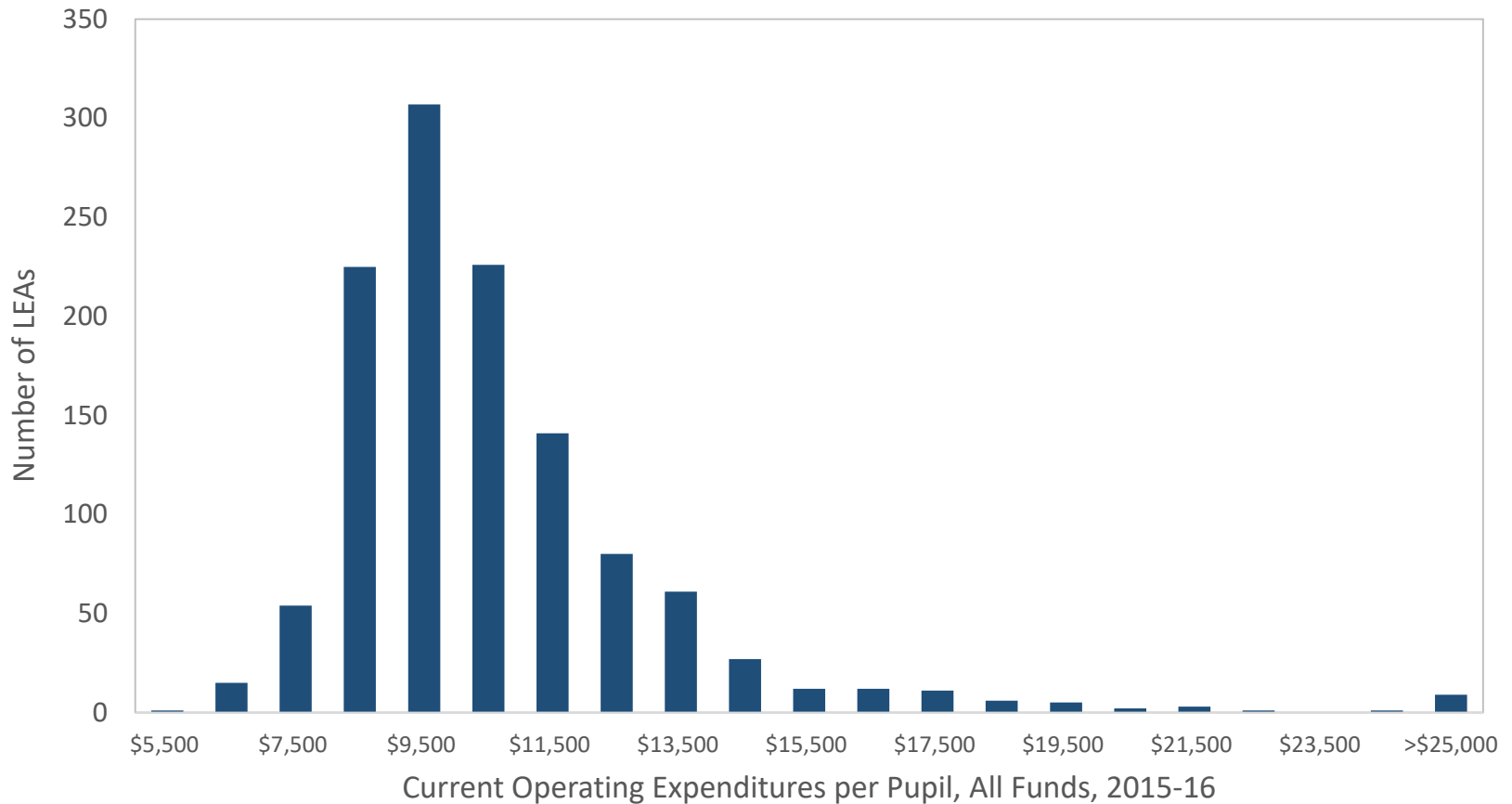


# School Finance: Incentives and Foundations

a presentation to  
the Texas Commission on Public School Finance  
by Lori L. Taylor  
Director, Mosbacher Institute TAMU  
Principal Investigator, Texas Smart Schools Initiative  
February 8, 2018

# Spending Differs from District to District



# Why Does Spending Differ?

- Differences in outcomes
- Differences in costs
  - Student needs
  - Input prices
  - Economies of scale
- Differences in efficiency

# Differences in Outcomes

- Some districts are producing higher levels of core student outcomes
- Some districts are providing enrichments other districts do not provide

# Differences in Costs: Student Need

- Near consensus in the literature that it costs more to serve students who are
  - Economically disadvantaged (ED)
  - English language learners (ELL)
  - Special education
- No consensus as to how much more

# What the Literature Says About Cost

- Economically Disadvantaged
  - Less than 1% additional funding needed
    - Reschovsky and Imazeki (2001)
  - More than 100% additional funding needed
    - Duncombe and Yinger (2005)
- English Language Learners
  - No additional funding needed
    - Duncombe, Lukemeyer, and Yinger (2008)
  - More than 400% additional funding needed
    - Duncombe and Yinger (1998)

# Why are the ED Cost Estimates so Varied?

- Student poverty not well measured
  - The poverty level income is the same in New York City as in Dalhart, Texas, even though the costs of living are very different
- Being identified as economically disadvantaged means something very different in NYC than in Texas
- Being identified as economically disadvantaged means something different in Houston than in rural Texas

# Why are the ELL Cost Estimates so Varied?

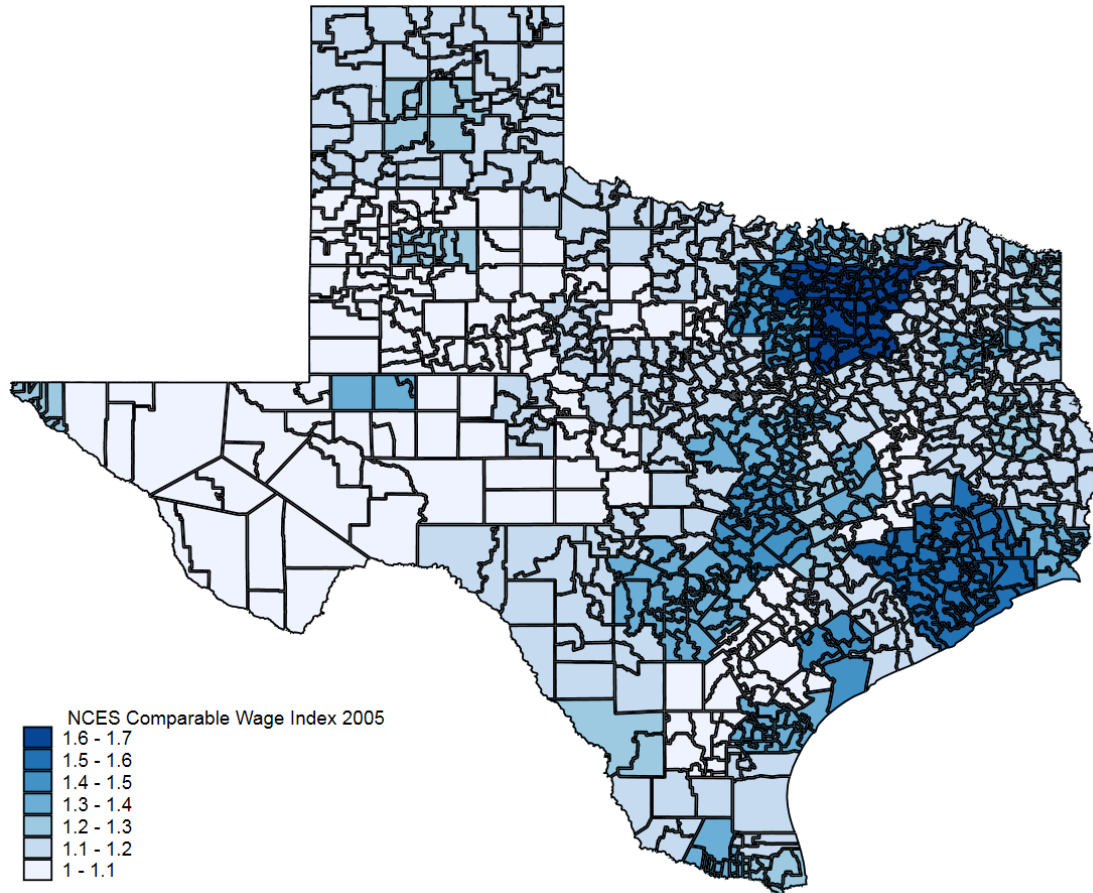
- A student who is ELL in high school likely has greater needs than a student who is ELL in kindergarten
- States where nearly all the ELL students share a common language may have a cost advantage over other states
- A general lack of economies of scale can make for greater cost in some states and districts



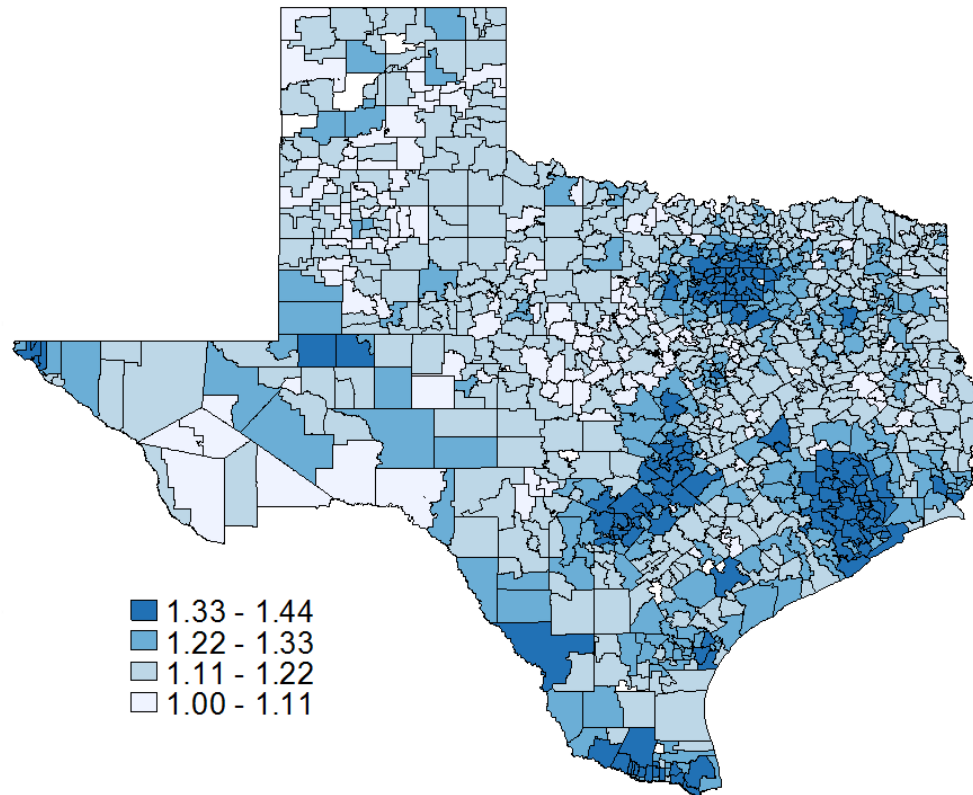
# Differences in Costs: Input Prices

- Payroll is 78% of current operating expenditures in Texas
- The price of labor is higher in some parts of the state than in other parts

# The NCES Comparable Wage Index



# Teacher Salary Index, 2013-14

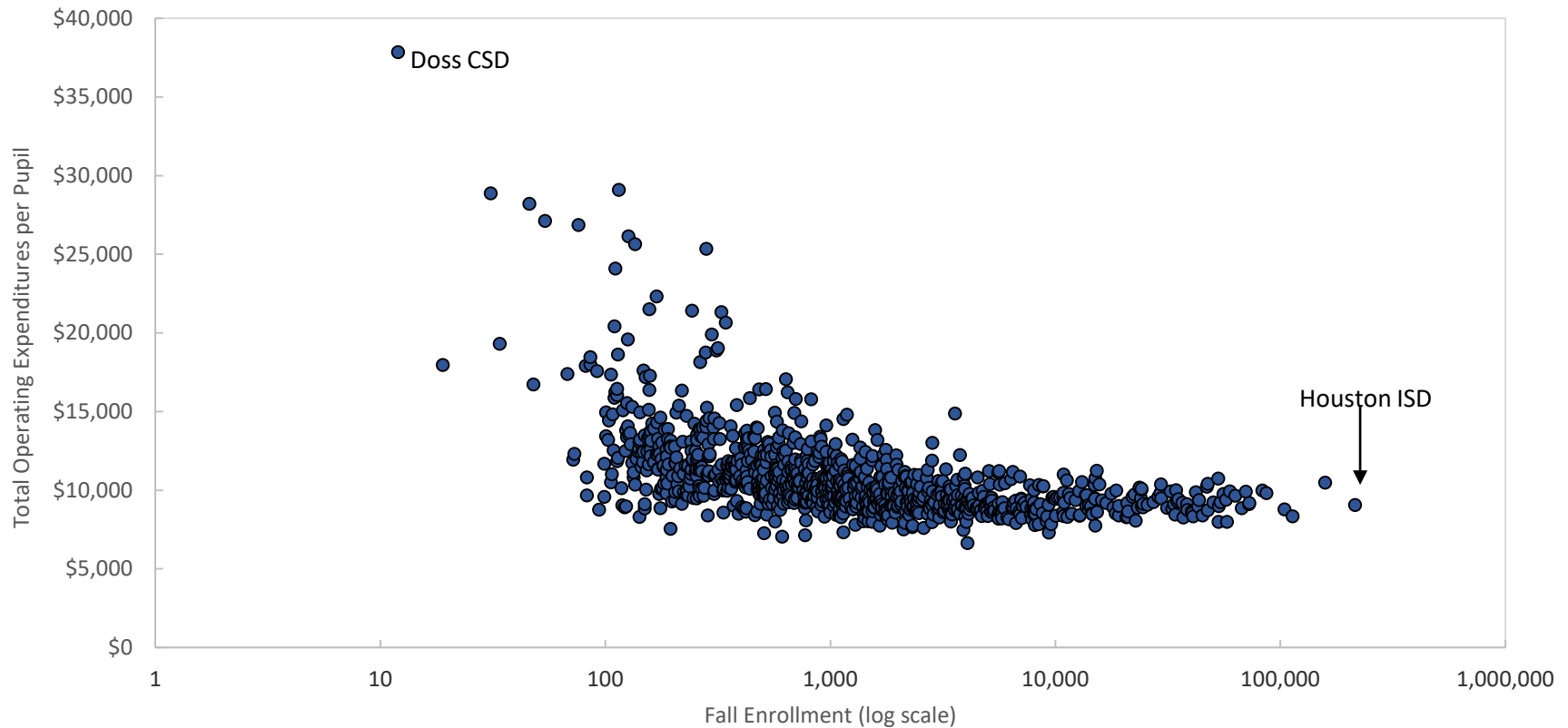


Source: Texas Public Education Information Management System (PEIMS) data and author's calculations

# Differences in Costs: Scale

- The per-pupil cost of operating a small *district* is much higher than the per-pupil cost of operating a larger one
- The per-pupil cost of operating a small *school* is also much higher than the per-pupil cost of operating a larger one

# Total Operating Expenditures per Pupil for Traditional Public School Districts, All Funds, 2015-16

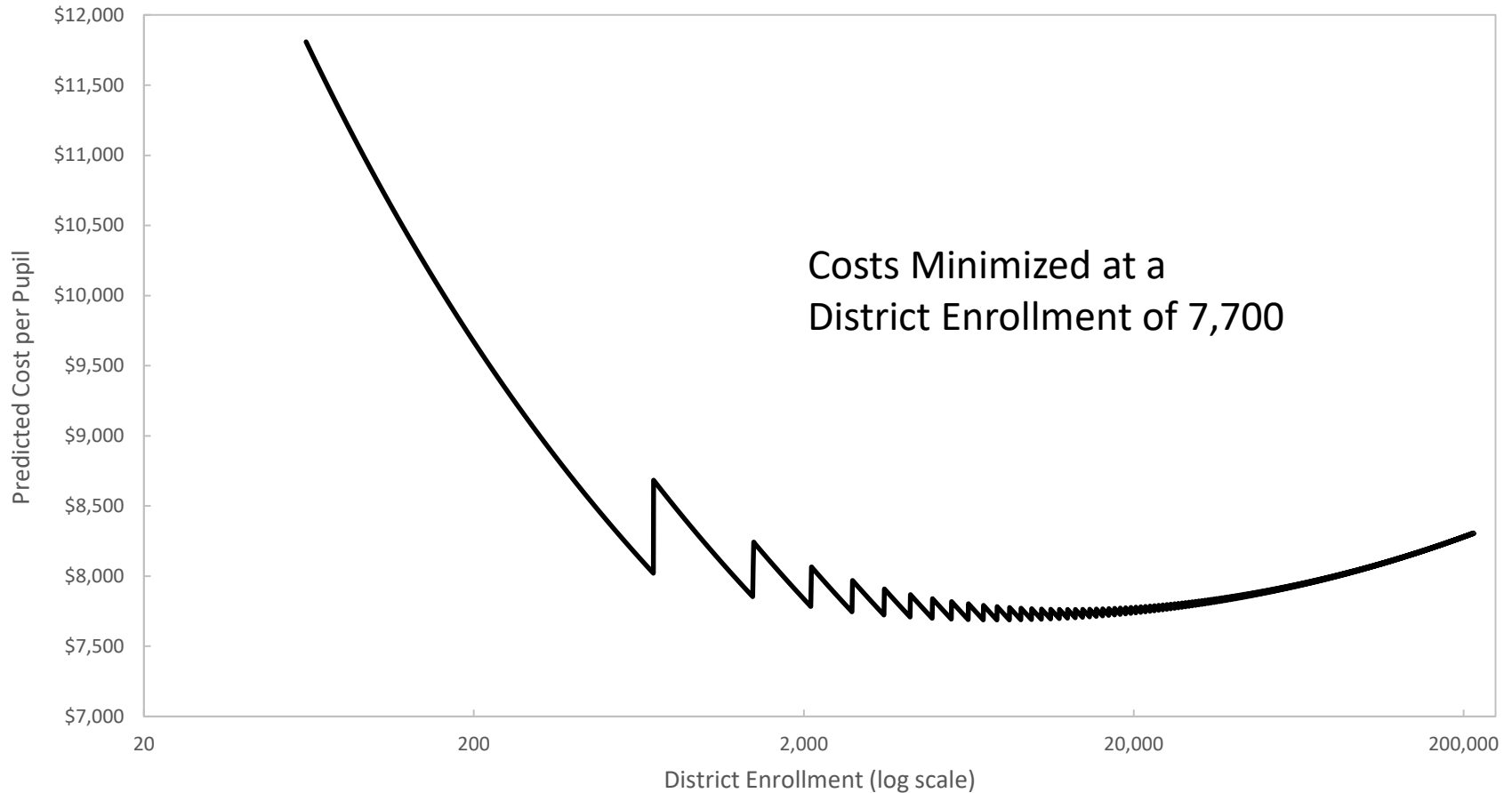


Source: Texas Education Agency (2017).

# 2017 Consolidation Study

- There are substantial economies of scale in Texas at the district level

# Per Pupil Cost and School District Enrollment, Holding Campus Size at or Below Roughly the State Average



# 2017 Consolidation Study

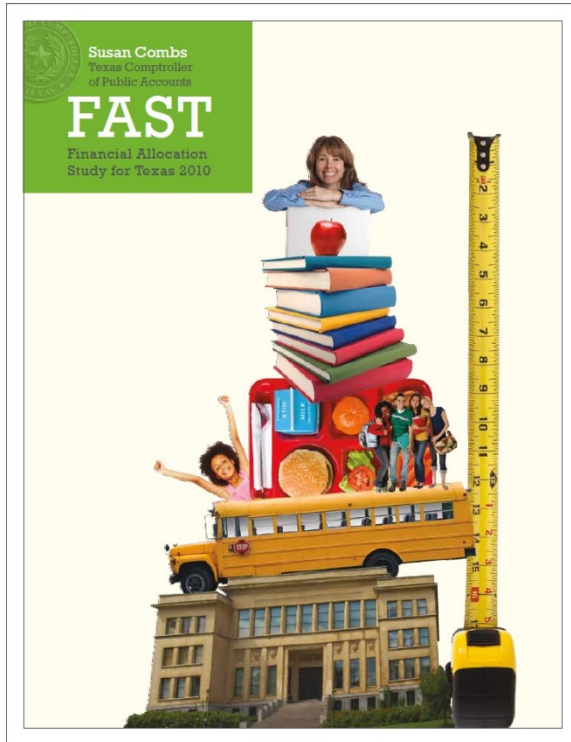
- There are substantial economies of scale in Texas at the district level
- There are also substantial economies of scale at the school level
  - A 200-student campus costs 14% more to operate than a 400-student campus
- Reduced choice would lead to increased inefficiency and thereby increased spending



# Differences in Efficiency

- Some school districts accomplish more than others with lower levels of spending
- Adopting best practices could substantially lower operating expenditures
- The Texas Smart Schools Initiative (TSS) helps identify best practitioners
  - [www.txsmartschools.org](http://www.txsmartschools.org)

# TSS Origins and History



- In 2009 the Texas legislature directed the Texas Comptroller of Public Accounts to “identify school districts and campuses that use resource allocation practices that contribute to high academic achievement and cost-effective operations”
- Former comptroller, Susan Combs, and her team developed the Financial Allocation Study for Texas (FAST) to meet that challenge
- The Texas Smart Schools Initiative was initially funded by Susan Combs to build on and improve the work started by FAST



| Highlighting success in two dimensions: Academic Progress and Cost-Effective Finances

HOME ABOUT Apples2Apples RESULTS HIGHLIGHTS HELP CONTACT



### Searching for Success

TXSmartSchools uses academic, financial, and demographic data to identify school districts and campuses that produce high academic achievement while also maintaining cost-effective operations.

We hope that school districts and education policymakers will use this information to identify Texas schools worth emulating—those facing similar challenges and spending similar dollars but that are able to achieve great things.



### Compare Schools Easily

The heart of the TXSmartSchools website is the *Apples2Apples* data exploration tool that enables you to interact with Texas public school and district data.

Just pick any Texas school or district — or several schools and districts — and *Apples2Apples* will retrieve the data and suggest fiscal peers for comparison.



### TXSmartSchools News

Welcome to TXSmartSchools.org, a resource for Texans interested in school effectiveness and efficiency.

11/21/2017

**Texas Smart Schools to Present at National Education Conference**—The Texas Smart Schools Initiative has been recognized for its work on school fiscal responsibility with an invitation to Dr. Lori Taylor, Principal Investigator for the project, to present at the 2017 National Summit on Education Reform in Nashville, TN.

9/15/2017

How well do we understand the



Texas Smart Schools Initiative  
TXSmartSchools.org

# Measuring Academic Progress

- Value added measure of student gains on the Texas accountability instruments
  - STAAR exams
  - End of Course (EOC) exams
- Adjusted for differences in prior performance and key student characteristics
  - Grade level, sex, race/ethnicity
  - Free or reduced-price lunch status, LEP status, special education status, and gifted and talented status

# Measuring Real Expenditures

- Each school or district has a unique set of fiscal peers that are its nearest-neighbor matches on key dimensions of educational cost
  - Size
  - Labor cost
  - Student need
- Spending at the school and district level measured relative to those fiscal peers
  - Very large districts measured relative to other large districts
  - Very small or specialized districts also measured relative to one another

# The Real Spending Index

- Based on operating expenditures per pupil in core educational functions
  - Instruction and related
  - Instructional leadership
  - School leadership
  - Student support services
  - Extracurricular activities
  - Central administration
  - Maintenance, security, and data processing

Legend

- Fiscal Peers
- ◆ CYPRESS-FAIRBANKS ISD

### CYPRESS-FAIRBANKS ISD

113,656 students  
 view all campuses  
 HARRIS COUNTY, REGION 4  
 TEA Rating: Met Standard



Smart Score

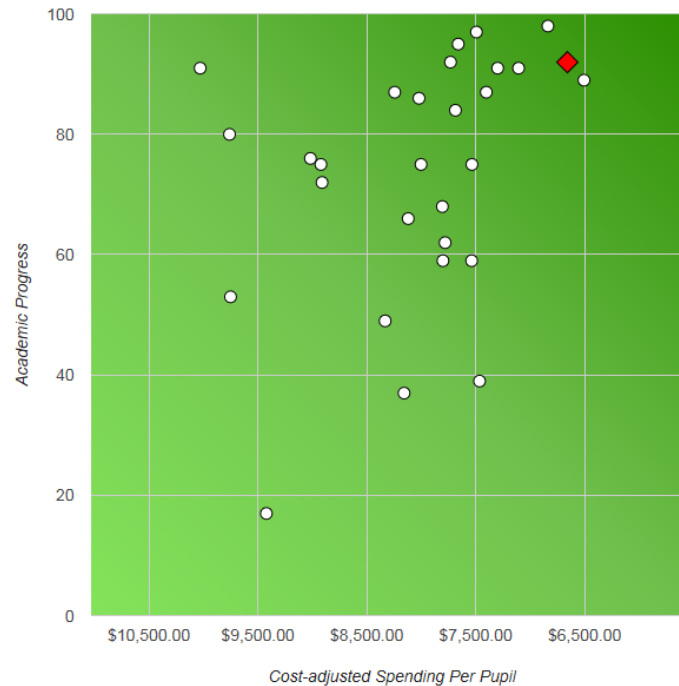
Very High Academic Progress  
 at or above 92% of all districts

2017

Very Low Spending compared to  
 fiscal peers  
 \$6,658.00 cost-adjusted spending  
 per pupil

This report shows CYPRESS-FAIRBANKS ISD compared to its **Smart Fiscal Peers**. You may choose your own group of districts to compare by selecting several districts.

#### Cost-adjusted Spending Per Pupil vs. Academic Progress



Legend

- Fiscal Peers
- ◆ SAN ANTONIO ISD

SAN ANTONIO ISD

53,035 students  
view all campuses  
BEXAR COUNTY, REGION 20  
TEA Rating: Met Standard



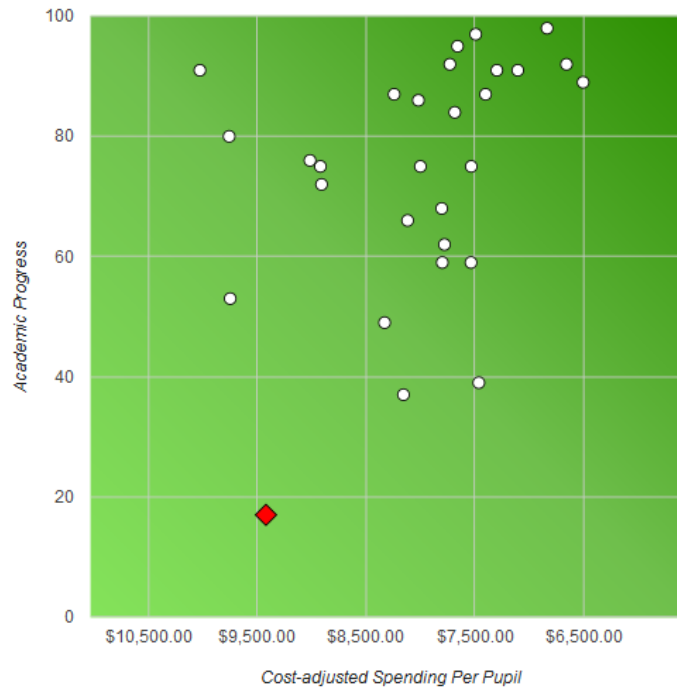
Smart Score

2017

Very Low Academic Progress  
at or above 17% of all districts  
Very High Spending compared to  
fiscal peers  
\$9,421.00 cost-adjusted spending  
per pupil

This report shows SAN ANTONIO ISD compared to its **Smart Fiscal Peers**. You may choose your own group of districts to compare by selecting several districts.

Cost-adjusted Spending Per Pupil vs. Academic Progress







Legend

- Fiscal Peers
- ◆ HOUSTON ISD

### HOUSTON ISD

214,891 students  
 view all campuses  
 HARRIS COUNTY, REGION 4  
 TEA Rating: Met Standard



Smart Score

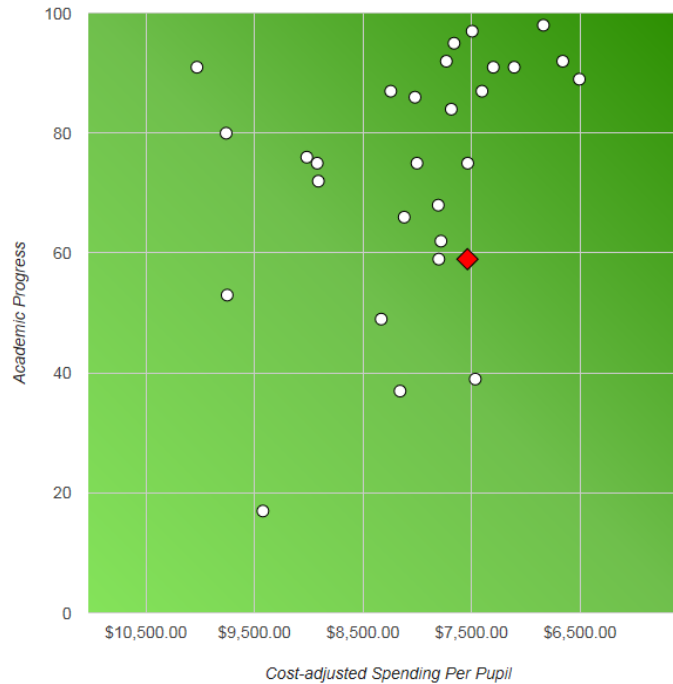
2017

Average Academic Progress  
 at or above 59% of all districts

Low Spending compared to fiscal peers  
 \$7,536.33 cost-adjusted spending  
 per pupil

This report shows HOUSTON ISD compared to its **Smart Fiscal Peers**. You may choose your own group of districts to compare by selecting several districts.

### Cost-adjusted Spending Per Pupil vs. Academic Progress



Legend

- Fiscal Peers
- ◆ DALLAS ISD

### DALLAS ISD

158,495 students  
view all campuses  
DALLAS COUNTY, REGION 10  
TEA Rating: Met Standard



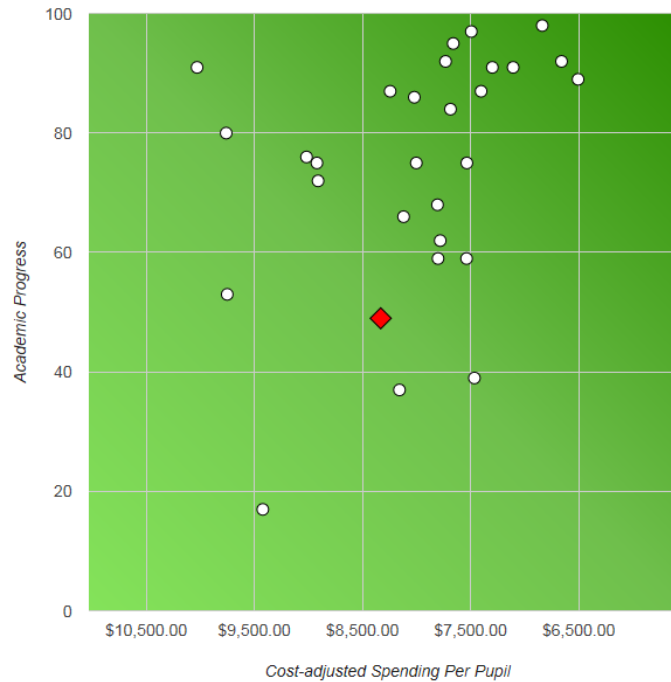
Smart Score

2017

Average Academic Progress  
at or above 49% of all districts  
High Spending compared to fiscal  
peers  
\$8,330.67 cost-adjusted spending  
per pupil

This report shows DALLAS ISD compared to its **Smart Fiscal Peers**. You may choose your own group of districts to compare by selecting several districts.

### Cost-adjusted Spending Per Pupil vs. Academic Progress



Legend

- Fiscal Peers
- ◆ LEVELLAND ISD

LEVELLAND ISD

3,067 students  
 view all campuses  
 HOCKLEY COUNTY, REGION 17  
 TEA Rating: Met Standard

★★★★★  
 Smart Score

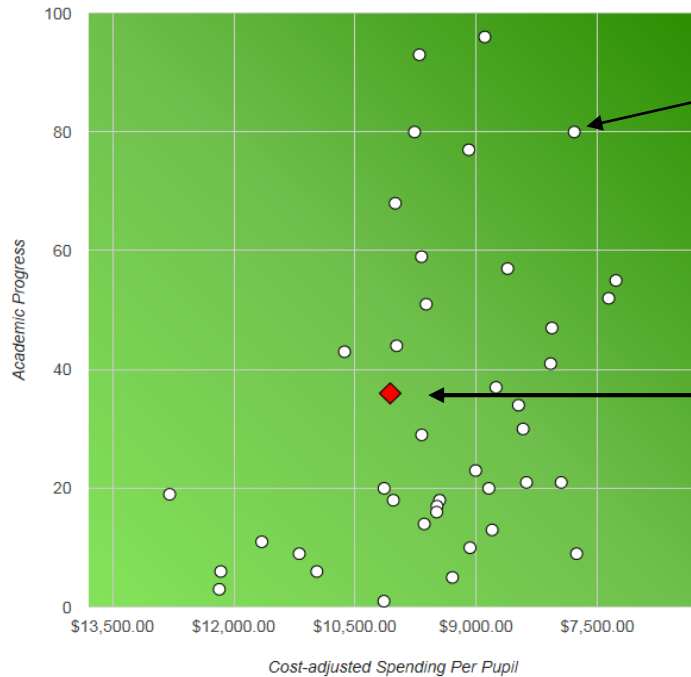
2017

Low Academic Progress  
 at or above 36% of all districts

High Spending compared to fiscal peers  
 \$10,061.67 cost-adjusted spending per pupil

This report shows LEVELLAND ISD compared to its **Smart Fiscal Peers**. You may choose your own group of districts to compare by selecting several districts.

Cost-adjusted Spending Per Pupil vs. Academic Progress



Everman ISD  
 89% Econ. Dis.  
 28% ELL

Levelland ISD  
 69% Econ. Dis.  
 7.5% ELL

Legend

- Fiscal Peers
- ◆ EL PASO ISD

EL PASO ISD

59,772 students  
 view all campuses  
 EL PASO COUNTY, REGION 19  
 TEA Rating: Met Standard



Smart Score

2017

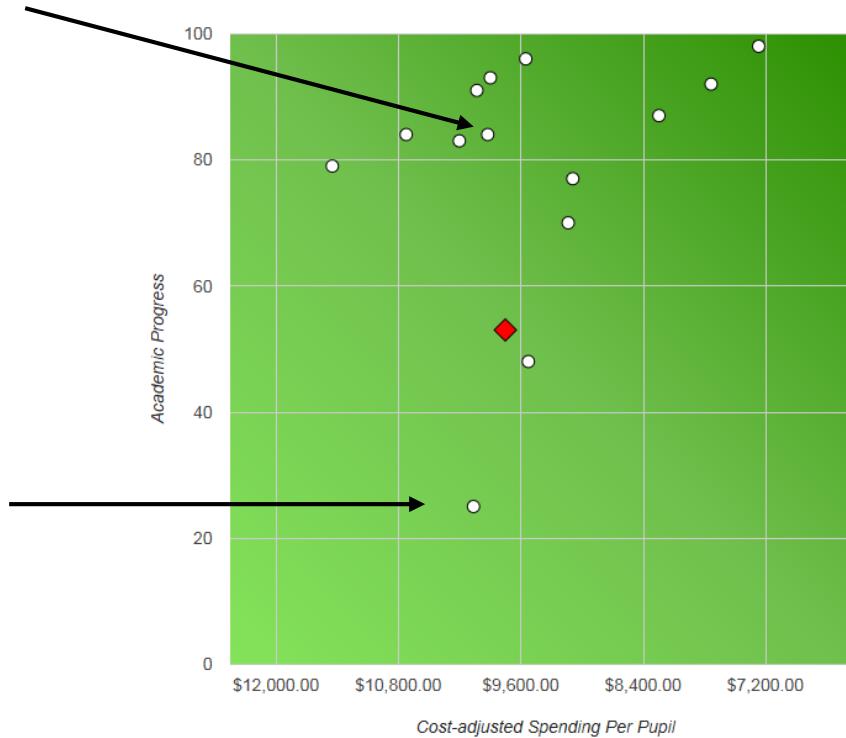
Average Academic Progress  
 at or above 53% of all districts  
 Very High Spending compared to  
 fiscal peers  
 \$9,750.00 cost-adjusted spending  
 per pupil

This report shows EL PASO ISD compared to the peers you selected. You can also see how EL PASO ISD compares to its Smart Fiscal Peers by selecting **only** EL PASO ISD from the list of districts.

Cost-adjusted Spending Per Pupil vs. Academic Progress

San Elizario ISD  
 95% Econ. Dis.  
 51% ELL

Tornillo ISD  
 96% Econ. Dis.  
 21% ELL



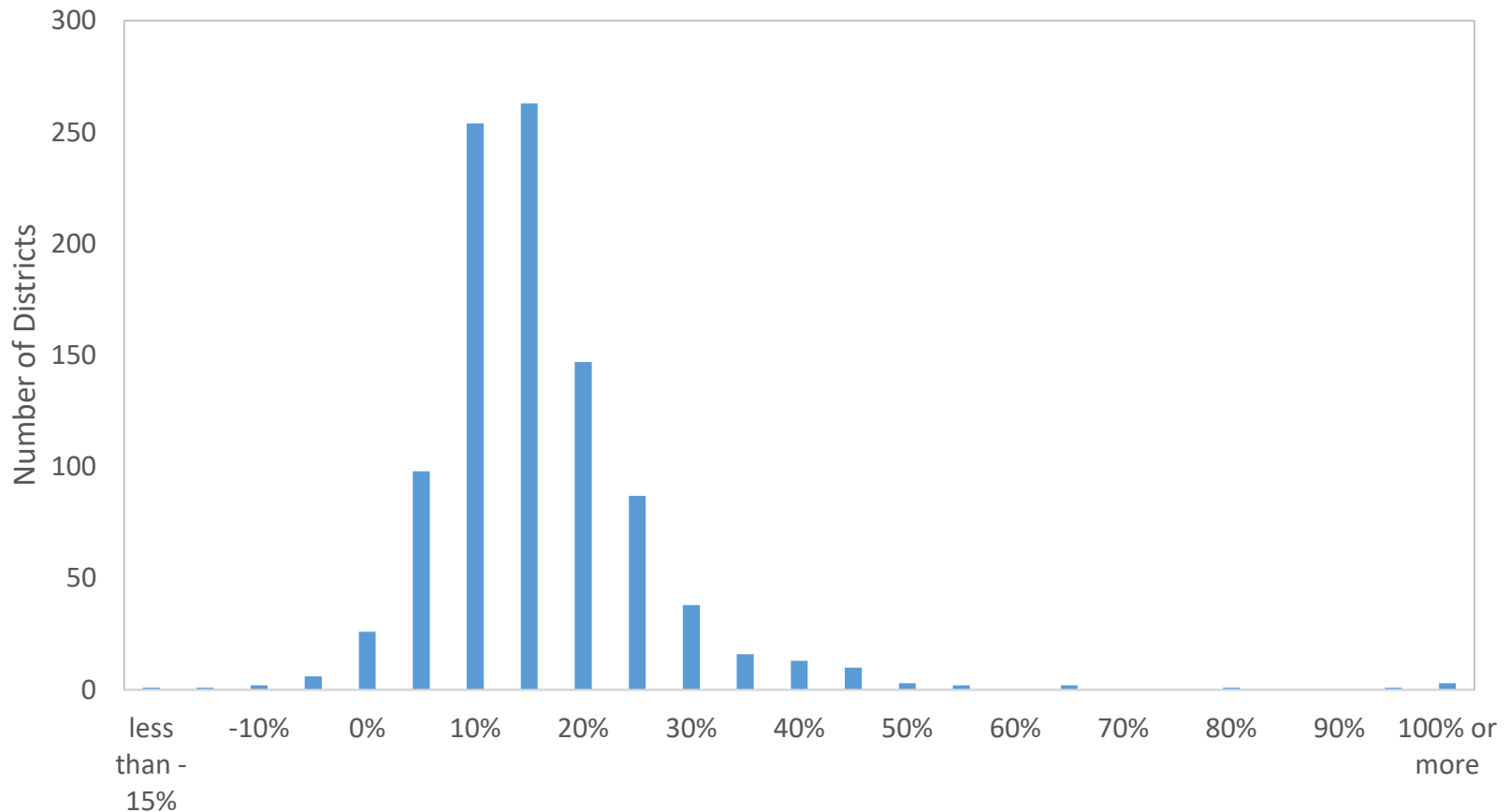
# What Influences Efficiency?

- Competition fosters efficiency
  - Choice among traditional public school districts
  - Charter schools
- Common budget practices in Texas foster inefficiency

# Common Budget Practices Foster Inefficiency

- Texas school district budgets are systematically biased
  - Actual revenues exceed budgeted revenues 97% of the time
  - On average, actual revenues exceed budgeted revenues by at least 10%
  - Actual federal revenues are three times the budgeted amount

# The Gap Between Actual and Budgeted Revenues, 2015-16



# The Unintended Consequences of Biased Budgeting

- Windfalls generated by biased budgeting appear to flow directly into current operations
  - The more a district systematically underestimates its revenues, the more it spends, all other things being equal
- No evidence that budget windfalls are used to finance increases in measured academic quality
- Districts where budgets are closer to actual revenues and expenditures are more efficient



# What Do we Know About Efficiency?

- Competition fosters efficiency
  - Choice among traditional public school districts
  - Charter schools
- Common budget practices in Texas foster inefficiency
- Common compensation practices foster inefficiency

# Common Compensation Practices Foster Inefficiency

- Most Texas districts compensate teachers based on a salary schedule that rewards years of experience and educational attainment
- Research finds little or no evidence that years of experience are systematically related to student performance *after the first few years of experience*
  - Rivkin, Hanushek and Kain (2005)
- Research finds little or no evidence that advanced degrees are systematically related to higher student performance
  - Hanushek and Rivkin (2006)

# What Do we Know About Efficiency?

- Competition fosters efficiency
  - Choice among traditional public school districts
  - Charter schools
- Common budget practices in Texas foster inefficiency
- Common compensation practices foster inefficiency
- Some regulations foster inefficiency

# Some Regulations Foster Inefficiency

- The Financial Integrity Rating System of Texas (FIRST) incentivizes districts to lower their administrative cost ratios
  - The goal can be met by increasing spending on instruction with no change in spending on administration
  - No evidence efficiency is related to the share of spending on administration
- Class size restrictions are costly, and a one standard deviation improvement in teacher quality would produce larger benefits than a ten student reduction in class size
  - Rivkin, Hanushek and Kain (2005)

# Conclusions

- The cost of education is not the same in all districts
- Equalizing spending per pupil would not be equitable
- Many Texas school districts could achieve higher performance with current levels of funding if they adopted the best practices of their peers