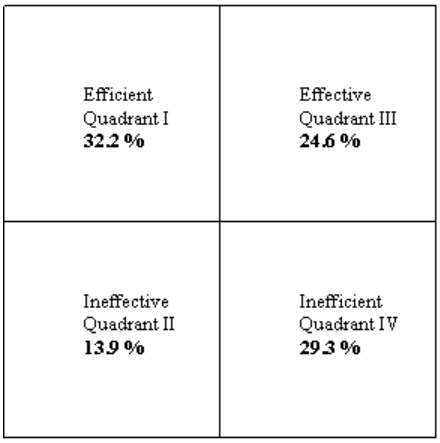
FOR ALL SCHOOLS IN STATE OF TEXAS 2004



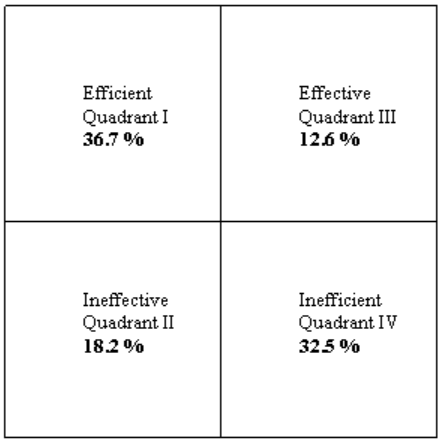
All Grades Tested TAKS Math 2004
(n = 1034)



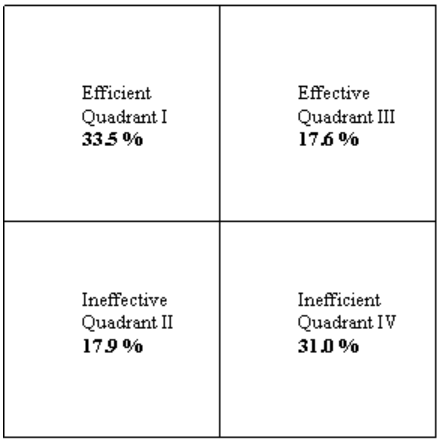
All Grades Tested TAKS Reading 2004
(n = 1028)



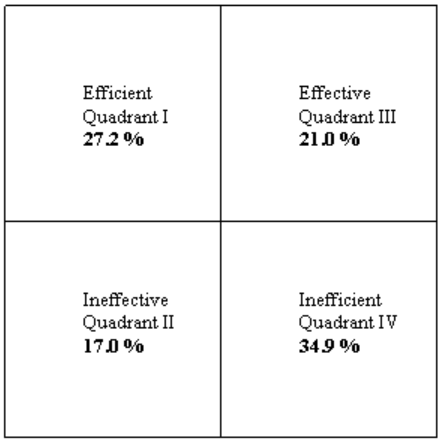
District Completion Rate without G.E.D. 2003
(n = 967)



District Mean SAT 2003
(n = 708)



District Mean ACT 2003
(n = 881)



District SAT / ACT Tested 2003
(n = 945)

VITA

Chad Aaron Stevens received his Bachelor of Science degree in exercise and sports studies from Tarleton State University in 1996. He entered the educational management program at University of Houston - Clear Lake in summer 1997, and received his Master of Science degree in December of 1999. He entered the doctorate program at Texas A&M University in July of 2001 seeking a Ph.D. in educational administration with a specialization in public school administration. He received his Ph.D. from Texas A&M University in December 2006. His research interests include school finance, educational administration theory, gifted and talented education, curriculum and educational history.

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