

# Select Committee on Public School Accountability

Presented by Timothy M. Tauer

July 14, 2008

Page 01

## The Role of Growth Measurements in Texas Public Education Accountability



File: 888801-080714-01

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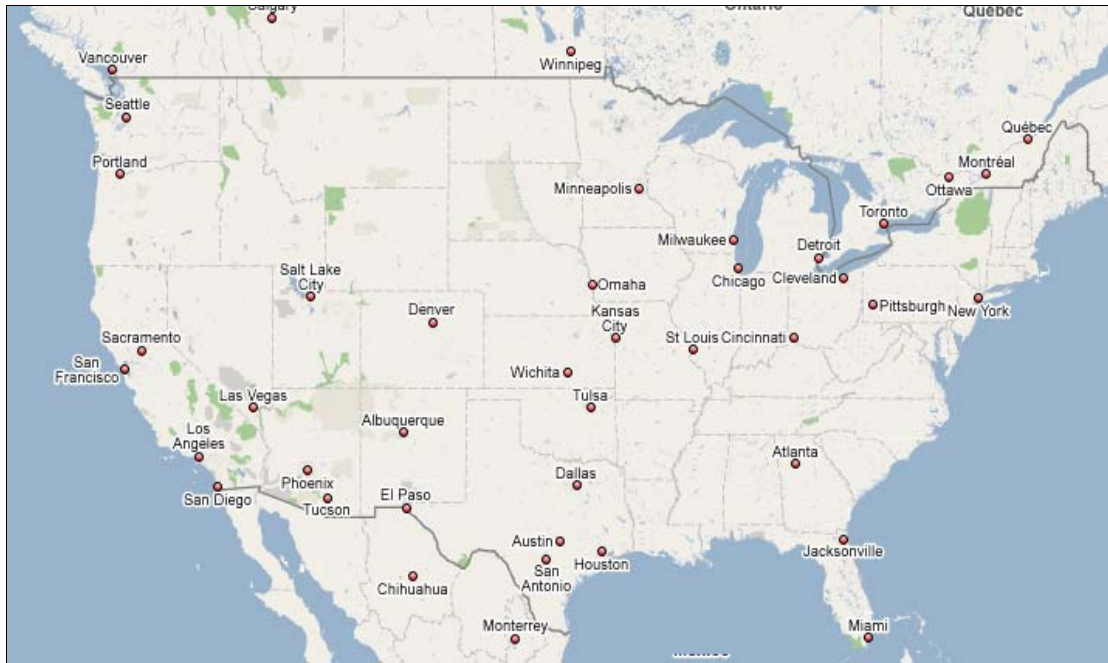
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### Accountability is About Performance Management and Performance Management is a Journey



### A Successful Journey Depend on a System of Navigation

#### Position

Destination

Origins

#### Movement

Direction

Speed

#### Coordinate System

A Framework for Precise Locations

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### **Establishing and Maintaining a Performance-Based Public Education Accountability System**

#### **The Select Committee Must Determine:**

**“... the extent to which the accountability system fairly and accurately reports the effectiveness of ..... financial expenditures and the impact ..... on student achievement.”**

**“... the extent to which the accountability system considers the different student demographics of districts and campuses.”**

*Senate Bill 1031*

**“... to identify those organizations whose practices contribute to high academic achievement and cost effective operations.”**

*Governor Perry - Lt. Governor Dewhurst - Speaker Craddick*

#### **Effective Accountability Must Let Organizations Know**

Where They Are

How Does That Varies From What Was Expected

If and Where Corrections are Necessary

Are Those Corrections are Having the Desired Effect

Select Committee on Public School Accountability

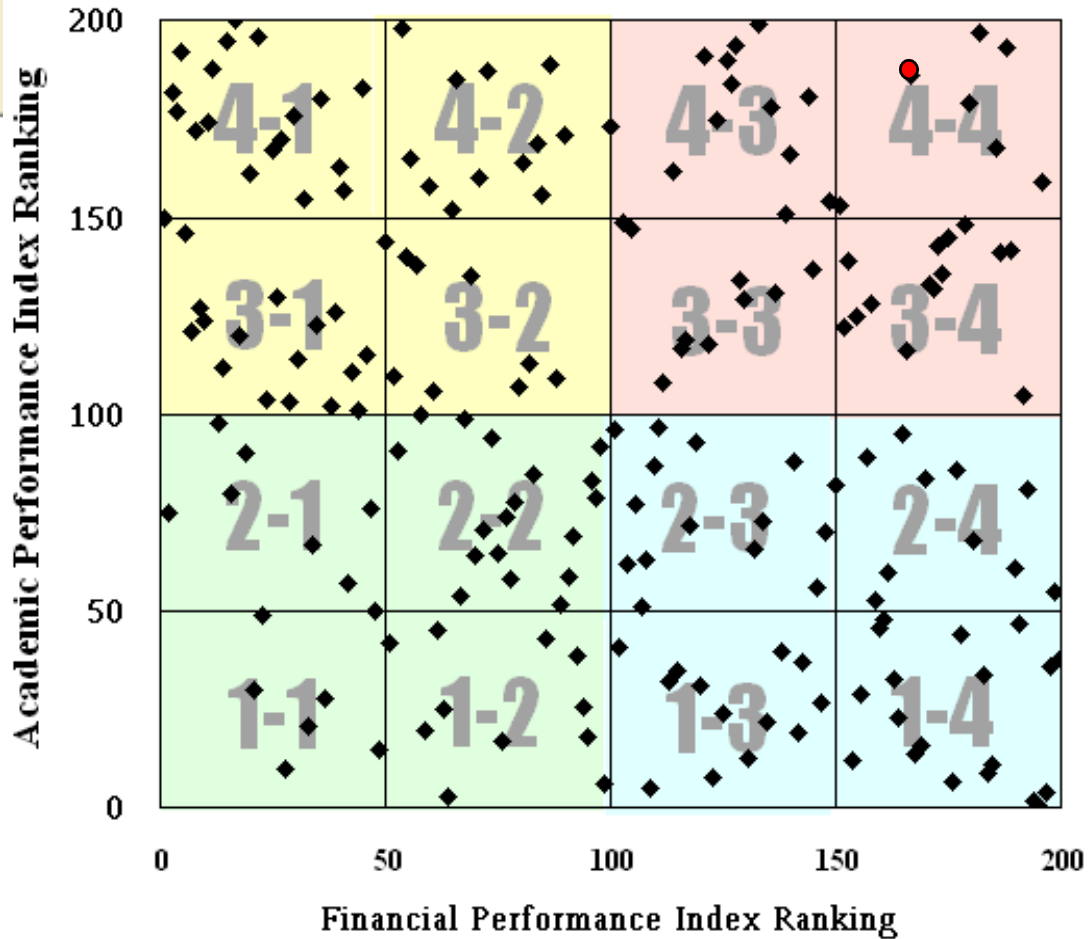
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ERG Best Practice Matrix

(2006-2007 School Year)



Best Practice Matrix

By Definition, Academics and Resources are the Coordinate System

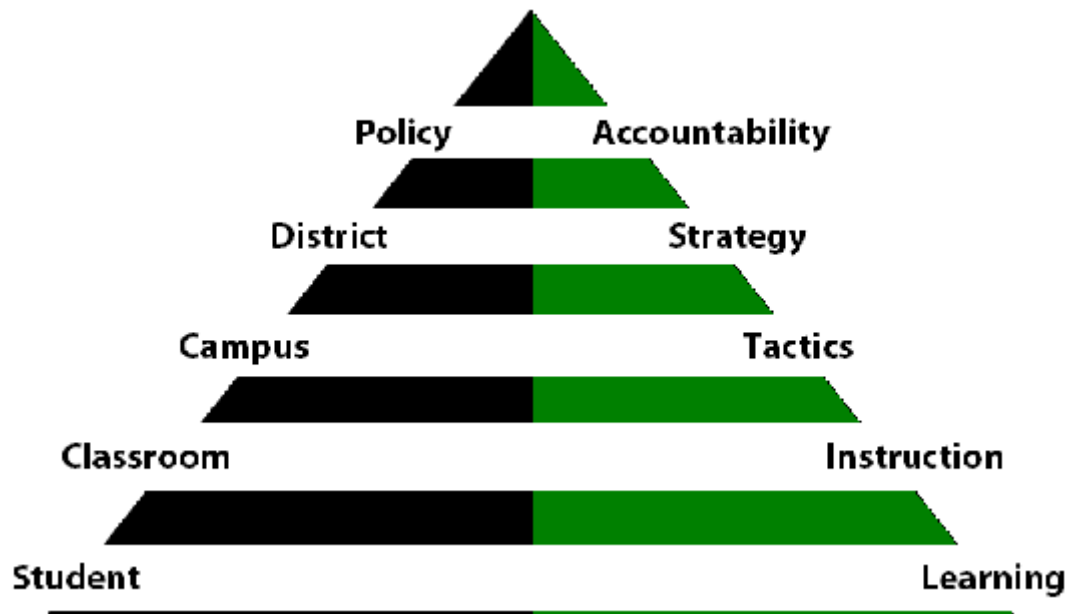
The Select Committee's Responsibility

Define the Elements of an Academic Index

Define the Elements of a Financial Index

**The Desktop Analyst**

System Architecture



**Macro and Micro-Management**

Different Organizational Levels Require Different Information

The Information Must be Integrated and Aligned Across Organizational Levels

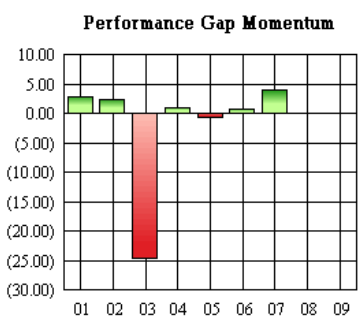
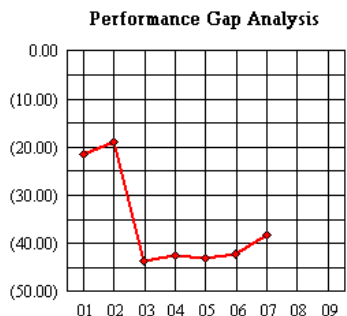
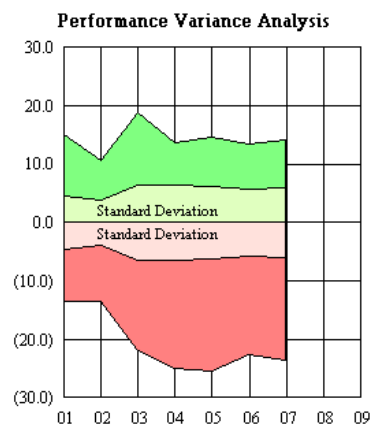
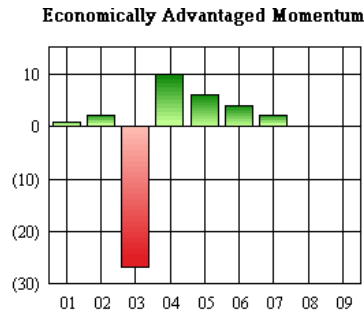
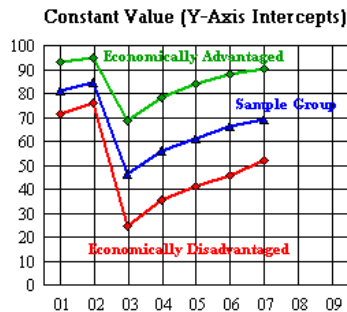
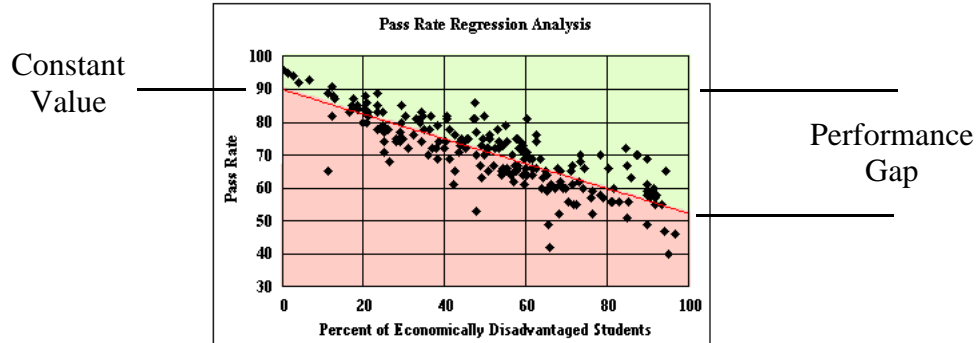
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## A Policy-Level View - System-Wide Performance



Year	Maximum	Minimum	Std Dev
2001	15.0	(13.5)	4.6
2002	10.6	(13.5)	4.0
2003	18.8	(21.9)	6.5
2004	13.6	(25.0)	6.5
2005	14.6	(25.5)	6.2
2006	13.5	(22.6)	5.9
2007	14.1	(23.6)	5.9
2008			
2009			

### Upper Chart Series

The Trend Chart Provides Information on Location  
The Momentum Chart Displays Direction and Rate of Change  
Track Variability in Membership Performance

### Lower Chart Series

The Trend Chart Provides Information on the Performance Gap  
The Momentum Chart Displays Direction and Rate of Change

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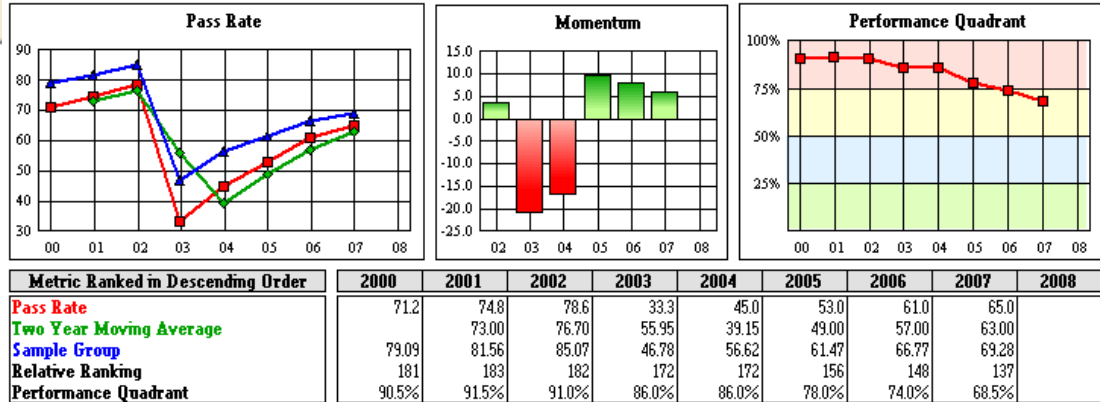
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## A District-Level View of Performance

(Brownsville Independent School District)

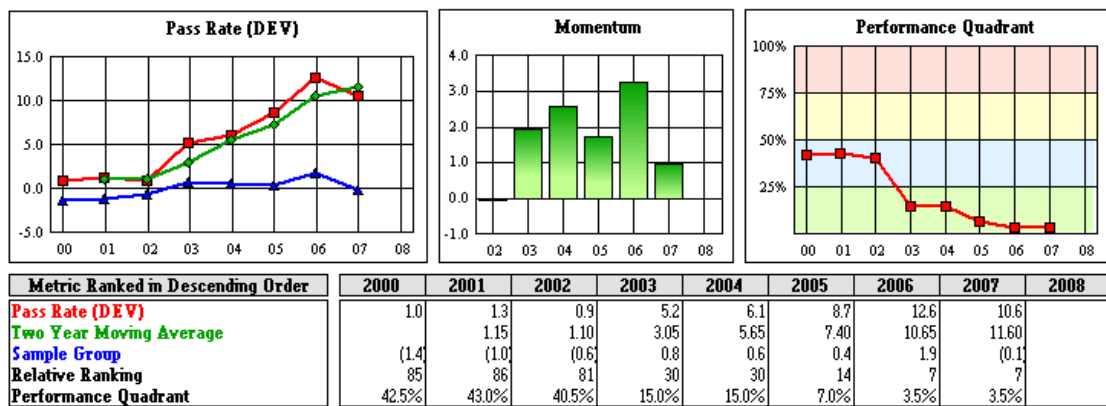


### Longitudinal Performance Analysis

The Trend Chart Displays Information on Relative Location  
 The Momentum Chart Displays Direction and Rate of Change  
 The Performance Quadrant Chart Displays Comparable Improvement

### The Desktop Analyst Series

Tracks the Longitudinal Performance of more than 650 Metrics



### Performance Analysis After Adjusting for Student Demographics

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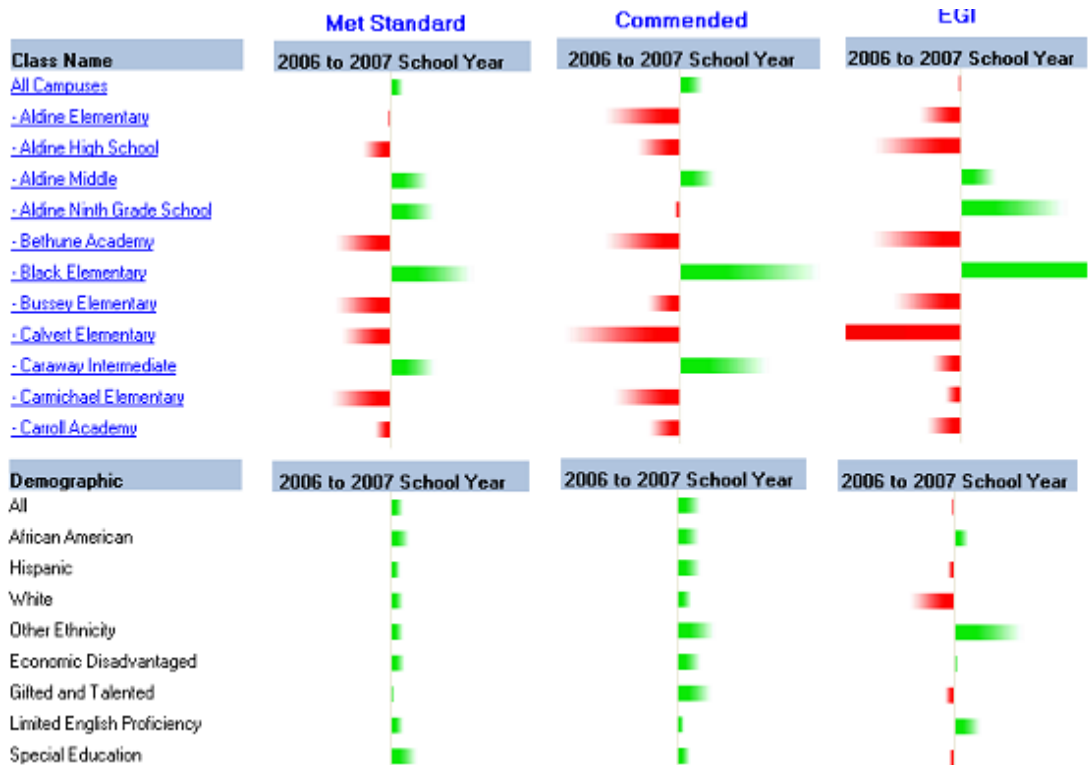
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## A Campus-Level View of Performance



### Performance Growth Analysis

Selected English Language Arts/Reading for All Grades  
Displays Direction and Amplitude of Change by Campus and Student Groups

### Performance Categories Monitored

- Met Standard
- Commended Performance
- Education Growth Index (EGI)

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### Continued: A Campus-Level View of Performance

	All Grades	3 - 4	4 - 5	5 - 6	6 - 7	7 - 8	8 - 9	9 - 10	10 - 11
<b>Total</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Aldine</b>	0.00	-0.02	0.08	0.08	0.01	-0.01	0.10	-0.17	-0.11
Aldine High Sch #001	-0.15	0.00	0.00	0.00	0.00	0.00	0.00	-0.17	-0.11
Aldine Ninth Gr #081	0.10	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00
Black Elementar #126	0.46	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bussey Elementa #131	-0.16	-0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Eckert Intermed #061	0.02	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
Goodman Element #106	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gray Elementary #125	-0.18	-0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Odom Elementary #115	-0.38	-0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stehlik Interme #064	0.13	0.00	0.13	0.13	0.00	0.00	0.00	0.00	0.00
Stovall Middle #044	0.00	0.00	0.00	0.00	0.01	-0.01	0.00	0.00	0.00
Thompson Elemen #117	-0.02	-0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Alternative</b>	-0.11	0.00	0.00	0.00	0.00	0.00	-0.13	-0.11	-0.13
Hall Academy #007	-0.11	0.00	0.00	0.00	0.00	0.00	-0.13	-0.11	-0.13
<b>Carver</b>	-0.03	-0.06	-0.01	-0.02	-0.09	-0.04	0.02	0.10	0.10
Bethune Academy #102	-0.09	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Carroll Academy #103	-0.12	-0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Carter Academy #107	-0.15	-0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Carver H S For #002	0.06	0.00	0.00	0.00	0.00	0.00	0.02	0.10	0.10
Drew Academy #042	-0.08	0.00	0.00	0.00	-0.20	0.06	0.00	0.00	0.00
Grantham Academ #048	-0.06	0.00	0.00	0.00	0.00	-0.12	0.00	0.00	0.00
Harris Academy #129	0.23	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Houston Academy #062	0.08	0.00	0.12	0.05	0.00	0.00	0.00	0.00	0.00
Raymond Academy #113	-0.01	-0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Reed Academy #068	-0.10	0.00	-0.13	-0.08	0.00	0.00	0.00	0.00	0.00
Smith Academy #114	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stovall Academy #127	-0.13	-0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Eisenhower</b>	0.01	0.11	-0.01	-0.02	-0.12	0.06	0.01	-0.03	0.15

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## Case Study Texas High School Project

THSP Camous	District	2007	Met Standard - Deviations	2006	Growth	Year-to-Year Growth
Alkins	Austin	(24.0)		(22.6)	(1.4)	
Bel Air	Ysleta	(4.5)		(5.0)	0.5	
Dunbar	Fort Worth	(41.9)		(30.7)	(11.2)	
Lanier	San Antonio	(11.3)		(14.6)	3.2	
North Side	Fort Worth	(22.6)		(20.8)	(1.8)	
Houston	San Antonio	(24.7)		(32.3)	7.6	
Yates	Houston	(31.3)		(31.2)	(0.1)	
Smiley	North Forest	(26.5)		(25.8)	(0.7)	
Group Total		(21.5)		(21.1)	(0.5)	

Non-THSP Camous	District	2007	Met Standard - Deviations	2006	Growth	Year-to-Year Growth
Aldine	Aldine	(15.1)		(14.1)	(1.0)	
Taylor	Arlief	(29.2)		(26.9)	(2.3)	
Porter	Brownsville	(5.0)		(7.1)	2.1	
Memorial	McAllen	(7.4)		(0.8)	(6.6)	
Furr	Houston	(22.9)		(26.2)	3.3	
Moody	Corpus Christi	(19.4)		(18.8)	(0.6)	
Mercedes	Mercedes	(9.1)		(6.3)	(2.8)	
Americas	Ysleta	(15.1)		(18.6)	3.6	
Group Total		(15.5)		(15.1)	(0.4)	

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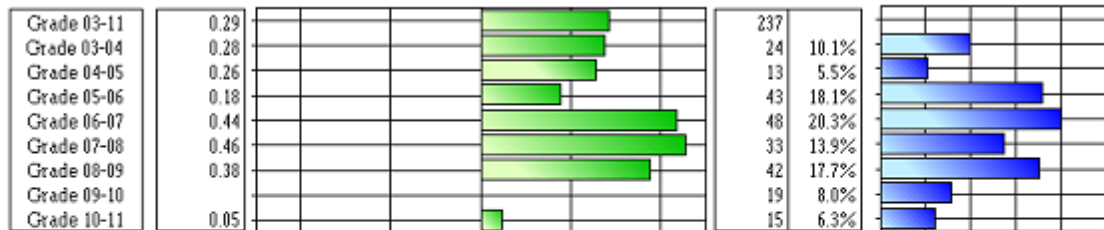
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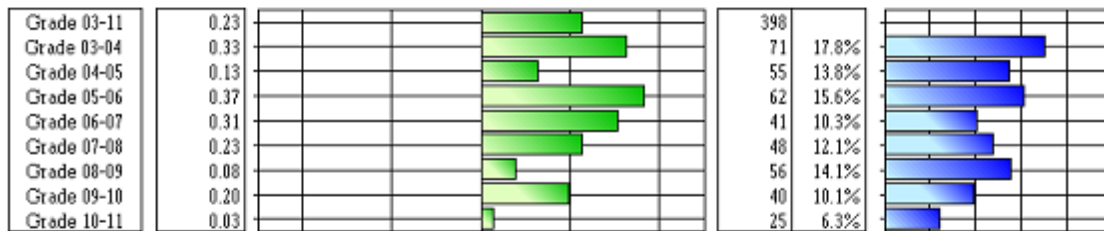
## Case Study

### Review of a Major Corporate Grant (TAKS)

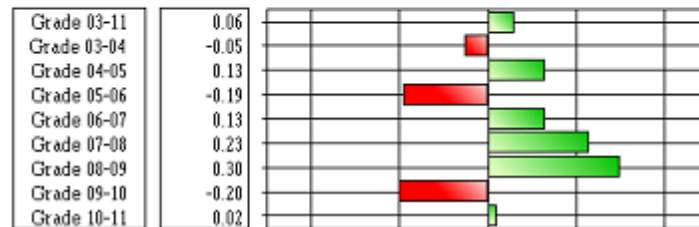
#### Results of Students in Participating Campuses



#### Results of Students in Non-Participating Campuses



#### Analysis of Math Variances between Participating and Non-Participating Campuses



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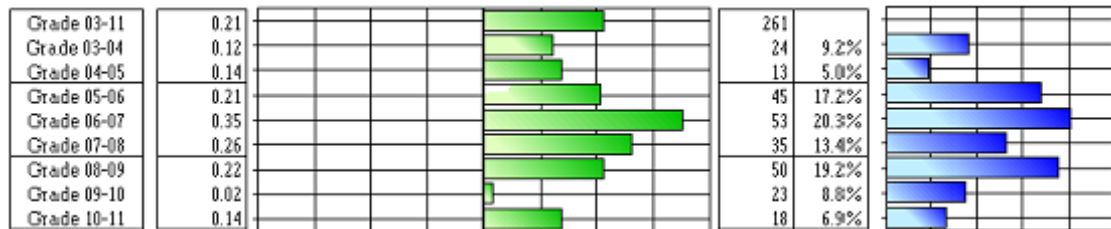
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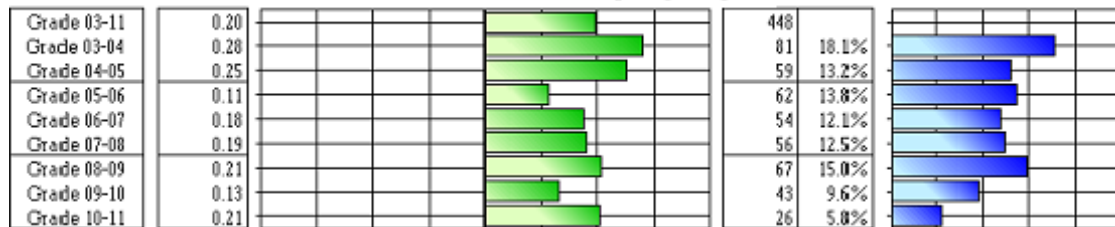
## Case Study

### Review of a Major Corporate Grant (SAT-10)

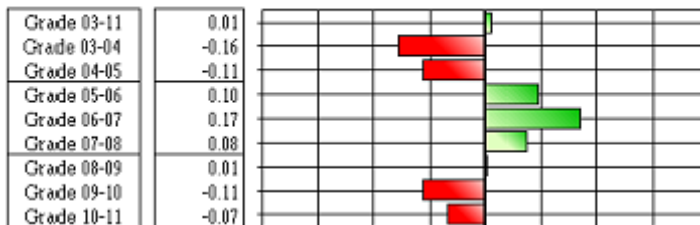
**Results of Students in Participating Campuses**



**Results of Students in Non-Participating Campuses**



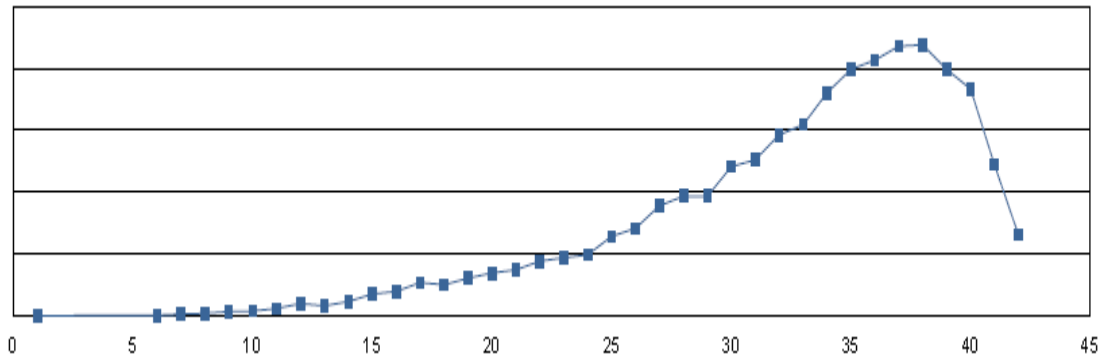
**Analysis of Math Variances between Participating and Non-Participating Campuses**



## Cautions About the Measurement Tool

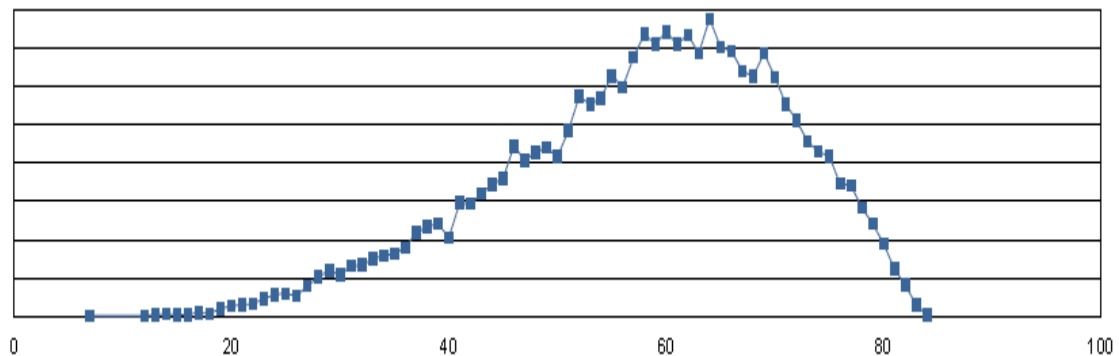
### **TAKS Scores**

(Grade 05 - English Language Arts/Reading)



### **SAT 10 Scores**

(Grade 05 - English Language Arts/Reading)



### **Texas Education Agency on the Texas Growth Index**

The TAKS tests are designed to provide the most information on students near the middle of the distribution and are not designed to provide much information for students who perform at the upper and lower ends of proficiency distribution.

## Summary

- 01. All Performance Models are Wrong!**
- 02.. Some Performance Models Are More Useful Than Others.**
- 03. Growth Adds to Our Understanding of Performance.**
- 04. Growth is not just an Academic Characteristic.**
- 05. Understand the Limitations of the Measurement Tool.**
- 06. Data Used in Performance Models Must Be:**
  - ... More Accurate.**
  - ... More Consistent.**
  - ... More Timely.**



**High performing organizations are always looking for innovative solutions that contribute to both high academic performance and cost-effective operations.**

Academic and Financial Performance Management Review

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**2006-2007 Division I Performance Analysis**

Pass Rates .....	Page 01
Graduation Rates .....	Page 02
SAT Mean Scores .....	Page 03
ACT Mean Scores .....	Page 04
Operating Service Expenditures .....	Page 05
Instructional Service Expenditures .....	Page 06
Leadership Service Expenditures .....	Page 07
Student Service Expenditures .....	Page 08
Non-Student Service Expenditures .....	Page 09

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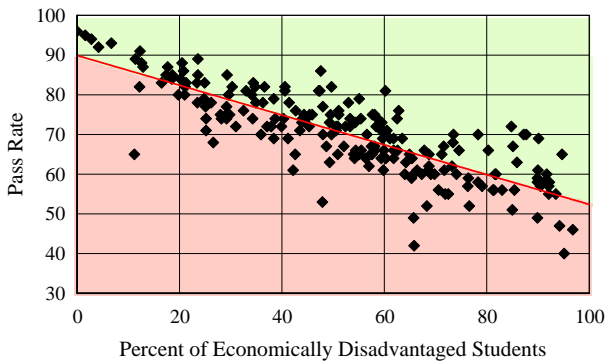
# THE ERG RATINGS

ACADEMIC & FINANCIAL PERFORMANCE MANAGEMENT REVIEW

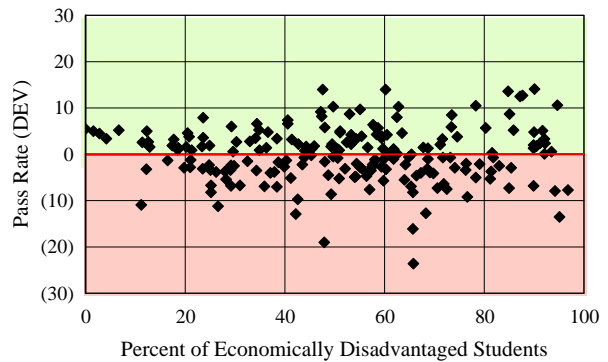
## Performance Analysis - Pass Rates at Panel Recommendation

2006-2007 School Year

Pass Rate Regression Analysis



Pass Rate - Analysis of Variances



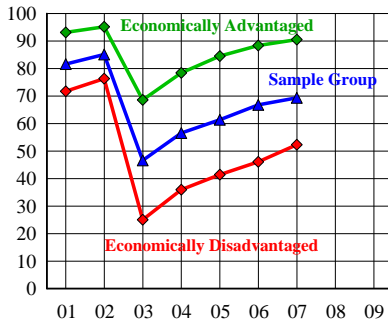
Given the influence that student socio-economic factors have on academic outcomes in public education, conducting an analysis of raw pass rates to evaluate either the quality of a district's leadership or the effectiveness of its programs is inappropriate. Using linear regression analysis techniques to evaluate the performance of a sample group of 200 large school district in Texas (each represented by a dot on the regression analysis), we forecast each district's expected pass rate and analyze the variance between the expected pass rate and the actual pass rate. Using this technique, we "level the playing field" to make the performance evaluation process fair. Districts with a high percent of economically disadvantaged students have an equal chance of being recognized for achieving favorable performance variances as those districts benefiting from a low percent of economically disadvantaged students.

$$\text{Deviation from Expected Value} = \text{Actual Value} - \text{Expected Value}$$

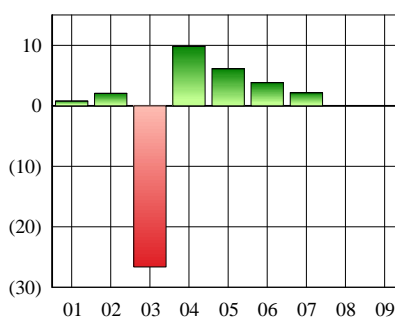
$$\text{Expected Value} = \text{Constant Value} + (\text{Percent of Economically Disadvantaged Students} \times \text{Slope of the Regression Line})$$

While variance analysis offers valuable information about the relative performance of each district, studying the parameters of the regression analysis can offer valuable insight into the general performance of the public education system in Texas.

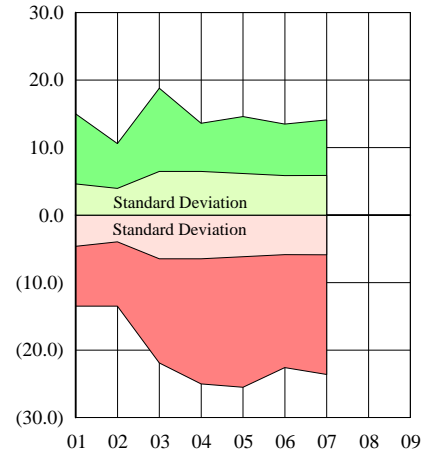
Constant Value (Y-Axis Intercepts)



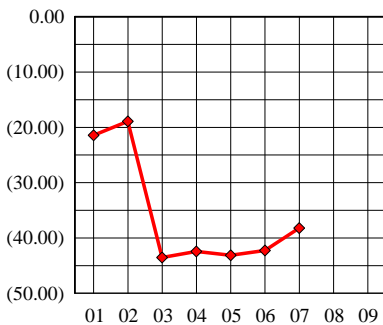
Economically Advantaged Momentum



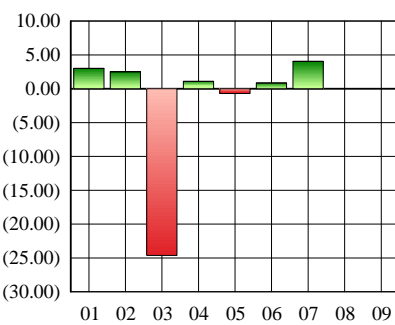
Performance Variance Analysis



Performance Gap Analysis



Performance Gap Momentum



Year	Maximum	Minimum	Std Dev
2001	15.0	(13.5)	4.6
2002	10.6	(13.5)	4.0
2003	18.8	(21.9)	6.5
2004	13.6	(25.0)	6.5
2005	14.6	(25.5)	6.2
2006	13.5	(22.6)	5.9
2007	14.1	(23.6)	5.9
2008			
2009			

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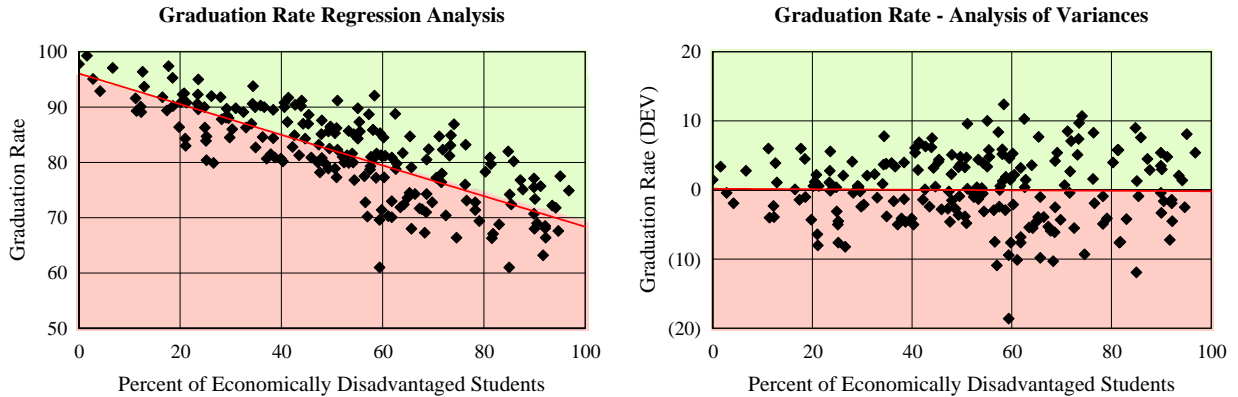
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## Performance Analysis - Graduation Rates

2006-2007 School Year

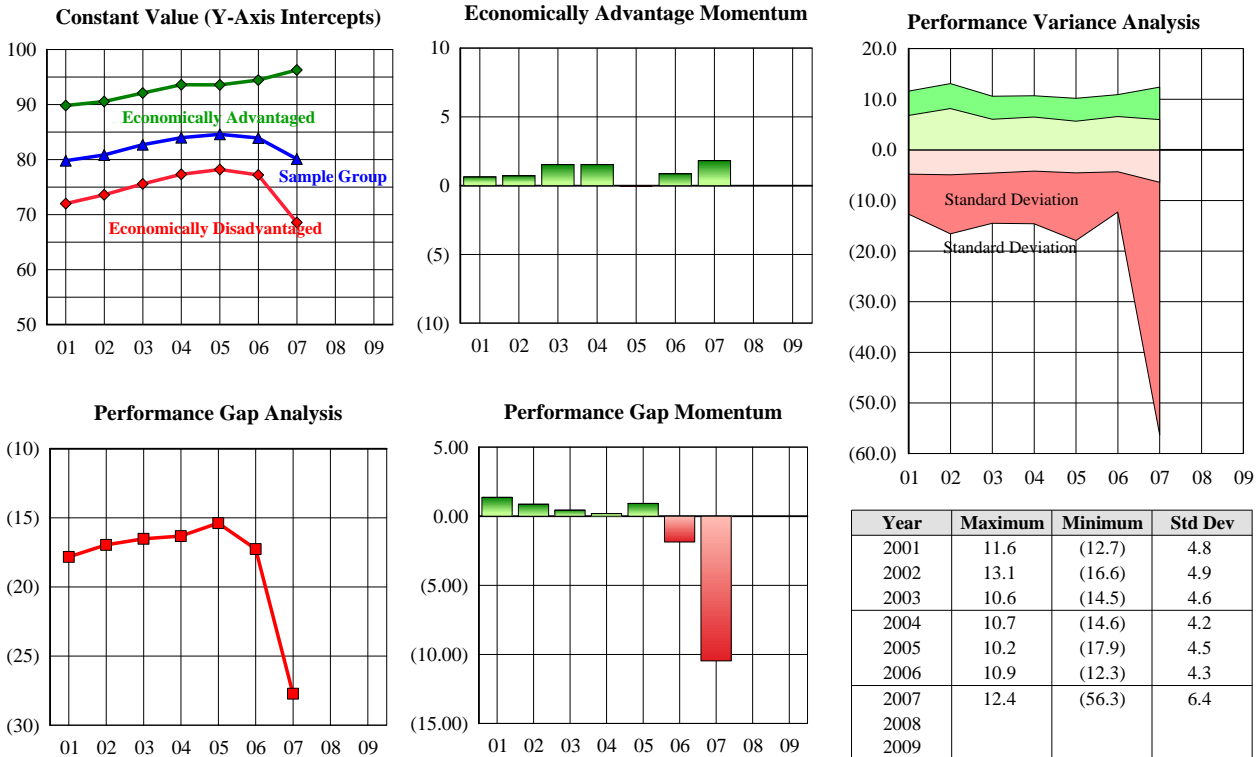


Given the influence that student socio-economic factors have on academic outcomes in public education, conducting an analysis of raw graduation rates to evaluate either the quality of a district's leadership or the effectiveness of its programs is inappropriate. Using linear regression analysis techniques to evaluate the performance of a sample group of 200 large school district in Texas (each represented by a dot on the regression analysis), we forecast each district's expected graduation rate and analyze the variance between the expected graduation rate and the actual graduation rate. Using this technique, we "level the playing field" to make the performance evaluation process fair. Districts with a high percent of economically disadvantaged students have an equal chance of being recognized for achieving favorable performance variances as those districts benefiting from a low percent of economically disadvantaged students.

**Deviation from Expected Value = Actual Value - Expected Value**

**Expected Value = Constant Value + (Percent of Economically Disadvantaged Students x Slope of the Regression Line)**

While variance analysis offers valuable information about the relative performance of each district, studying the parameters of the regression analysis can offer valuable insight into the general performance of the public education system in Texas.

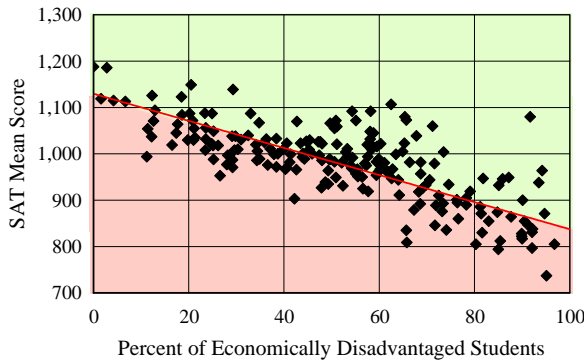


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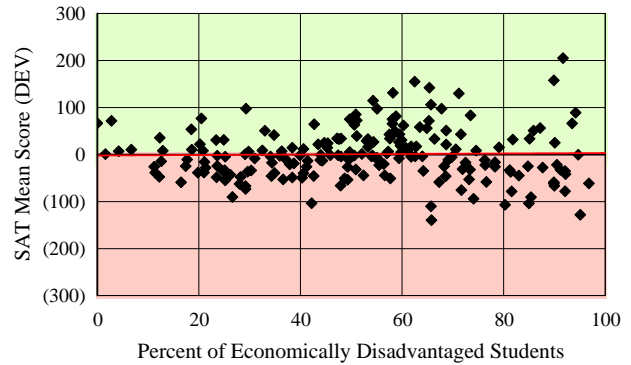
## Performance Analysis - SAT Mean Scores

2006-2007 School Year

**SAT Mean Scores Regression Analysis**



**SAT Mean Scores - Analysis of Variances**



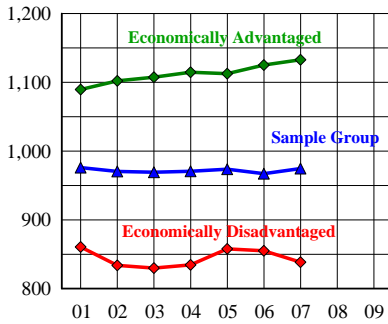
Given the influence that student socio-economic factors have on academic outcomes in public education, conducting an analysis of raw SAT mean scores to evaluate either the quality of a district's leadership or the effectiveness of its programs is inappropriate. Using linear regression analysis techniques to evaluate the performance of a sample group of 200 large school district in Texas (each represented by a dot on the regression analysis), we forecast each district's expected SAT mean scores and analyze the variance between the expected SAT mean scores and the actual SAT mean scores. Using this technique, we "level the playing field" to make the performance evaluation process fair. Districts with a high percent of economically disadvantaged students have an equal chance of being recognized for achieving favorable performance variances as those districts benefiting from a low percent of economically disadvantaged students.

**Deviation from Expected Value = Actual Value - Expected Value**

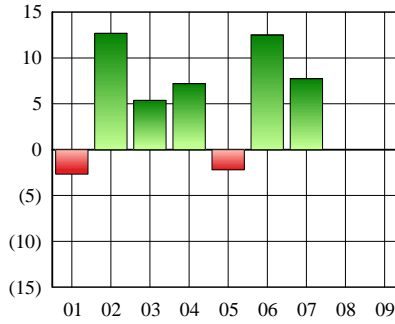
**Expected Value = Constant Value + (Percent of Economically Disadvantaged Students x Slope of the Regression Line)**

While variance analysis offers valuable information about the relative performance of each district, studying the parameters of the regression analysis can offer valuable insight into the general performance of the public education system in Texas.

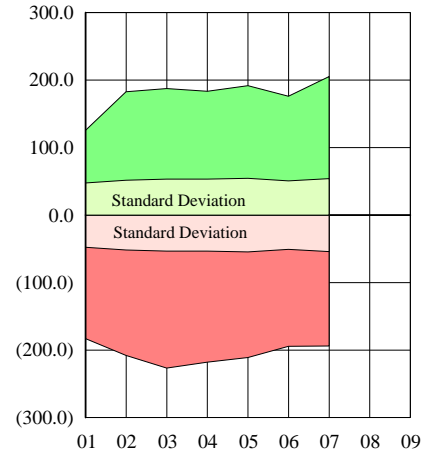
**Constant Value (Y-Axis Intercept)**



**Economically Advantaged Momentum**



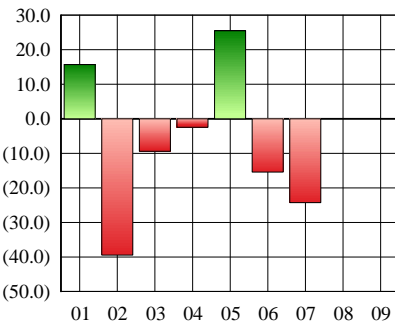
**Performance Variance Analysis**



**Performance Gap Analysis**



**Performance Gap Momentum**

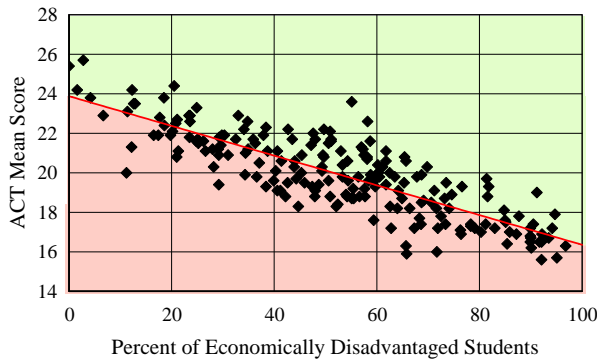


Year	Maximum	Minimum	Std Dev
2001	125.7	(135.5)	47.5
2002	182.8	(156.1)	51.7
2003	187.4	(173.1)	53.4
2004	183.5	(164.5)	53.3
2005	191.7	(156.5)	54.4
2006	176.2	(143.6)	50.7
2007	205.3	(139.7)	54.2
2008			
2009			

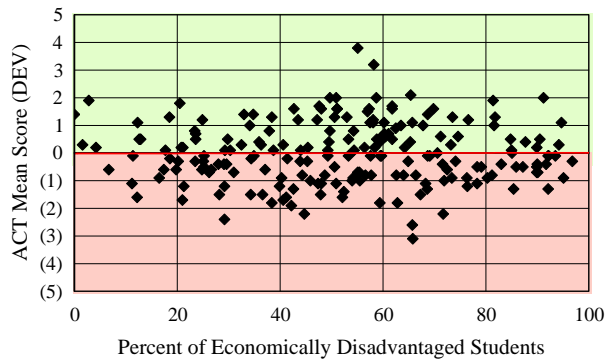
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## Performance Analysis - ACT Mean Scores 2006-2007 School Year

**ACT Mean Scores Regression Analysis**



**ACT Mean Scores - Analysis of Variances**



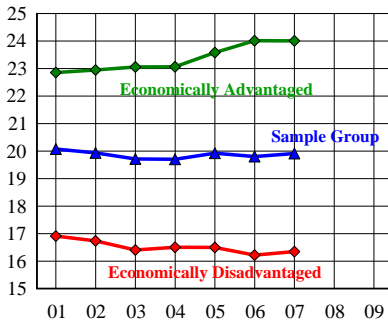
Given the influence that student socio-economic factors have on academic outcomes in public education, conducting an analysis of raw ACT mean scores to evaluate either the quality of a district's leadership or the effectiveness of its programs is inappropriate. Using linear regression analysis techniques to evaluate the performance of a sample group of 200 large school district in Texas (each represented by a dot on the regression analysis), we forecast each district's expected ACT mean scores and analyze the variance between the expected ACT mean scores and the actual ACT mean scores. Using this technique, we "level the playing field" to make the performance evaluation process fair. Districts with a high percent of economically disadvantaged students have an equal chance of being recognized for achieving favorable performance variances as those districts benefiting from a low percent of economically disadvantaged students.

**Deviation from Expected Value = Actual Value - Expected Value**

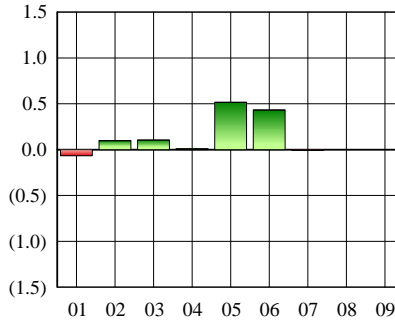
**Expected Value = Constant Value + (Percent of Economically Disadvantaged Students x Slope of the Regression Line)**

While variance analysis offers valuable information about the relative performance of each district, studying the parameters of the regression analysis can offer valuable insight into the general performance of the public education system in Texas.

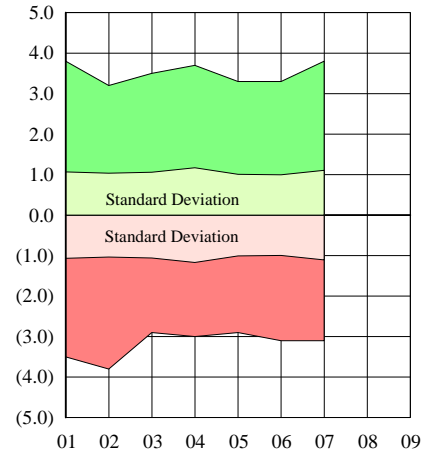
**Constant Value (Y-Axis Intercept)**



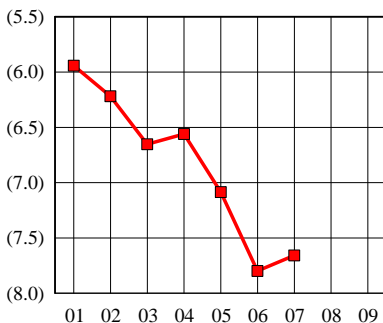
**Economically Advantaged Momentum**



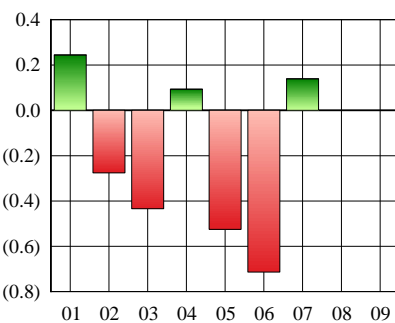
**Performance Variance Analysis**



**Performance Gap Analysis**



**Performance Gap Momentum**

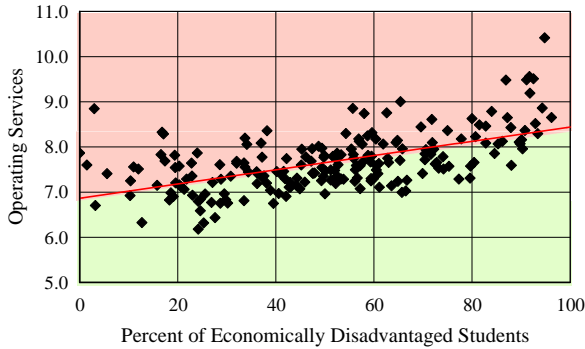


Year	Maximum	Minimum	Std Dev
2001	3.8	(3.5)	1.07
2002	3.2	(3.8)	1.04
2003	3.5	(2.9)	1.06
2004	3.7	(3.0)	1.17
2005	3.3	(2.9)	1.01
2006	3.3	(3.1)	1.00
2007	3.8	24.0	1.11
2008			
2009			

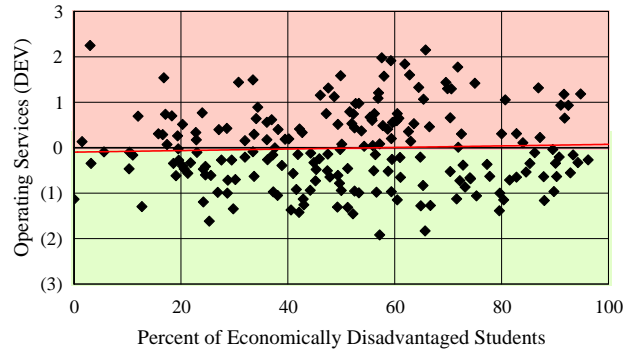
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## Performance Analysis - Total Operating Services Costs 2006-2007 School Year

**Operating Services Regression Analysis**



**Operating Services Analysis of Variances**



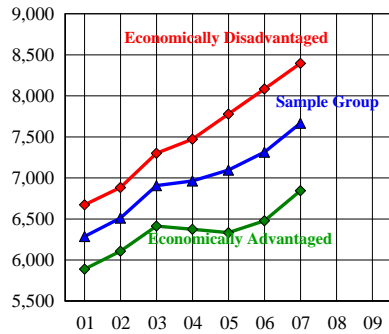
Given the influence that student socio-economic factors have on academic outcomes in public education, conducting an analysis of raw expenditure data to evaluate either the quality of a district's leadership or the effectiveness of its programs is inappropriate. Using linear regression analysis techniques to evaluate the performance of a sample group of 200 large school district in Texas (each represented by a dot on the regression analysis), we forecast each district's expected expenditures and analyze the variance between the expected expenditures and the actual expenditures. Using this technique, we "level the playing field" to make the performance evaluation process fair. Districts with a high percent of economically disadvantaged students have an equal chance of being recognized for achieving favorable performance variances as those districts benefiting from a low percent of economically disadvantaged students.

**Deviation from Expected Value = Actual Value - Expected Value**

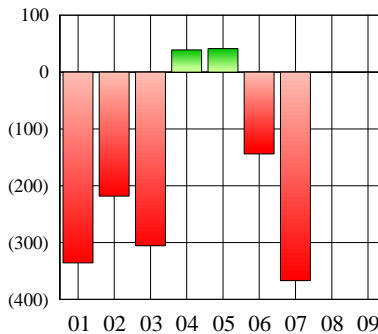
**Expected Value = Constant Value + (Percent of Economically Disadvantaged Students x Slope of the Regression Line)**

While variance analysis offers valuable information about the relative performance of each district, studying the parameters of the regression analysis can offer valuable insight into the general performance of the public education system in Texas.

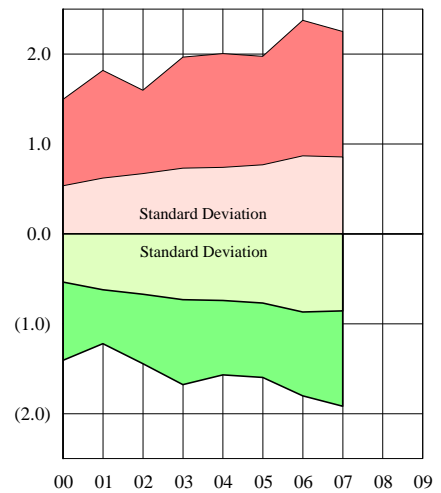
**Constant Value (Y-Axis Intercept)**



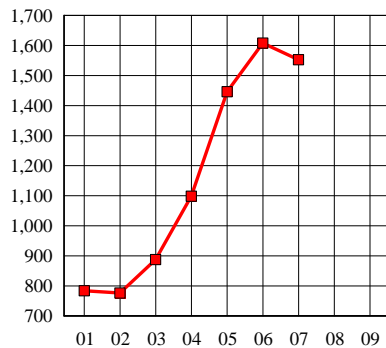
**Economically Advantaged Momentum**



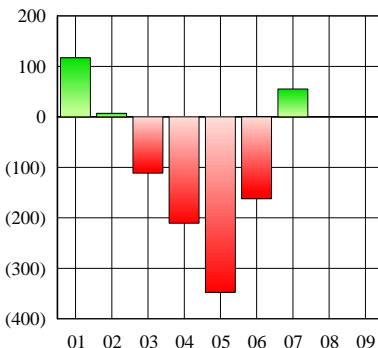
**Performance Variance Analysis**



**Performance Gap Analysis**



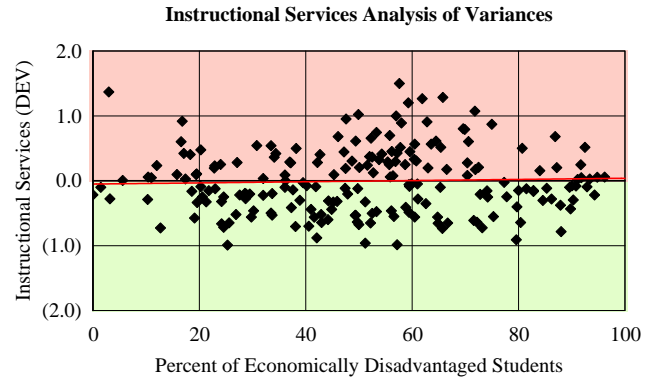
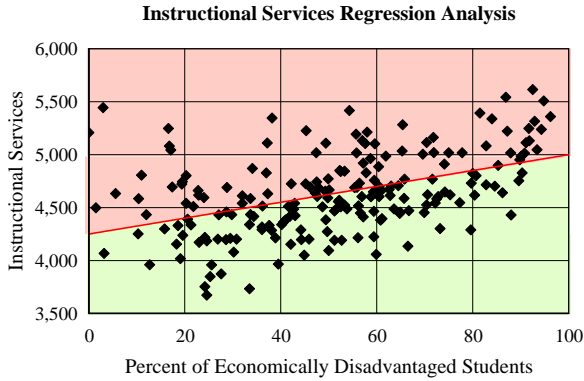
**Performance Gap Momentum**



Year	Minimum	Maximum	Std Dev
2001	(1,221.90)	1,819.20	621.82
2002	(1,443.80)	1,597.60	671.05
2003	(1,677.20)	1,967.00	732.45
2004	(1,568.40)	2,005.50	739.89
2005	(1,597.10)	1,975.00	768.50
2006	(1,801.10)	2,376.60	867.97
2007	(1,916.60)	2,251.30	856.39
2008			
2009			

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## Performance Analysis - Instructional Services Costs 2005-2006 School Year

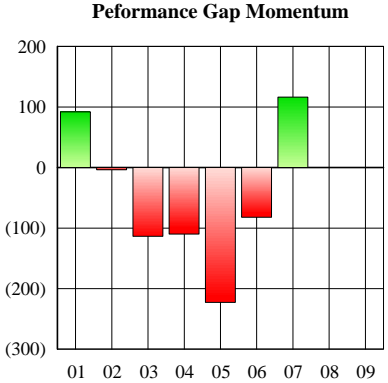
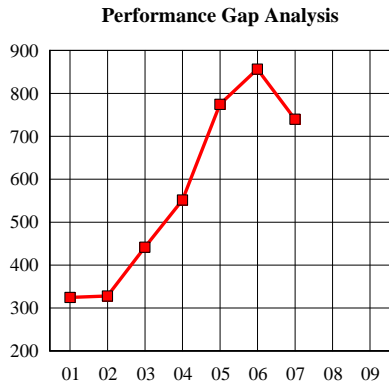
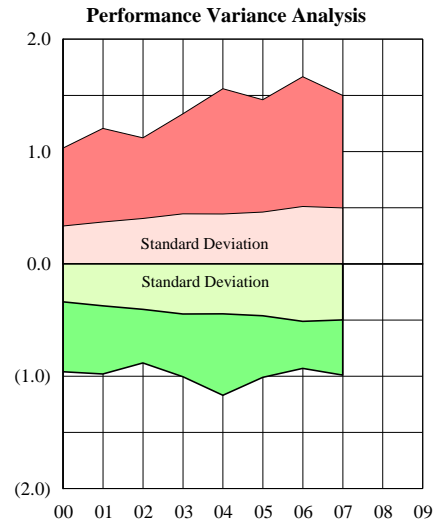
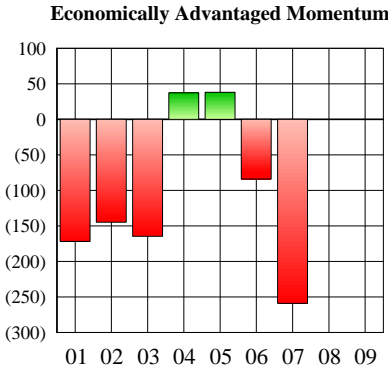
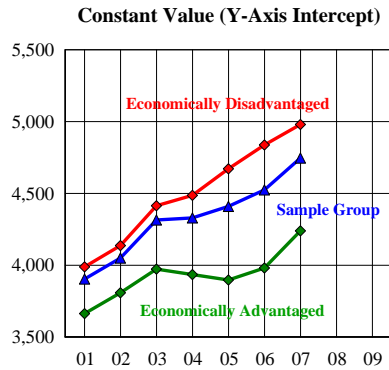


Given the influence that student socio-economic factors have on academic outcomes in public education, conducting an analysis of raw expenditure data to evaluate either the quality of a district's leadership or the effectiveness of its programs is inappropriate. Using linear regression analysis techniques to evaluate the performance of a sample group of 200 large school district in Texas (each represented by a dot on the regression analysis), we forecast each district's expected expenditures and analyze the variance between the expected expenditures and the actual expenditures. Using this technique, we "level the playing field" to make the performance evaluation process fair. Districts with a high percent of economically disadvantaged students have an equal chance of being recognized for achieving favorable performance variances as those districts benefiting from a low percent of economically disadvantaged students.

**Deviation from Expected Value = Actual Value - Expected Value**

**Expected Value = Constant Value + (Percent of Economically Disadvantaged Students x Slope of the Regression Line)**

While variance analysis offers valuable information about the relative performance of each district, studying the parameters of the regression analysis can offer valuable insight into the general performance of the public education system in Texas.

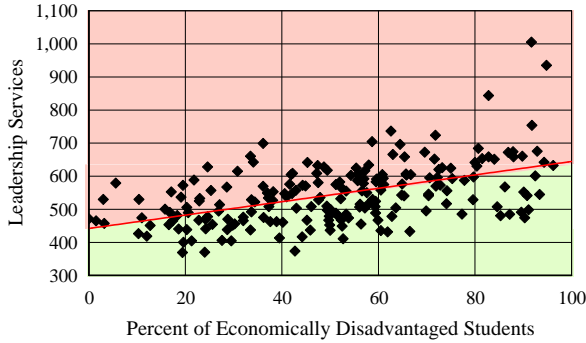


Year	Minimum	Maximum	Std Dev
2001	(980.10)	1,206.50	372.69
2002	(880.80)	1,122.20	404.66
2003	(1,003.30)	1,335.80	445.08
2004	(1,169.40)	1,558.60	444.98
2005	(1,010.20)	1,460.40	461.19
2006	(930.00)	1,666.70	511.37
2007	(990.10)	1,500.00	498.86
2008			
2009			

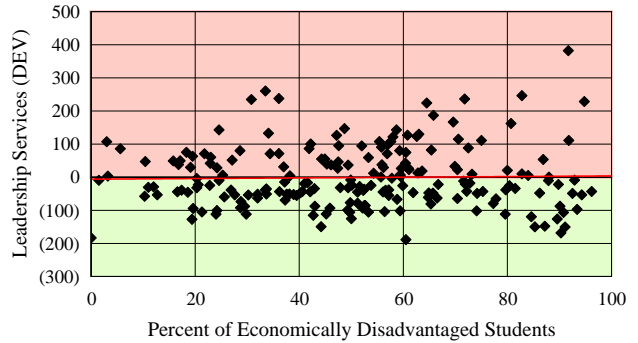
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## Performance Analysis - Leadership Services Costs 2005-2006 School Year

**Leadership Services Regression Analysis**



**Leadership Services Analysis of Variances**



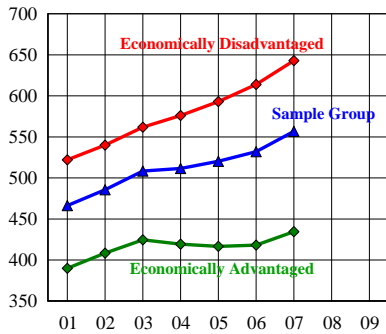
Given the influence that student socio-economic factors have on academic outcomes in public education, conducting an analysis of raw expenditure data to evaluate either the quality of a district's leadership or the effectiveness of its programs is inappropriate. Using linear regression analysis techniques to evaluate the performance of a sample group of 200 large school district in Texas (each represented by a dot on the regression analysis), we forecast each district's expected expenditures and analyze the variance between the expected expenditures and the actual expenditures. Using this technique, we "level the playing field" to make the performance evaluation process fair. Districts with a high percent of economically disadvantaged students have an equal chance of being recognized for achieving favorable performance variances as those districts benefiting from a low percent of economically disadvantaged students.

**Deviation from Expected Value = Actual Value - Expected Value**

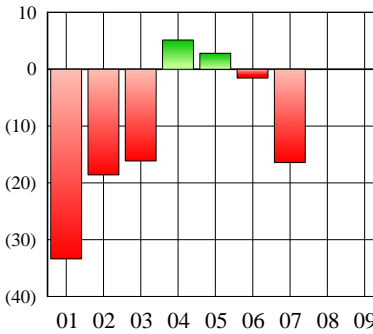
**Expected Value = Constant Value + (Percent of Economically Disadvantaged Students x Slope of the Regression Line)**

While variance analysis offers valuable information about the relative performance of each district, studying the parameters of the regression analysis can offer valuable insight into the general performance of the public education system in Texas.

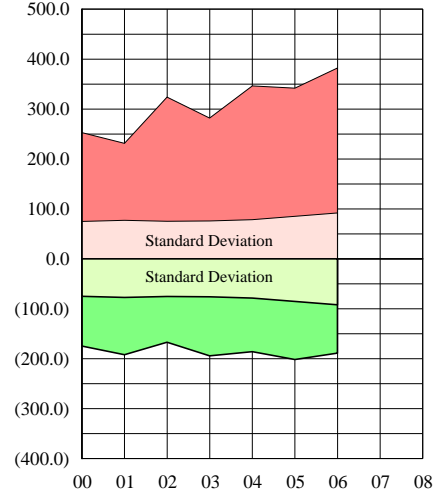
**Constant Value (Y-Axis Intercept)**



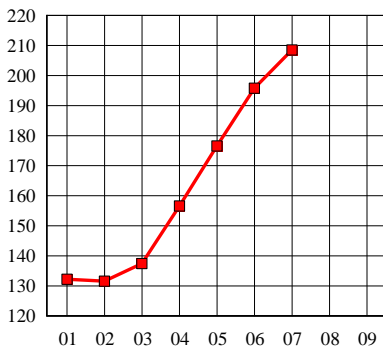
**Economically Advantaged Momentum**



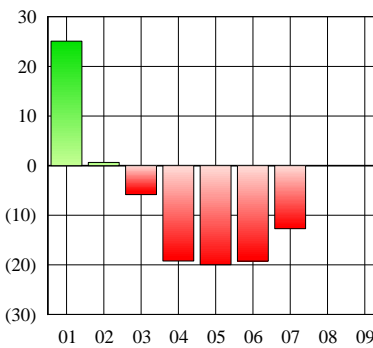
**Performance Variance Analysis**



**Performance Gap Analysis**



**Performance Gap Momentum**



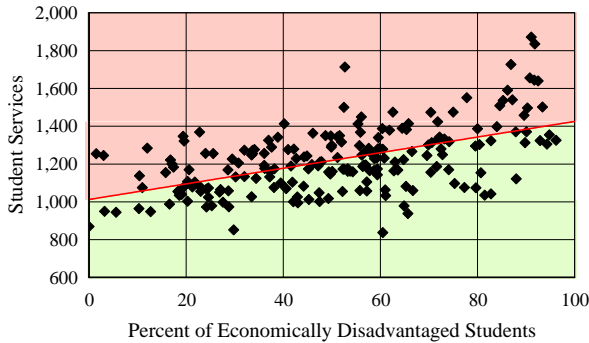
Year	Mimimum	Maximum	Std Dev
2001	(174.70)	252.70	74.86
2002	(191.90)	231.20	77.09
2003	(166.90)	323.90	75.27
2004	(194.00)	281.90	75.92
2005	(185.70)	346.30	78.47
2006	(201.50)	341.90	85.22
2007	(188.60)	382.10	91.87
2008			
2009			

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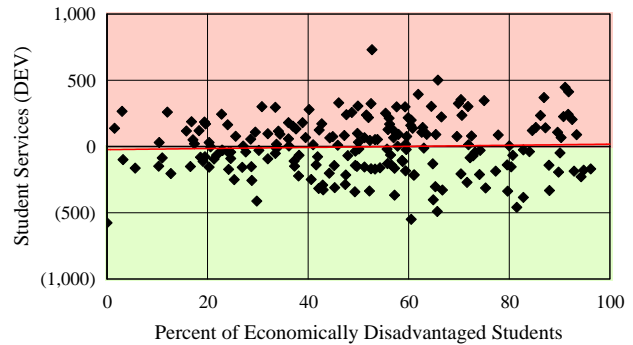


## Performance Analysis - Student Services Costs 2005-2006 School Year

**Student Services Regression Analysis**



**Student Services Analysis of Variances**



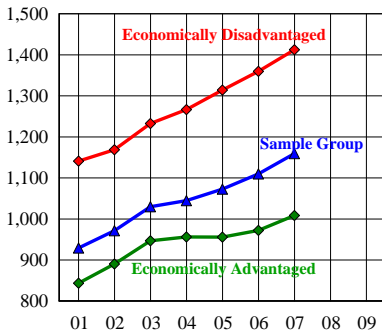
Given the influence that student socio-economic factors have on academic outcomes in public education, conducting an analysis of raw expenditure data to evaluate either the quality of a district's leadership or the effectiveness of its programs is inappropriate. Using linear regression analysis techniques to evaluate the performance of the 200 largest school district in Texas (each represented by a dot on the regression analysis), we forecast each district's expected expenditures and analyze the variance between the expected expenditures and the actual expenditures. Using this technique, we "level the playing field" to make the performance evaluation process fair. Districts with a high percent of economically disadvantaged students have an equal chance of being recognized for achieving favorable performance variances as those districts benefiting from a low percent of economically disadvantaged students.

**Deviation from Expected Value = Actual Value - Expected Value**

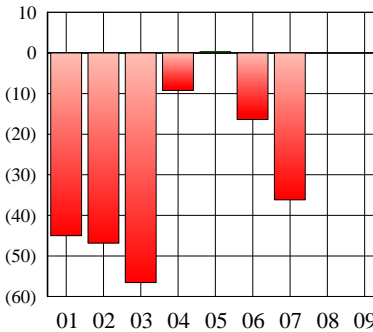
**Expected Value = Constant Value + (Percent of Economically Disadvantaged Students x Slope of the Regression Line)**

While variance analysis offers valuable information about the relative performance of each district, studying the parameters of the regression analysis can offer valuable insight into the general performance of the public education system in Texas.

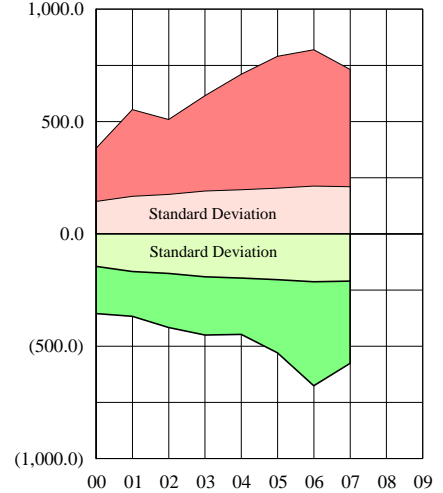
**Constant Value (Y-Axis Intercept)**



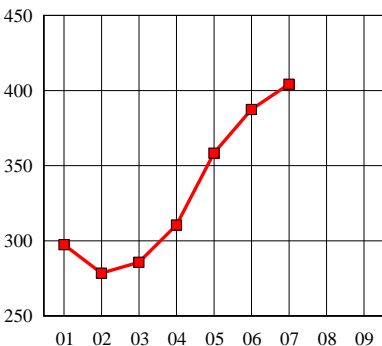
**Economically Advantaged Momentum**



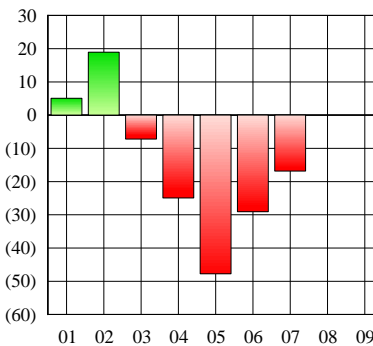
**Performance Variance Analysis**



**Performance Gap Analysis**



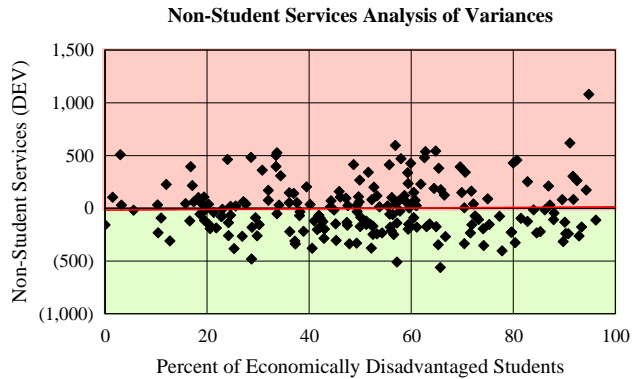
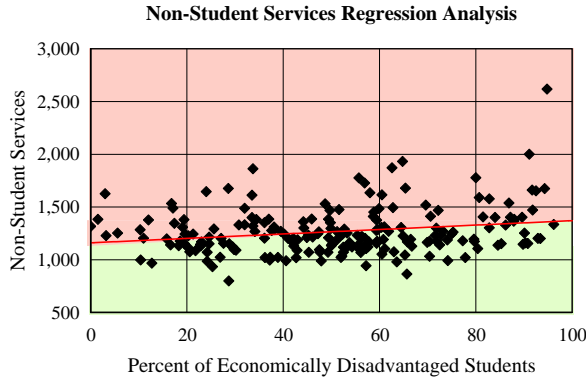
**Performance Gap Momentum**



Year	Minimum	Maximum	Std Dev
2001	(366.80)	553.10	167.23
2002	(416.30)	509.00	175.68
2003	(450.10)	615.30	190.94
2004	(447.00)	710.90	196.77
2005	(529.10)	790.10	203.58
2006	(675.90)	819.20	212.87
2007	(575.70)	731.60	210.23
2008			
2009			

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## Performance Analysis - Non-Student Services Costs 2005-2006 School Year



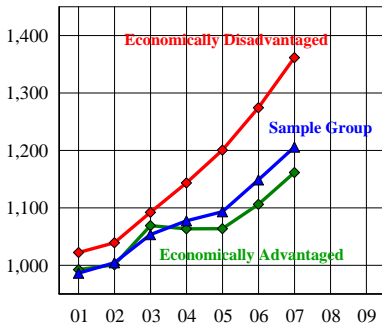
Given the influence that student socio-economic factors have on academic outcomes in public education, conducting an analysis of raw expenditure data to evaluate either the quality of a district's leadership or the effectiveness of its programs is inappropriate. Using linear regression analysis techniques to evaluate the performance of a sample group of 200 large school district in Texas (each represented by a dot on the regression analysis), we forecast each district's expected expenditures and analyze the variance between the expected expenditures and the actual expenditures. Using this technique, we "level the playing field" to make the performance evaluation process fair. Districts with a high percent of economically disadvantaged students have an equal chance of being recognized for achieving favorable performance variances as those districts benefiting from a low percent of economically disadvantaged students.

**Deviation from Expected Value = Actual Value - Expected Value**

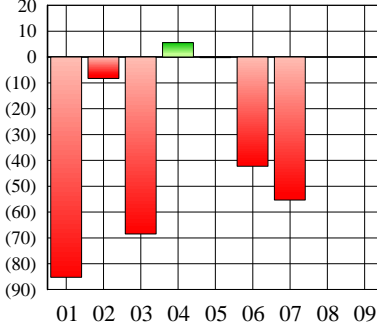
**Expected Value = Constant Value + (Percent of Economically Disadvantaged Students x Slope of the Regression Line)**

While variance analysis offers valuable information about the relative performance of each district, studying the parameters of the regression analysis can offer valuable insight into the general performance of the public education system in Texas.

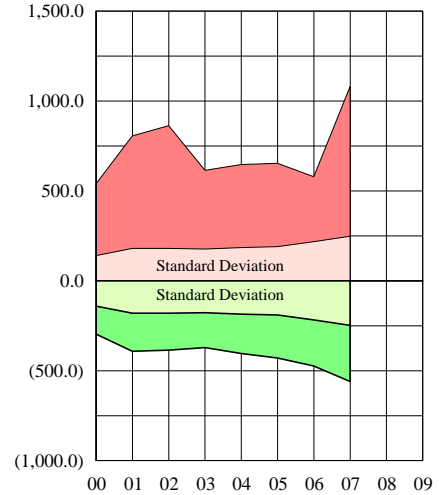
**Constant Value (Y-Axis Intercept)**



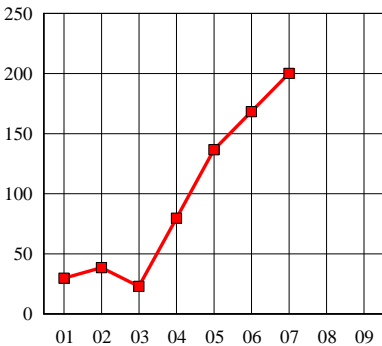
**Economically Advantaged Momentum**



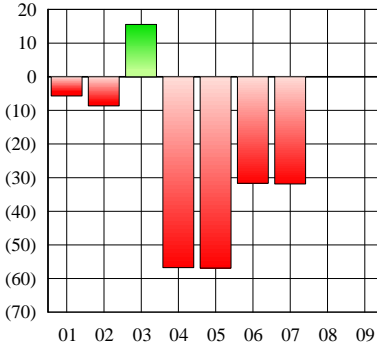
**Performance Variance Analysis**



**Performance Gap Analysis**



**Performance Gap Momentum**



Year	Minimum	Maximum	Std Dev
2001	(391.80)	806.10	180.27
2002	(385.80)	863.60	180.27
2003	(370.90)	614.60	177.27
2004	(404.00)	647.00	185.30
2005	(429.00)	654.00	189.94
2006	(473.30)	579.10	217.56
2007	(560.10)	1,080.80	247.80
2008			
2009			

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