STANDARD &POOR'S

School Evaluation Services



Kansas School District Efficiency Study

Part IIb: District Efficiency Profiles

Presented alphabetically (school districts G-N)

Commissioned by

Governor Kathleen Sebelius Ewing Marion Kauffman Foundation April, 2007

Standard & Poor's School Evaluation Services 55 Water Street New York, NY 10041 (212) 438-2193

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OVERVIEW OF DISTRICT EFFICIENCY STUDY

Governor Kathleen Sebelius and the Ewing Marion Kauffman Foundation have commissioned Standard & Poor's School Evaluation Services to conduct an Educational Efficiency Study of the state's school districts. The overarching objective of the project is to help Kansas better understand which districts are utilizing their resources most efficiently and how less efficient districts may benchmark themselves against these districts to identify improvement opportunities.

Specific objectives of the study include the following:

- Efficiency Measurement provide a relative efficiency measurement system to assess school districts' effective use of resources. Specifically, this study provides relative efficiency scores for individual districts and identifies those districts that are particularly effective in using their financial resources to optimize student learning (i.e., highly efficient districts). The relative efficiency of each school district is scored on a scale from 0% - 100%. Part I of the study (a separate document) focuses on this objective.
- 2. Efficiency Improvement in conjunction with the measurement system, provide information to foster the more efficient use of resources, particularly to raise student achievement. Specifically, this study provides the less efficient districts with improvement targets and benchmarks derived from highly efficient districts to which they can compare themselves a process that can lead to the identification of potential improvement opportunities. This section (Part II) of the study focuses on this objective.

GUIDE TO DISTRICT EFFICIENCY PROFILES

Layout of Efficiency Profiles

The remainder of this section of the Kansas School District Efficiency Study is a series of twopage profiles for the districts in the state that are not on the **efficient frontier**. The purpose of these profiles is to provide each district with a brief summary of its current relative efficiency, as well as benchmarks from the efficient frontier districts that may be able to provide a window into "best practices" and potential improvement targets.

The profiles include the following:

- the district's **relative efficiency score** and **output targets** that, had they been achieved, would have placed the district on the **efficient frontier** (i.e., would have resulted in a relative efficiency score of 100%),
- a **brief guide** to understanding the data and analytical method used to determine the score,
- a list of the 21 efficient frontier districts across the state,
- a **side-by-side comparison** with up to two districts from the **efficient frontier** that appear to be particularly useful benchmarks for the district as it explores ways to improve its outputs and, ultimately, its efficiency.

Important Data and Method Notes

Data Sources

All data used in this study – student performance, enrollment characteristics, and spending – were obtained from the Kansas Department of Education.

Data Calculations

To perform the efficiency analysis, all data have been converted into weighted averages of the districts' 2004-05 and 2005-06 school years, with the most recent year (2005-06) weighted twice as heavily as the least recent year (2004-05). The averaging has been done to mitigate potential problems with data volatility due to small populations and measurement error, while recognizing that the most recent performance should be an important reflection of the districts' most recent efforts.

Definition of Outputs and Inputs

Proficiency Rate is an overall indicator created by Standard & Poor's to measure success in meeting state standards in reading and math. The proficiency rate is calculated by summing the total number of reading and math tests systemwide (grades 3-8 and high school) that scored at the "meeting standard" level or better, and dividing by the total number of tests.

Performance Index is an overall indicator created by Standard & Poor's to go beyond measuring proficiency and award points on a sliding scale for every test score that reaches at least the "approaches standard" level, with more points given for higher performance levels. The performance index is calculated by summing the total number of reading and math tests systemwide that score in each of the four highest performance levels, with additional weight placed on each higher level, and dividing by total possible number of points. Index points are awarded as follows (out of a maximum 4.0 points): 0.5 points for all scores that are "approaching standard"; 1.0 points for "meeting standard"; 1.5 points for "exceeding standard"; and 2.0 points for "exemplary" scores.

Performance Level Academic Warning	<u>Index Points</u> 0	Effective Weight <u>in Index</u> 0%
Approaching Standard	0.5	10%
Meeting Standard	1.0	20%
Exceeding Standard	1.5	30%
Exemplary	2.0	40%
Possible Points	4.0	100%

Core Spending is comprised of a subset of "core" district spending functions that are largely comparable from district to district and most directly tied to efforts to improve student learning. These include expenditures for instruction, instructional staff support, pupil support, general administration, school administration, and operations and maintenance. (Spending for transportation, food services, and enterprise operations are excluded because of variation between districts, often due to reasons outside of district control, while non-operating activities like capital outlays and debt service are excluded both because of variation between districts and

also within the same district from one year to the next). Since the purchasing power of the dollar varies from one region to another across the state, this study uses the Comparable Wage Index from the National Center for Education Statistics to "normalize" each school district's expenditure data, making spending levels more comparable.

School District Efficiency Profiles

Kansas School District Efficiency Study

District: Galena (D0499)

Region: Southeast Kansas (Cherokee County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **84.67%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 84.67%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	61.8%	73.0%
Performance Index	33.5%	45.2%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on core day-to-day operations,

adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged
 Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index
 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic",
 "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Galena (D0499)

Region: Southeast Kansas (Cherokee County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Galena with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Galena	Osawatomie	Baldwin City
District Code	D0499	D0367	D0348
County	Cherokee	Miami	Douglas
Enrollment	780	1,235	1,407
Constraints			
Economically Disadvantaged Students	63.9%	50.8%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	12.9%	15.3%	13.7%
Inputs			
Core Spending (per student)	\$9,612	\$6,193	\$6,490
Outputs			
Reading and Math Proficiency Rate	61.8%	75.5%	88.7%
Reading (grades 3-8)	76.9%	78.5%	94.3%
Reading (high school)	53.2%	78.4%	72.2%
Math (grades 3-8)	56.8%	81.4%	94.3%
Math (high school)	38.7%	39.7%	66.1%
Reading and Math Performance Index	33.5%	45.7%	64.0%
Reading (grades 3-8)	40.6%	48.0%	67.4%
Reading (high school)	30.7%	43.0%	44.6%
Math (grades 3-8)	30.3%	50.1%	74.1%
Math (high school)	23.6%	22.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Garden City (D0457)

Region: Southwest Kansas (Finney County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **97.22%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 97.22%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	64.4%	66.2%
Performance Index	37.9%	41.8%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

• Core Spending (\$ per student spent on core

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Garden City (D0457)

Region: Southwest Kansas (Finney County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Garden City with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Garden City	Dodge City	Gardner-Edgerton
District Code	D0457	D0443	D0231
County	Finney	Ford	Johnson
Enrollment	7,482	5,947	3,782
Constraints			
Economically Disadvantaged Students	57.4%	68.9%	21.5%
English Language Learners	25.9%	40.1%	0.9%
Students with Disabilities	12.3%	13.2%	12.2%
Inputs			
Core Spending (per student)	\$7,221	\$7,703	\$5,565
Outputs			
Reading and Math Proficiency Rate	64.4%	57.2%	89.0%
Reading (grades 3-8)	64.6%	60.0%	88.9%
Reading (high school)	62.6%	56.8%	87.6%
Math (grades 3-8)	68.6%	61.1%	92.0%
Math (high school)	47.6%	35.6%	78.7%
Reading and Math Performance Index	37.9%	32.9%	61.5%
Reading (grades 3-8)	36.8%	33.8%	59.6%
Reading (high school)	36.9%	32.5%	63.8%
Math (grades 3-8)	42.0%	35.8%	65.9%
Math (high school)	27.0%	21.9%	50.3%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Garnett (D0365)

Region: Southeast Kansas (Anderson County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **73.03%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 73.03%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	64.9%	88.9%
Performance Index	38.1%	55.6%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index
 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic",
 "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Garnett (D0365)

Region: Southeast Kansas (Anderson County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Garnett with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

		Most Similar	Best-Performing
Indicator	This District	Frontier District*	Frontier District**
District Name	Garnett	Osawatomie	Baldwin City
District Code	D0365	D0367	D0348
County	Anderson	Miami	Douglas
Enrollment	1,143	1,235	1,407
Constraints			
Economically Disadvantaged Students	44.4%	50.8%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	14.7%	15.3%	13.7%
Inputs			
Core Spending (per student)	\$7,799	\$6,193	\$6,490
Outputs		•	
Reading and Math Proficiency Rate	64.9%	75.5%	88.7%
Reading (grades 3-8)	65.3%	78.5%	94.3%
Reading (high school)	71.7%	78.4%	72.2%
Math (grades 3-8)	69.8%	81.4%	94.3%
Math (high school)	45.0%	39.7%	66.1%
Reading and Math Performance Index	38.1%	45.7%	64.0%
Reading (grades 3-8)	37.8%	48.0%	67.4%
Reading (high school)	43.4%	43.0%	44.6%
Math (grades 3-8)	41.2%	50.1%	74.1%
Math (high school)	25.9%	22.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Geary (D0475)

Region: North Central Kansas (Geary County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **95.84%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 95.84%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	76.6%	79.9%
Performance Index	51.0%	53.2%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Geary (D0475)

Region: North Central Kansas (Geary County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Geary with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

		Most Similar	Best-Performing
	This	Frontier	Frontier
Indicator	District	District*	District**
District Name	Geary	Newton	Gardner-Edgerton
District Code	D0475	D0373	D0231
County	Geary	Harvey	Johnson
Enrollment	6,377	3,731	3,782
Constraints			
Economically Disadvantaged Students	54.4%	45.5%	21.5%
English Language Learners	5.6%	5.9%	0.9%
Students with Disabilities	14.3%	15.4%	12.2%
Inputs			
Core Spending (per student)	\$8,861	\$5,915	\$5,565
Outputs			
Reading and Math Proficiency Rate	76.6%	75.1%	89.0%
Reading (grades 3-8)	81.5%	80.8%	88.9%
Reading (high school)	65.1%	72.8%	87.6%
Math (grades 3-8)	82.9%	76.7%	92.0%
Math (high school)	48.3%	55.1%	78.7%
Reading and Math Performance Index	51.0%	50.6%	61.5%
Reading (grades 3-8)	52.6%	54.7%	59.6%
Reading (high school)	38.8%	48.1%	63.8%
Math (grades 3-8)	58.5%	52.2%	65.9%
Math (high school)	29.4%	36.5%	50.3%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Girard (D0248)

Region: Southeast Kansas (Crawford County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **89.55%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = **89.55%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	85.8%	95.9%
Performance Index	55.6%	64.4%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

• Core Spending (\$ per student spent on core day-to-day operations,

adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Girard (D0248)

Region: Southeast Kansas (Crawford County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Girard with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Girard	Osawatomie	Baldwin City
District Code	D0248	D0367	D0348
County	Crawford	Miami	Douglas
Enrollment	1,100	1,235	1,407
Constraints			
Economically Disadvantaged Students	35.7%	50.8%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	9.2%	15.3%	13.7%
Inputs			
Core Spending (per student)	\$7,552	\$6,193	\$6,490
Outputs			
Reading and Math Proficiency Rate	85.8%	75.5%	88.7%
Reading (grades 3-8)	90.0%	78.5%	94.3%
Reading (high school)	86.0%	78.4%	72.2%
Math (grades 3-8)	85.8%	81.4%	94.3%
Math (high school)	76.2%	39.7%	66.1%
Reading and Math Performance Index	55.6%	45.7%	64.0%
Reading (grades 3-8)	60.3%	48.0%	67.4%
Reading (high school)	55.7%	43.0%	44.6%
Math (grades 3-8)	54.1%	50.1%	74.1%
Math (high school)	48.1%	22.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Goddard (D0265)

Region: South Central Kansas (Sedgwick County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **92.23%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 92.23%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	78.9%	85.5%
Performance Index	50.4%	58.7%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on core day-to-day operations,

adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Goddard (D0265)

Region: South Central Kansas (Sedgwick County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Goddard with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance. In this case, the comparison district under both criteria is the same.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Goddard	Gardner- Edgerton	Gardner-Edgerton
District Code	D0265	D0231	D0231
County	Sedgwick	Johnson	Johnson
Enrollment	4,383	3,782	3,782
Constraints			
Economically Disadvantaged Students	15.7%	21.5%	21.5%
English Language Learners	0.2%	0.9%	0.9%
Students with Disabilities	12.9%	12.2%	12.2%
Inputs			
Core Spending (per student)	\$5,438	\$5,565	\$5,565
Outputs			
Reading and Math Proficiency Rate	78.9%	89.0%	89.0%
Reading (grades 3-8)	83.2%	88.9%	88.9%
Reading (high school)	80.3%	87.6%	87.6%
Math (grades 3-8)	79.8%	92.0%	92.0%
Math (high school)	59.8%	78.7%	78.7%
Reading and Math Performance Index	50.4%	61.5%	61.5%
Reading (grades 3-8)	52.4%	59.6%	59.6%
Reading (high school)	48.8%	63.8%	63.8%
Math (grades 3-8)	53.0%	65.9%	65.9%
Math (high school) * Efficient frontier district with most similar cons	35.1%	50.3%	50.3%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Goessel (D0411)

Region: North Central Kansas (Marion County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **81.71%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 81.71%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**. This district's unattainable proficiency output target (greater than 100%) indicates that reaching the efficient frontier would also require reducing inputs; improving outputs alone would not be sufficient.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	81.8%	>100%
Performance Index	56.7%	69.4%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Note: A target value of ">100%" indicates that output improvements alone are not sufficient; input reductions are also necessary.

Which data are included in the calculation of the district's efficiency score?

Inputs

- **Outputs**
- Core Spending
 (\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index

 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level "basic",
 "proficient", "advanced", and "exemplary" with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Goessel (D0411)

Region: North Central Kansas (Marion County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	County	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Goessel with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Goessel	Waconda	Leoti
District Code	D0411	D0272	D0467
County	Marion	Mitchell	Wichita
Enrollment	284	365	501
Constraints			
Economically Disadvantaged Students	23.3%	44.3%	39.5%
English Language Learners	0.0%	0.0%	26.5%
Students with Disabilities	14.3%	12.9%	12.4%
Inputs			
Core Spending (per student)	\$8,209	\$9,480	\$8,455
Outputs			
Reading and Math Proficiency Rate	81.8%	94.5%	88.1%
Reading (grades 3-8)	84.7%	96.9%	84.4%
Reading (high school)	90.8%	88.6%	84.0%
Math (grades 3-8)	83.3%	96.6%	94.8%
Math (high school)	67.6%	92.0%	78.7%
Reading and Math Performance Index	56.7%	70.2%	58.9%
Reading (grades 3-8)	61.6%	70.4%	54.4%
Reading (high school)	63.0%	61.8%	62.3%
Math (grades 3-8)	56.5%	77.0%	63.1%
Math (high school)	42.3%	64.0%	57.5%

* Efficient frontier district with most similar constraints as this district.

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Goodland (D0352)

Region: Northwest Kansas (Sherman County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **78.22%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 78.22%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	63.6%	81.3%
Performance Index	37.6%	51.7%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on cor

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Goodland (D0352)

Region: Northwest Kansas (Sherman County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Goodland with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Goodland	Lyons	Baldwin City
District Code	D0352	D0405	D0348
County	Sherman	Rice	Douglas
Enrollment	1,009	904	1,407
Constraints			
Economically Disadvantaged Students	40.9%	61.6%	15.2%
English Language Learners	8.3%	12.6%	0.1%
Students with Disabilities	17.8%	19.0%	13.7%
Inputs			
Core Spending (per student)	\$8,426	\$9,018	\$6,490
Outputs			
Reading and Math Proficiency Rate	63.6%	75.3%	88.7%
Reading (grades 3-8)	69.6%	81.6%	94.3%
Reading (high school)	74.7%	69.5%	72.2%
Math (grades 3-8)	60.4%	76.6%	94.3%
Math (high school)	51.4%	60.1%	66.1%
Reading and Math Performance Index	37.6%	46.6%	64.0%
Reading (grades 3-8)	41.1%	51.4%	67.4%
Reading (high school)	48.1%	44.4%	44.6%
Math (grades 3-8)	35.4%	46.2%	74.1%
Math (high school)	29.7%	36.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Greeley (D0200)

Region: Southwest Kansas (Greeley County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **87.29%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 87.29%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	70.2%	80.4%
Performance Index	42.5%	50.8%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index
 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic",
 "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Greeley (D0200)

Region: Southwest Kansas (Greeley County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Greeley with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Greeley	Deerfield	Waconda
District Code	D0200	D0216	D0272
County	Greeley	Kearny	Mitchell
Enrollment	272	362	365
Constraints			
Economically Disadvantaged Students	42.5%	53.2%	44.3%
English Language Learners	15.6%	32.3%	0.0%
Students with Disabilities	16.0%	16.4%	12.9%
Inputs			
Core Spending (per student)	\$9,253	\$9,619	\$9,480
Outputs			
Reading and Math Proficiency Rate	70.2%	71.4%	94.5%
Reading (grades 3-8)	74.1%	84.0%	96.9%
Reading (high school)	68.6%	55.3%	88.6%
Math (grades 3-8)	73.8%	81.4%	96.6%
Math (high school)	54.9%	16.3%	92.0%
Reading and Math Performance Index	42.5%	43.1%	70.2%
Reading (grades 3-8)	45.1%	51.6%	70.4%
Reading (high school)	40.7%	35.0%	61.8%
Math (grades 3-8)	42.9%	48.7%	77.0%
Math (high school)	41.4%	11.6%	64.0%

* Efficient frontier district with most similar constraints as this district.

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Greensburg (D0422)

Region: South Central Kansas (Kiowa County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **80.86%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 80.86%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	77.4%	99.0%
Performance Index	53.4%	66.1%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on cor

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index
 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic",
 "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Greensburg (D0422)

Region: South Central Kansas (Kiowa County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Greensburg with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

		Most Similar	Best-Performing
Indicator	This District	Frontier District*	Frontier District**
District Name	Greensburg	Halstead	Waconda
District Code	D0422	D0440	D0272
County	Kiowa	Harvey	Mitchell
Enrollment	304	735	365
Constraints			
Economically Disadvantaged Students	30.9%	34.7%	44.3%
English Language Learners	0.0%	0.0%	0.0%
Students with Disabilities	19.3%	18.7%	12.9%
Inputs			
Core Spending (per student)	\$9,502	\$6,792	\$9,480
Outputs		•	
Reading and Math Proficiency Rate	77.4%	83.9%	94.5%
Reading (grades 3-8)	81.4%	87.0%	96.9%
Reading (high school)	75.1%	83.8%	88.6%
Math (grades 3-8)	77.5%	86.3%	96.6%
Math (high school)	79.2%	64.0%	92.0%
Reading and Math Performance Index	53.4%	55.8%	70.2%
Reading (grades 3-8)	56.2%	56.7%	70.4%
Reading (high school)	47.7%	55.3%	61.8%
Math (grades 3-8)	56.6%	59.6%	77.0%
Math (high school)	53.6%	41.1%	64.0%

* Efficient frontier district with most similar constraints as this district.

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Haven (D0312)

Region: South Central Kansas (Reno County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **87.80%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 87.80%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	79.9%	94.1%
Performance Index	56.3%	64.1%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on con-

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Haven (D0312)

Region: South Central Kansas (Reno County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Haven with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

		Most Similar	Best-Performing
Indicator	This District	Frontier District*	Frontier District**
District Name	Haven	Osawatomie	Baldwin City
District Code	D0312	D0367	D0348
County	Reno	Miami	Douglas
Enrollment	1,108	1,235	1,407
Constraints			
Economically Disadvantaged Students	37.1%	50.8%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	10.6%	15.3%	13.7%
Inputs			
Core Spending (per student)	\$7,625	\$6,193	\$6,490
Outputs			
Reading and Math Proficiency Rate	79.9%	75.5%	88.7%
Reading (grades 3-8)	83.7%	78.5%	94.3%
Reading (high school)	76.9%	78.4%	72.2%
Math (grades 3-8)	83.5%	81.4%	94.3%
Math (high school)	53.2%	39.7%	66.1%
Reading and Math Performance Index	56.3%	45.7%	64.0%
Reading (grades 3-8)	57.3%	48.0%	67.4%
Reading (high school)	54.2%	43.0%	44.6%
Math (grades 3-8)	60.4%	50.1%	74.1%
Math (high school)	39.5%	22.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Hays (D0489)

Region: Northwest Kansas (Ellis County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **99.58%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score = 99.58%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	87.3%	87.7%
Performance Index	59.0%	59.2%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

• Core Spending (\$ per student spent on core

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Hays (D0489)

Region: Northwest Kansas (Ellis County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Hays with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

		Most Similar	Best-Performing
	This	Frontier	Frontier
Indicator	District	District*	District**
District Name	Hays	Newton	Gardner-Edgerton
District Code	D0489	D0373	D0231
County	Ellis	Harvey	Johnson
Enrollment	3,060	3,731	3,782
Constraints			
Economically Disadvantaged Students	33.0%	45.5%	21.5%
English Language Learners	2.6%	5.9%	0.9%
Students with Disabilities	17.3%	15.4%	12.2%
Inputs			
Core Spending (per student)	\$8,573	\$5,915	\$5,565
Outputs			
Reading and Math Proficiency Rate	87.3%	75.1%	89.0%
Reading (grades 3-8)	91.7%	80.8%	88.9%
Reading (high school)	76.4%	72.8%	87.6%
Math (grades 3-8)	91.7%	76.7%	92.0%
Math (high school)	67.3%	55.1%	78.7%
Reading and Math Performance Index	59.0%	50.6%	61.5%
Reading (grades 3-8)	61.6%	54.7%	59.6%
Reading (high school)	46.4%	48.1%	63.8%
Math (grades 3-8)	64.5%	52.2%	65.9%
Math (high school)	42.9%	36.5%	50.3%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Haysville (D0261)

Region: South Central Kansas (Sedgwick County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **88.63%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score = 88.63%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	68.5%	77.3%
Performance Index	40.2%	52.2%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Haysville (D0261)

Region: South Central Kansas (Sedgwick County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Haysville with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar	Best-Performing
Indicator	District	Frontier District*	Frontier District**
District Name	Haysville	Newton	Gardner-Edgerton
District Code	D0261	D0373	D0231
County	Sedgwick	Harvey	Johnson
Enrollment	4,656	3,731	3,782
Constraints			
Economically Disadvantaged Students	36.1%	45.5%	21.5%
English Language Learners	2.2%	5.9%	0.9%
Students with Disabilities	15.7%	15.4%	12.2%
Inputs			
Core Spending (per student)	\$5,890	\$5,915	\$5,565
Outputs			
Reading and Math Proficiency Rate	68.5%	75.1%	89.0%
Reading (grades 3-8)	71.6%	80.8%	88.9%
Reading (high school)	66.6%	72.8%	87.6%
Math (grades 3-8)	74.1%	76.7%	92.0%
Math (high school)	40.7%	55.1%	78.7%
Reading and Math Performance Index	40.2%	50.6%	61.5%
Reading (grades 3-8)	42.3%	54.7%	59.6%
Reading (high school)	38.3%	48.1%	63.8%
Math (grades 3-8)	44.5%	52.2%	65.9%
Math (high school)	19.9%	36.5%	50.3%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: **Herington (D0487**)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **79.96%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = **79.96%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	78.1%	97.7%
Performance Index	50.2%	63.4%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co.

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Herington (D0487)

Region: North Central Kansas (Dickinson County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Herington with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Herington	Osawatomie	Baldwin City
District Code	D0487	D0367	D0348
County	Dickinson	Miami	Douglas
Enrollment	526	1,235	1,407
Constraints			
Economically Disadvantaged Students	38.8%	50.8%	15.2%
English Language Learners	0.1%	0.0%	0.1%
Students with Disabilities	15.0%	15.3%	13.7%
Inputs			
Core Spending (per student)	\$8,708	\$6,193	\$6,490
Outputs			
Reading and Math Proficiency Rate	78.1%	75.5%	88.7%
Reading (grades 3-8)	86.3%	78.5%	94.3%
Reading (high school)	69.8%	78.4%	72.2%
Math (grades 3-8)	81.0%	81.4%	94.3%
Math (high school)	40.4%	39.7%	66.1%
Reading and Math Performance Index	50.2%	45.7%	64.0%
Reading (grades 3-8)	55.1%	48.0%	67.4%
Reading (high school)	44.0%	43.0%	44.6%
Math (grades 3-8)	53.0%	50.1%	74.1%
Math (high school)	27.2%	22.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Hesston (D0460)

Region: South Central Kansas (Harvey County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **92.75%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 92.75%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	86.5%	97.2%
Performance Index	61.3%	66.1%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on con-

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index
 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic",
 "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Hesston (D0460)

Region: South Central Kansas (Harvey County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Hesston with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Hesston	Leoti	Baldwin City
District Code	D0460	D0467	D0348
County	Harvey	Wichita	Douglas
Enrollment	787	501	1,407
Constraints			
Economically Disadvantaged Students	19.1%	39.5%	15.2%
English Language Learners	2.4%	26.5%	0.1%
Students with Disabilities	9.1%	12.4%	13.7%
Inputs			
Core Spending (per student)	\$6,909	\$8,455	\$6,490
Outputs			
Reading and Math Proficiency Rate	86.5%	88.1%	88.7%
Reading (grades 3-8)	89.8%	84.4%	94.3%
Reading (high school)	79.8%	84.0%	72.2%
Math (grades 3-8)	89.4%	94.8%	94.3%
Math (high school)	71.9%	78.7%	66.1%
Reading and Math Performance Index	61.3%	58.9%	64.0%
Reading (grades 3-8)	63.5%	54.4%	67.4%
Reading (high school)	55.7%	62.3%	44.6%
Math (grades 3-8)	64.2%	63.1%	74.1%
Math (high school)	52.5%	57.5%	40.1%

* Efficient frontier district with most similar constraints as this district.

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Hiawatha (D0415)

Region: Northeast Kansas (Brown County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **97.79%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score = 97.79%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	86.4%	90.6%
Performance Index	59.1%	60.5%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on core day-to-day operations,

adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Hiawatha (D0415)

Region: Northeast Kansas (Brown County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Hiawatha with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Hiawatha	Halstead	Baldwin City
District Code	D0415	D0440	D0348
County	Brown	Harvey	Douglas
Enrollment	937	735	1,407
Constraints			
Economically Disadvantaged Students	43.2%	34.7%	15.2%
English Language Learners	0.3%	0.0%	0.1%
Students with Disabilities	19.9%	18.7%	13.7%
Inputs			
Core Spending (per student)	\$8,624	\$6,792	\$6,490
Outputs		•	
Reading and Math Proficiency Rate	86.4%	83.9%	88.7%
Reading (grades 3-8)	89.0%	87.0%	94.3%
Reading (high school)	83.1%	83.8%	72.2%
Math (grades 3-8)	90.3%	86.3%	94.3%
Math (high school)	66.7%	64.0%	66.1%
Reading and Math Performance Index	59.1%	55.8%	64.0%
Reading (grades 3-8)	61.0%	56.7%	67.4%
Reading (high school)	55.4%	55.3%	44.6%
Math (grades 3-8)	62.8%	59.6%	74.1%
Math (high school)	44.8%	41.1%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Hill City (D0281)

Region: Northwest Kansas (Graham County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **74.53%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 74.53%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**. This district's unattainable proficiency output target (greater than 100%) indicates that reaching the efficient frontier would also require reducing inputs; improving outputs alone would not be sufficient.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	77.1%	>100%
Performance Index	47.1%	67.2%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Note: A target value of ">100%" indicates that output improvements alone are not sufficient; input reductions are also necessary.

Which data are included in the calculation of the district's efficiency score?

Inputs

- <u>Outputs</u>
- **Core Spending** (\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index

 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level "basic",
 "proficient", "advanced", and "exemplary" with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Hill City (D0281)

Region: Northwest Kansas (Graham County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Hill City with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Hill City	Halstead	Waconda
District Code	D0281	D0440	D0272
County	Graham	Harvey	Mitchell
Enrollment	424	735	365
Constraints			
Economically Disadvantaged Students	35.7%	34.7%	44.3%
English Language Learners	0.0%	0.0%	0.0%
Students with Disabilities	19.0%	18.7%	12.9%
Inputs			
Core Spending (per student)	\$10,259	\$6,792	\$9,480
Outputs			
Reading and Math Proficiency Rate	77.1%	83.9%	94.5%
Reading (grades 3-8)	83.0%	87.0%	96.9%
Reading (high school)	76.5%	83.8%	88.6%
Math (grades 3-8)	87.8%	86.3%	96.6%
Math (high school)	35.1%	64.0%	92.0%
Reading and Math Performance Index	47.1%	55.8%	70.2%
Reading (grades 3-8)	49.9%	56.7%	70.4%
Reading (high school)	48.9%	55.3%	61.8%
Math (grades 3-8)	53.8%	59.6%	77.0%
Math (high school)	19.1%	41.1%	64.0%

* Efficient frontier district with most similar constraints as this district.

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Hoisington (D0431)

Region: South Central Kansas (Barton County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **86.10%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score = 86.10%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	82.1%	95.3%
Performance Index	52.3%	62.3%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Hoisington (D0431)

Region: South Central Kansas (Barton County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Hoisington with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Hoisington	Waconda	Baldwin City
District Code	D0431	D0272	D0348
County	Barton	Mitchell	Douglas
Enrollment	667	365	1,407
Constraints	007	305	1,407
Economically Disadvantaged Students	46.8%	44.3%	15.2%
English Language Learners	40.8%	0.0%	0.1%
Students with Disabilities	0.1%	12.9%	0.1% 13.7%
	10.8%	12.9%	15.7%
Inputs		+	
Core Spending (per student)	\$9,692	\$9,480	\$6,490
Outputs			
Reading and Math Proficiency Rate	82.1%	94.5%	88.7%
Reading (grades 3-8)	87.5%	96.9%	94.3%
Reading (high school)	90.8%	88.6%	72.2%
Math (grades 3-8)	78.4%	96.6%	94.3%
Math (high school)	69.6%	92.0%	66.1%
Reading and Math Performance Index	52.3%	70.2%	64.0%
Reading (grades 3-8)	56.2%	70.4%	67.4%
Reading (high school)	57.3%	61.8%	44.6%
Math (grades 3-8)	50.6%	77.0%	74.1%
Math (high school)	40.0%	64.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Holcomb (D0363)

Region: Southwest Kansas (Finney County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **90.07%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 90.07%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	76.3%	84.8%
Performance Index	48.3%	55.4%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on cor

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Holcomb (D0363)

Region: Southwest Kansas (Finney County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Holcomb with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Holcomb	Leoti	Baldwin City
District Code	D0363	D0467	D0348
County	Finney	Wichita	Douglas
Enrollment	921	501	1,407
Constraints			
Economically Disadvantaged Students	44.3%	39.5%	15.2%
English Language Learners	7.9%	26.5%	0.1%
Students with Disabilities	14.2%	12.4%	13.7%
Inputs			
Core Spending (per student)	\$7,827	\$8,455	\$6,490
Outputs			
Reading and Math Proficiency Rate	76.3%	88.1%	88.7%
Reading (grades 3-8)	77.8%	84.4%	94.3%
Reading (high school)	80.5%	84.0%	72.2%
Math (grades 3-8)	83.2%	94.8%	94.3%
Math (high school)	38.8%	78.7%	66.1%
Reading and Math Performance Index	48.3%	58.9%	64.0%
Reading (grades 3-8)	47.9%	54.4%	67.4%
Reading (high school)	49.0%	62.3%	44.6%
Math (grades 3-8)	54.5%	63.1%	74.1%
Math (high school)	28.0%	57.5%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Holton (D0336)

Region: Northeast Kansas (Jackson County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **82.28%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 82.28%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	75.4%	91.7%
Performance Index	45.5%	62.1%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Holton (D0336)

Region: Northeast Kansas (Jackson County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Holton with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

		Most Similar	Best-Performing
T I (This	Frontier	Frontier
Indicator	District	District*	District**
District Name	Holton	Osawatomie	Baldwin City
District Code	D0336	D0367	D0348
County	Jackson	Miami	Douglas
Enrollment	1,154	1,235	1,407
Constraints			
Economically Disadvantaged Students	26.6%	50.8%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	13.6%	15.3%	13.7%
Inputs			
Core Spending (per student)	\$6,655	\$6,193	\$6,490
Outputs			
Reading and Math Proficiency Rate	75.4%	75.5%	88.7%
Reading (grades 3-8)	79.8%	78.5%	94.3%
Reading (high school)	76.0%	78.4%	72.2%
Math (grades 3-8)	77.5%	81.4%	94.3%
Math (high school)	55.5%	39.7%	66.1%
Reading and Math Performance Index	45.5%	45.7%	64.0%
Reading (grades 3-8)	47.9%	48.0%	67.4%
Reading (high school)	45.3%	43.0%	44.6%
Math (grades 3-8)	47.1%	50.1%	74.1%
Math (high school)	34.9%	22.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Hoxie (D0412)

Region: Northwest Kansas (Sheridan County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **72.20%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 72.20%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**. This district's unattainable proficiency output target (greater than 100%) indicates that reaching the efficient frontier would also require reducing inputs; improving outputs alone would not be sufficient.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	74.5%	>100%
Performance Index	41.1%	68.2%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Note: A target value of ">100%" indicates that output improvements alone are not sufficient; input reductions are also necessary.

Which data are included in the calculation of the district's efficiency score?

Inputs

- **Outputs**
- Core Spending
 (\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index

 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level "basic",
 "proficient", "advanced", and "exemplary" with higher scores awarded more points than lower scores)

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Hoxie (D0412)

Region: Northwest Kansas (Sheridan County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Hoxie with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

		Most Similar	Best-Performing
	This	Frontier	Frontier
Indicator	District	District*	District**
District Name	Hoxie	Burlingame	Waconda
District Code	D0412	D0454	D0272
County	Sheridan	Osage	Mitchell
Enrollment	350	351	365
Constraints			
Economically Disadvantaged Students	21.3%	31.1%	44.3%
English Language Learners	0.2%	0.0%	0.0%
Students with Disabilities	18.2%	21.6%	12.9%
Inputs			
Core Spending (per student)	\$9,801	\$6,794	\$9,480
Outputs			
Reading and Math Proficiency Rate	74.5%	81.6%	94.5%
Reading (grades 3-8)	80.8%	82.1%	96.9%
Reading (high school)	75.3%	72.1%	88.6%
Math (grades 3-8)	74.4%	87.5%	96.6%
Math (high school)	61.2%	64.5%	92.0%
Reading and Math Performance Index	41.1%	48.3%	70.2%
Reading (grades 3-8)	43.4%	47.4%	70.4%
Reading (high school)	42.9%	40.8%	61.8%
Math (grades 3-8)	39.2%	53.7%	77.0%
Math (high school)	40.6%	35.7%	64.0%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Hugoton (D0210)

Region: Southwest Kansas (Stevens County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **78.24%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 78.24%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	65.2%	83.3%
Performance Index	37.4%	52.4%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on column spending spectrum spending spectrum spectrum

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Hugoton (D0210)

Region: Southwest Kansas (Stevens County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Hugoton with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Hugoton	Kismet-Plains	Baldwin City
District Code	D0210	D0483	D0348
County	Stevens	Seward	Douglas
Enrollment	1,082	731	1,407
Constraints			
Economically Disadvantaged Students	47.3%	62.0%	15.2%
English Language Learners	11.2%	36.3%	0.1%
Students with Disabilities	9.6%	11.5%	13.7%
Inputs			
Core Spending (per student)	\$8,071	\$7,745	\$6,490
Outputs			
Reading and Math Proficiency Rate	65.2%	63.3%	88.7%
Reading (grades 3-8)	64.3%	63.7%	94.3%
Reading (high school)	63.9%	64.2%	72.2%
Math (grades 3-8)	69.6%	65.2%	94.3%
Math (high school)	55.0%	53.7%	66.1%
Reading and Math Performance Index	37.4%	36.7%	64.0%
Reading (grades 3-8)	36.8%	34.1%	67.4%
Reading (high school)	38.9%	38.6%	44.6%
Math (grades 3-8)	40.1%	39.5%	74.1%
Math (high school)	28.1%	34.2%	40.1%

* Efficient frontier district with most similar constraints as this district.

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Humboldt (D0258)

Region: Southeast Kansas (Allen County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **90.29%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 90.29%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	81.0%	89.7%
Performance Index	50.3%	59.6%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on c

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Humboldt (D0258)

Region: Southeast Kansas (Allen County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Humboldt with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Humboldt	West Elk	Baldwin City
District Code	D0258	D0282	D0348
County	Allen	Elk	Douglas
Enrollment	541	445	1,407
Constraints			
Economically Disadvantaged Students	46.2%	54.7%	15.2%
English Language Learners	0.2%	0.1%	0.1%
Students with Disabilities	30.3%	27.7%	13.7%
Inputs			
Core Spending (per student)	\$8,842	\$8,950	\$6,490
Outputs			
Reading and Math Proficiency Rate	81.0%	85.1%	88.7%
Reading (grades 3-8)	82.1%	89.0%	94.3%
Reading (high school)	88.1%	70.5%	72.2%
Math (grades 3-8)	82.7%	92.6%	94.3%
Math (high school)	72.1%	62.0%	66.1%
Reading and Math Performance Index	50.3%	56.6%	64.0%
Reading (grades 3-8)	50.1%	58.4%	67.4%
Reading (high school)	58.0%	40.3%	44.6%
Math (grades 3-8)	50.5%	66.4%	74.1%
Math (high school)	49.0%	34.7%	40.1%

* Efficient frontier district with most similar constraints as this district.

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Hutchinson (D0308)

Region: South Central Kansas (Reno County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **90.08%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score = 90.08%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	70.7%	78.5%
Performance Index	43.4%	49.9%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on c

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Hutchinson (D0308)

Region: South Central Kansas (Reno County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Hutchinson with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Hutchinson	Newton	Gardner-Edgerton
District Code	D0308	D0373	D0231
County	Reno	Harvey	Johnson
Enrollment	4,843	3,731	3,782
Constraints	,	,	,
Economically Disadvantaged Students	53.9%	45.5%	21.5%
English Language Learners	2.1%	5.9%	0.9%
Students with Disabilities	16.9%	15.4%	12.2%
Inputs			
Core Spending (per student)	\$7,684	\$5,915	\$5,565
Outputs			
Reading and Math Proficiency Rate	70.7%	75.1%	89.0%
Reading (grades 3-8)	75.1%	80.8%	88.9%
Reading (high school)	68.0%	72.8%	87.6%
Math (grades 3-8)	70.8%	76.7%	92.0%
Math (high school)	56.3%	55.1%	78.7%
Reading and Math Performance Index	43.4%	50.6%	61.5%
Reading (grades 3-8)	45.3%	54.7%	59.6%
Reading (high school)	40.9%	48.1%	63.8%
Math (grades 3-8)	45.5%	52.2%	65.9%
Math (high school)	31.2%	36.5%	50.3%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Independence (D0446)

Region: Southeast Kansas (Montgomery County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **94.12%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 94.12%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	75.6%	80.3%
Performance Index	49.7%	52.8%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

• Core Spending (\$ per student spent on core day-to-day operations,

adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Independence (D0446)

Region: Southeast Kansas (Montgomery County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Independence with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	7DL • -	Most Similar	Best-Performing
Indicator	This District	Frontier District*	Frontier District**
District Name	Independence	Osawatomie	Gardner-Edgerton
District Code	D0446	D0367	D0231
County	Montgomery	Miami	Johnson
Enrollment	1,974	1,235	3,782
Constraints			
Economically Disadvantaged Students	49.8%	50.8%	21.5%
English Language Learners	0.3%	0.0%	0.9%
Students with Disabilities	13.1%	15.3%	12.2%
Inputs			
Core Spending (per student)	\$7,224	\$6,193	\$5,565
Outputs			
Reading and Math Proficiency Rate	75.6%	75.5%	89.0%
Reading (grades 3-8)	79.4%	78.5%	88.9%
Reading (high school)	71.4%	78.4%	87.6%
Math (grades 3-8)	82.8%	81.4%	92.0%
Math (high school)	53.3%	39.7%	78.7%
Reading and Math Performance Index	49.7%	45.7%	61.5%
Reading (grades 3-8)	51.6%	48.0%	59.6%
Reading (high school)	43.6%	43.0%	63.8%
Math (grades 3-8)	57.7%	50.1%	65.9%
Math (high school)	30.9%	22.0%	50.3%

* Efficient frontier district with most similar constraints as this district.

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Ingalls (D0477)

Region: Southwest Kansas (Gray County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **82.37%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 82.37%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	68.3%	82.9%
Performance Index	39.3%	55.5%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Ingalls (D0477)

Region: Southwest Kansas (Gray County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Ingalls with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Ingalls	Rolla	Halstead
District Code	D0477	D0217	D0440
County	Gray	Morton	Harvey
Enrollment	267	212	735
Constraints			
Economically Disadvantaged Students	39.3%	53.5%	34.7%
English Language Learners	16.9%	15.2%	0.0%
Students with Disabilities	5.4%	10.7%	18.7%
Inputs			
Core Spending (per student)	\$7,578	\$11,780	\$6,792
Outputs			
Reading and Math Proficiency Rate	68.3%	78.6%	83.9%
Reading (grades 3-8)	72.9%	88.6%	87.0%
Reading (high school)	79.7%	74.2%	83.8%
Math (grades 3-8)	60.9%	77.2%	86.3%
Math (high school)	71.7%	44.1%	64.0%
Reading and Math Performance Index	39.3%	50.0%	55.8%
Reading (grades 3-8)	42.9%	55.7%	56.7%
Reading (high school)	45.9%	47.3%	55.3%
Math (grades 3-8)	36.2%	48.5%	59.6%
Math (high school)	33.7%	33.4%	41.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Inman (D0448)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **68.45%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 68.45%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**. This district's unattainable proficiency output target (greater than 100%) indicates that reaching the efficient frontier would also require reducing inputs; improving outputs alone would not be sufficient.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	77.5%	>100%
Performance Index	48.3%	76.4%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Note: A target value of ">100%" indicates that output improvements alone are not sufficient; input reductions are also necessary.

Which data are included in the calculation of the district's efficiency score?

Inputs

- **Outputs**
- Core Spending
 (\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index

 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level "basic",
 "proficient", "advanced", and "exemplary" with higher scores awarded more points than lower scores)

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Inman (D0448)

Region: North Central Kansas (McPherson County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Inman with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	7 1 1. • -	Most Similar	Best-Performing
Indicator	This District	Frontier District*	Frontier District**
District Name	Inman	Waconda	Leoti
District Code	D0448	D0272	D0467
County	McPherson	Mitchell	Wichita
Enrollment	441	365	501
Constraints			
Economically Disadvantaged Students	19.7%	44.3%	39.5%
English Language Learners	0.0%	0.0%	26.5%
Students with Disabilities	11.5%	12.9%	12.4%
Inputs			
Core Spending (per student)	\$8,388	\$9,480	\$8,455
Outputs			
Reading and Math Proficiency Rate	77.5%	94.5%	88.1%
Reading (grades 3-8)	85.0%	96.9%	84.4%
Reading (high school)	80.0%	88.6%	84.0%
Math (grades 3-8)	73.9%	96.6%	94.8%
Math (high school)	67.7%	92.0%	78.7%
Reading and Math Performance Index	48.3%	70.2%	58.9%
Reading (grades 3-8)	53.7%	70.4%	54.4%
Reading (high school)	48.1%	61.8%	62.3%
Math (grades 3-8)	45.9%	77.0%	63.1%
Math (high school)	42.9%	64.0%	57.5%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Iola (D0257)

Region: Southeast Kansas (Allen County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **82.65%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 82.65%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	69.1%	83.6%
Performance Index	42.5%	54.2%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index
 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic",
 "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Iola (D0257)

Region: Southeast Kansas (Allen County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Iola with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

		Most Similar	Best-Performing
Indicator	This District	Frontier District*	Frontier District**
District Name	Iola	Osawatomie	Gardner-Edgerton
District Code	D0257	D0367	D0231
County	Allen	Miami	Johnson
Enrollment	1,497	1,235	3,782
Constraints			
Economically Disadvantaged Students	50.6%	50.8%	21.5%
English Language Learners	0.2%	0.0%	0.9%
Students with Disabilities	20.7%	15.3%	12.2%
Inputs			
Core Spending (per student)	\$8,073	\$6,193	\$5,565
Outputs			
Reading and Math Proficiency Rate	69.1%	75.5%	89.0%
Reading (grades 3-8)	74.6%	78.5%	88.9%
Reading (high school)	70.7%	78.4%	87.6%
Math (grades 3-8)	70.0%	81.4%	92.0%
Math (high school)	39.9%	39.7%	78.7%
Reading and Math Performance Index	42.5%	45.7%	61.5%
Reading (grades 3-8)	43.4%	48.0%	59.6%
Reading (high school)	39.6%	43.0%	63.8%
Math (grades 3-8)	45.9%	50.1%	65.9%
Math (high school)	25.0%	22.0%	50.3%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Jayhawk (D0346)

Region: Southeast Kansas (Linn County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **74.78%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 74.78%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	66.0%	88.3%
Performance Index	39.9%	55.6%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

• Core Spending (\$ per student spent on core

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Jayhawk (D0346)

Region: Southeast Kansas (Linn County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Jayhawk with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Jayhawk	Waconda	Baldwin City
District Code	D0346	D0272	D0348
County	Linn	Mitchell	Douglas
Enrollment	588	365	1,407
Constraints			
Economically Disadvantaged Students	41.3%	44.3%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	13.3%	12.9%	13.7%
Inputs			
Core Spending (per student)	\$7,141	\$9,480	\$6,490
Outputs			
Reading and Math Proficiency Rate	66.0%	94.5%	88.7%
Reading (grades 3-8)	74.0%	96.9%	94.3%
Reading (high school)	56.4%	88.6%	72.2%
Math (grades 3-8)	68.7%	96.6%	94.3%
Math (high school)	50.0%	92.0%	66.1%
Reading and Math Performance Index	39.9%	70.2%	64.0%
Reading (grades 3-8)	44.4%	70.4%	67.4%
Reading (high school)	34.4%	61.8%	44.6%
Math (grades 3-8)	42.2%	77.0%	74.1%
Math (high school)	29.5%	64.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Jefferson County (D0339)

Region: Northeast Kansas (Jefferson County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **81.52%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 81.52%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	79.2%	97.2%
Performance Index	51.7%	65.5%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on cor

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index
 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic",
 "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Jefferson County (D0339)

Region: Northeast Kansas (Jefferson County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Jefferson County with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indiactor	This	Most Similar Frontier District*	Best-Performing Frontier District**
Indicator District Name	District Jefferson County	District* Waconda	Baldwin City
District Code	D0339	D0272	D0348
County	Jefferson	Mitchell	Douglas
Enrollment	503	365	1,407
Constraints			
Economically Disadvantaged Students	22.9%	44.3%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	14.0%	12.9%	13.7%
Inputs			
Core Spending (per student)	\$7,247	\$9,480	\$6,490
Outputs			
Reading and Math Proficiency Rate	79.2%	94.5%	88.7%
Reading (grades 3-8)	76.5%	96.9%	94.3%
Reading (high school)	81.8%	88.6%	72.2%
Math (grades 3-8)	85.6%	96.6%	94.3%
Math (high school)	61.7%	92.0%	66.1%
Reading and Math Performance Index	51.7%	70.2%	64.0%
Reading (grades 3-8)	46.8%	70.4%	67.4%
Reading (high school)	56.2%	61.8%	44.6%
Math (grades 3-8)	57.0%	77.0%	74.1%
Math (high school) * Efficient frontier district with most similar cons	46.6%	64.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Jefferson West (D0340)

Region: Northeast Kansas (Jefferson County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **82.13%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 82.13%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**. This district's unattainable proficiency output target (greater than 100%) indicates that reaching the efficient frontier would also require reducing inputs; improving outputs alone would not be sufficient.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	84.8%	>100%
Performance Index	56.1%	70.9%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Note: A target value of ">100%" indicates that output improvements alone are not sufficient; input reductions are also necessary.

Which data are included in the calculation of the district's efficiency score?

Inputs

- **Outputs**
- Core Spending
 (\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index

 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level "basic",
 "proficient", "advanced", and "exemplary" with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Jefferson West (D0340)

Region: Northeast Kansas (Jefferson County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Jefferson West with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance. In this case, the comparison district under both criteria is the same.

		Most Similar	Best-Performing
Indicator	This District	Frontier District*	Frontier District**
District Name	Jefferson West	Baldwin City	Baldwin City
District Code	D0340	D0348	D0348
County	Jefferson	Douglas	Douglas
Enrollment	971	1,407	1,407
Constraints			
Economically Disadvantaged Students	21.2%	15.2%	15.2%
English Language Learners	0.0%	0.1%	0.1%
Students with Disabilities	10.3%	13.7%	13.7%
Inputs			
Core Spending (per student)	\$6,932	\$6,490	\$6,490
Outputs			
Reading and Math Proficiency Rate	84.8%	88.7%	88.7%
Reading (grades 3-8)	89.7%	94.3%	94.3%
Reading (high school)	80.3%	72.2%	72.2%
Math (grades 3-8)	87.3%	94.3%	94.3%
Math (high school)	71.1%	66.1%	66.1%
Reading and Math Performance Index	56.1%	64.0%	64.0%
Reading (grades 3-8)	57.9%	67.4%	67.4%
Reading (high school)	53.5%	44.6%	44.6%
Math (grades 3-8)	59.7%	74.1%	74.1%
Math (high school)	46.4%	40.1%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Jetmore (D0227)

Region: Southwest Kansas (Hodgeman County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **72.24%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 72.24%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	68.4%	94.6%
Performance Index	38.3%	63.2%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Jetmore (D0227)

Region: Southwest Kansas (Hodgeman County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Jetmore with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

T W	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Jetmore	Ashland	Halstead
District Code	D0227	D0220	D0440
County	Hodgeman	Clark	Harvey
Enrollment	310	217	735
Constraints			
Economically Disadvantaged Students	34.1%	50.3%	34.7%
English Language Learners	4.3%	6.0%	0.0%
Students with Disabilities	12.7%	16.1%	18.7%
Inputs			
Core Spending (per student)	\$7,663	\$11,034	\$6,792
Outputs			
Reading and Math Proficiency Rate	68.4%	86.3%	83.9%
Reading (grades 3-8)	70.9%	82.5%	87.0%
Reading (high school)	86.6%	92.3%	83.8%
Math (grades 3-8)	66.2%	90.3%	86.3%
Math (high school)	53.5%	81.0%	64.0%
Reading and Math Performance Index	38.3%	64.2%	55.8%
Reading (grades 3-8)	41.0%	59.5%	56.7%
Reading (high school)	49.0%	65.1%	55.3%
Math (grades 3-8)	36.0%	71.7%	59.6%
Math (high school)	28.9%	51.3%	41.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Kansas City (D0500)

Region: Northeast Kansas (Wyandotte County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **83.58%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score = 83.58%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	48.5%	58.0%
Performance Index	26.8%	36.2%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index
 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic",
 "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Kansas City (D0500)

Region: Northeast Kansas (Wyandotte County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Kansas City with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Kansas City	Dodge City	Shawnee Mission
District Code	D0500	D0443	D0512
County	Wyandotte	Ford	Johnson
Enrollment	20,161	5,947	28,667
Constraints			
Economically Disadvantaged Students	73.8%	68.9%	16.2%
English Language Learners	16.7%	40.1%	4.7%
Students with Disabilities	12.4%	13.2%	15.2%
Inputs			
Core Spending (per student)	\$6,322	\$7,703	\$5,728
Outputs			
Reading and Math Proficiency Rate	48.5%	57.2%	81.4%
Reading (grades 3-8)	55.1%	60.0%	84.0%
Reading (high school)	45.3%	56.8%	83.6%
Math (grades 3-8)	49.3%	61.1%	82.9%
Math (high school)	22.8%	35.6%	70.4%
Reading and Math Performance Index	26.8%	32.9%	55.3%
Reading (grades 3-8)	30.5%	33.8%	56.8%
Reading (high school)	25.2%	32.5%	56.3%
Math (grades 3-8)	27.3%	35.8%	57.5%
Math (high school)	12.3%	21.9%	46.2%

* Efficient frontier district with most similar constraints as this district.

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Kaw Valley (D0321)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **82.18%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 82.18%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	81.2%	98.8%
Performance Index	49.9%	65.5%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Kaw Valley (D0321)

Region: Northeast Kansas (Pottawatomie County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Kaw Valley with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	4	Most Similar	Best-Performing
T 11 4	This	Frontier	Frontier
Indicator	District	District*	District**
District Name	Kaw Valley	Halstead	Baldwin City
District Code	D0321	D0440	D0348
County	Pottawatomie	Harvey	Douglas
Enrollment	1,131	735	1,407
Constraints			
Economically Disadvantaged Students	29.9%	34.7%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	19.8%	18.7%	13.7%
Inputs			
Core Spending (per student)	\$9,606	\$6,792	\$6,490
Outputs			
Reading and Math Proficiency Rate	81.2%	83.9%	88.7%
Reading (grades 3-8)	84.9%	87.0%	94.3%
Reading (high school)	78.7%	83.8%	72.2%
Math (grades 3-8)	82.2%	86.3%	94.3%
Math (high school)	65.1%	64.0%	66.1%
Reading and Math Performance Index	49.9%	55.8%	64.0%
Reading (grades 3-8)	51.6%	56.7%	67.4%
Reading (high school)	53.0%	55.3%	44.6%
Math (grades 3-8)	51.3%	59.6%	74.1%
Math (high school)	37.5%	41.1%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Kingman (D0331)

Region: South Central Kansas (Kingman County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **77.37%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 77.37%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	69.9%	90.4%
Performance Index	42.9%	59.7%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Kingman (D0331)

Region: South Central Kansas (Kingman County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Kingman with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Kingman	Halstead	Baldwin City
District Code	D0331	D0440	D0348
County	Kingman	Harvey	Douglas
Enrollment	1,180	735	1,407
Constraints			
Economically Disadvantaged Students	39.0%	34.7%	15.2%
English Language Learners	0.1%	0.0%	0.1%
Students with Disabilities	18.5%	18.7%	13.7%
Inputs			
Core Spending (per student)	\$8,117	\$6,792	\$6,490
Outputs		•	
Reading and Math Proficiency Rate	69.9%	83.9%	88.7%
Reading (grades 3-8)	72.4%	87.0%	94.3%
Reading (high school)	70.1%	83.8%	72.2%
Math (grades 3-8)	71.4%	86.3%	94.3%
Math (high school)	60.1%	64.0%	66.1%
Reading and Math Performance Index	42.9%	55.8%	64.0%
Reading (grades 3-8)	44.0%	56.7%	67.4%
Reading (high school)	45.7%	55.3%	44.6%
Math (grades 3-8)	43.7%	59.6%	74.1%
Math (high school)	37.8%	41.1%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Kinsely-Offerle (D0347)

Region: South Central Kansas (Edwards County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **85.53%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 85.53%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	74.3%	86.8%
Performance Index	44.6%	55.1%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index
 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic",
 "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Kinsely-Offerle (D0347)

Region: South Central Kansas (Edwards County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Kinsely-Offerle with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

To dia dari	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Kinsely-Offerle	Deerfield	Waconda
District Code	D0347	D0216	D0272
County	Edwards	Kearny	Mitchell
Enrollment	350	362	365
Constraints			
Economically Disadvantaged Students	47.8%	53.2%	44.3%
English Language Learners	12.3%	32.3%	0.0%
Students with Disabilities	15.3%	16.4%	12.9%
Inputs			
Core Spending (per student)	\$9,597	\$9,619	\$9,480
Outputs			
Reading and Math Proficiency Rate	74.3%	71.4%	94.5%
Reading (grades 3-8)	80.7%	84.0%	96.9%
Reading (high school)	80.8%	55.3%	88.6%
Math (grades 3-8)	71.3%	81.4%	96.6%
Math (high school)	57.6%	16.3%	92.0%
Reading and Math Performance Index	44.6%	43.1%	70.2%
Reading (grades 3-8)	49.7%	51.6%	70.4%
Reading (high school)	41.9%	35.0%	61.8%
Math (grades 3-8)	45.8%	48.7%	77.0%
Math (high school)	32.3%	11.6%	64.0%

* Efficient frontier district with most similar constraints as this district.

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Labette (D0506)

Region: Southeast Kansas (Labette County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **88.43%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = **88.43%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	76.8%	86.8%
Performance Index	48.5%	54.9%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Labette (D0506)

Region: Southeast Kansas (Labette County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Labette with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance. In this case, the comparison district under both criteria is the same.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Labette	Gardner- Edgerton	Gardner-Edgerton
District Code	D0506	D0231	D0231
County	Labette	Johnson	Johnson
Enrollment	1,708	3,782	3,782
Constraints			
Economically Disadvantaged Students	43.4%	21.5%	21.5%
English Language Learners	0.0%	0.9%	0.9%
Students with Disabilities	10.6%	12.2%	12.2%
Inputs			
Core Spending (per student)	\$7,112	\$5,565	\$5,565
Outputs			
Reading and Math Proficiency Rate	76.8%	89.0%	89.0%
Reading (grades 3-8)	86.0%	88.9%	88.9%
Reading (high school)	71.5%	87.6%	87.6%
Math (grades 3-8)	81.3%	92.0%	92.0%
Math (high school)	39.7%	78.7%	78.7%
Reading and Math Performance Index	48.5%	61.5%	61.5%
Reading (grades 3-8)	55.5%	59.6%	59.6%
Reading (high school)	42.8%	63.8%	63.8%
Math (grades 3-8)	51.6%	65.9%	65.9%
Math (high school) * Efficient frontier district with most similar cons	23.3%	50.3%	50.3%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: LaCrosse (D0395)

Region: South Central Kansas (Rush County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **80.14%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score = 80.14%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	73.1%	91.2%
Performance Index	41.9%	59.6%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index
 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic",
 "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: LaCrosse (D0395)

Region: South Central Kansas (Rush County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares LaCrosse with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	LaCrosse	Halstead	Leoti
District Code	D0395	D0440	D0467
County	Rush	Harvey	Wichita
Enrollment	311	735	501
Constraints			
Economically Disadvantaged Students	42.5%	34.7%	39.5%
English Language Learners	0.0%	0.0%	26.5%
Students with Disabilities	17.8%	18.7%	12.4%
Inputs			
Core Spending (per student)	\$8,440	\$6,792	\$8,455
Outputs			
Reading and Math Proficiency Rate	73.1%	83.9%	88.1%
Reading (grades 3-8)	77.8%	87.0%	84.4%
Reading (high school)	70.3%	83.8%	84.0%
Math (grades 3-8)	71.8%	86.3%	94.8%
Math (high school)	73.6%	64.0%	78.7%
Reading and Math Performance Index	41.9%	55.8%	58.9%
Reading (grades 3-8)	44.8%	56.7%	54.4%
Reading (high school)	43.9%	55.3%	62.3%
Math (grades 3-8)	40.1%	59.6%	63.1%
Math (high school)	41.8%	41.1%	57.5%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Lakin (D0215)

Region: Southwest Kansas (Kearny County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **91.42%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 91.42%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	79.1%	86.5%
Performance Index	51.4%	57.5%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index
 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic",
 "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Lakin (D0215)

Region: Southwest Kansas (Kearny County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Lakin with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

		Most Similar	Best-Performing
Indicator	This District	Frontier District*	Frontier District**
District Name	Lakin	Leoti	Baldwin City
District Code	D0215	D0467	D0348
County	Kearny	Wichita	Douglas
Enrollment	673	501	1,407
Constraints			
Economically Disadvantaged Students	38.0%	39.5%	15.2%
English Language Learners	15.0%	26.5%	0.1%
Students with Disabilities	13.3%	12.4%	13.7%
Inputs			
Core Spending (per student)	\$8,192	\$8,455	\$6,490
Outputs			
Reading and Math Proficiency Rate	79.1%	88.1%	88.7%
Reading (grades 3-8)	76.8%	84.4%	94.3%
Reading (high school)	73.4%	84.0%	72.2%
Math (grades 3-8)	89.6%	94.8%	94.3%
Math (high school)	63.3%	78.7%	66.1%
Reading and Math Performance Index	51.4%	58.9%	64.0%
Reading (grades 3-8)	46.3%	54.4%	67.4%
Reading (high school)	42.1%	62.3%	44.6%
Math (grades 3-8)	63.4%	63.1%	74.1%
Math (high school)	43.5%	57.5%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Lawrence (D0497)

Region: Northeast Kansas (Douglas County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **92.35%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 92.35%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	76.7%	83.1%
Performance Index	50.2%	55.2%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on c

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Lawrence (D0497)

Region: Northeast Kansas (Douglas County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Lawrence with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Lawrence	Gardner- Edgerton	Shawnee Mission
District Code	D0497	D0231	D0512
County	Douglas	Johnson	Johnson
Enrollment	10,269	3,782	28,667
Constraints			
Economically Disadvantaged Students	29.6%	21.5%	16.2%
English Language Learners	4.7%	0.9%	4.7%
Students with Disabilities	15.0%	12.2%	15.2%
Inputs			
Core Spending (per student)	\$6,759	\$5,565	\$5,728
Outputs			
Reading and Math Proficiency Rate	76.7%	89.0%	81.4%
Reading (grades 3-8)	80.0%	88.9%	84.0%
Reading (high school)	73.0%	87.6%	83.6%
Math (grades 3-8)	79.1%	92.0%	82.9%
Math (high school)	63.9%	78.7%	70.4%
Reading and Math Performance Index	50.2%	61.5%	55.3%
Reading (grades 3-8)	52.7%	59.6%	56.8%
Reading (high school)	49.8%	63.8%	56.3%
Math (grades 3-8)	51.4%	65.9%	57.5%
Math (high school) * Efficient frontier district with most similar cons	41.5%	50.3%	46.2%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Leavenworth (D0453)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **90.85%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 90.85%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	62.6%	68.9%
Performance Index	36.3%	44.9%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on core

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Leavenworth (D0453)

Region: Northeast Kansas (Leavenworth County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Leavenworth with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Leavenworth	Newton	Gardner-Edgerton
District Code	D0453	D0373	D0231
County	Leavenworth	Harvey	Johnson
Enrollment	4,155	3,731	3,782
Constraints	,	- ,	- ,
Economically Disadvantaged Students	46.4%	45.5%	21.5%
English Language Learners	3.1%	5.9%	0.9%
Students with Disabilities	18.7%	15.4%	12.2%
Inputs			
Core Spending (per student)	\$5,644	\$5,915	\$5,565
Outputs			
Reading and Math Proficiency Rate	62.6%	75.1%	89.0%
Reading (grades 3-8)	67.1%	80.8%	88.9%
Reading (high school)	64.1%	72.8%	87.6%
Math (grades 3-8)	65.3%	76.7%	92.0%
Math (high school)	44.6%	55.1%	78.7%
Reading and Math Performance Index	36.3%	50.6%	61.5%
Reading (grades 3-8)	37.9%	54.7%	59.6%
Reading (high school)	37.4%	48.1%	63.8%
Math (grades 3-8)	38.7%	52.2%	65.9%
Math (high school)	27.1%	36.5%	50.3%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Lebo-Waverly (D0243)

Region: Southeast Kansas (Coffey County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **74.25%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 74.25%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	69.6%	93.8%
Performance Index	41.1%	62.2%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on cc

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Lebo-Waverly (D0243)

Region: Southeast Kansas (Coffey County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Lebo-Waverly with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Lebo-Waverly	Waconda	Baldwin City
District Code	D0243	D0272	D0348
County	Coffey	Mitchell	Douglas
Enrollment	595	365	1,407
Constraints			
Economically Disadvantaged Students	35.5%	44.3%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	13.3%	12.9%	13.7%
Inputs			
Core Spending (per student)	\$7,475	\$9,480	\$6,490
Outputs			
Reading and Math Proficiency Rate	69.6%	94.5%	88.7%
Reading (grades 3-8)	74.5%	96.9%	94.3%
Reading (high school)	63.7%	88.6%	72.2%
Math (grades 3-8)	72.3%	96.6%	94.3%
Math (high school)	51.7%	92.0%	66.1%
Reading and Math Performance Index	41.1%	70.2%	64.0%
Reading (grades 3-8)	44.7%	70.4%	67.4%
Reading (high school)	32.6%	61.8%	44.6%
Math (grades 3-8)	44.0%	77.0%	74.1%
Math (high school)	28.3%	64.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Leon (D0205)

Region: South Central Kansas (Butler County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **82.62%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 82.62%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	79.7%	96.4%
Performance Index	50.6%	64.8%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on cor

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Leon (D0205)

Region: South Central Kansas (Butler County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Leon with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Leon	Osawatomie	Baldwin City
District Code	D0205	D0367	D0348
County	Butler	Miami	Douglas
Enrollment	741	1,235	1,407
Constraints			
Economically Disadvantaged Students	28.9%	50.8%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	13.9%	15.3%	13.7%
Inputs			
Core Spending (per student)	\$7,454	\$6,193	\$6,490
Outputs			
Reading and Math Proficiency Rate	79.7%	75.5%	88.7%
Reading (grades 3-8)	90.7%	78.5%	94.3%
Reading (high school)	67.8%	78.4%	72.2%
Math (grades 3-8)	82.4%	81.4%	94.3%
Math (high school)	51.4%	39.7%	66.1%
Reading and Math Performance Index	50.6%	45.7%	64.0%
Reading (grades 3-8)	58.2%	48.0%	67.4%
Reading (high school)	46.0%	43.0%	44.6%
Math (grades 3-8)	52.8%	50.1%	74.1%
Math (high school)	25.7%	22.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: LeRoy-Gridley (D0245)

Region: Southeast Kansas (Coffey County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **72.48%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 72.48%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	71.4%	98.5%
Performance Index	39.4%	64.9%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on c

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: LeRoy-Gridley (D0245)

Region: Southeast Kansas (Coffey County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares LeRoy-Gridley with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	LeRoy-Gridley	Halstead	Leoti
District Code	D0245	D0440	D0467
County	Coffey	Harvey	Wichita
Enrollment	278	735	501
Constraints			
Economically Disadvantaged Students	36.2%	34.7%	39.5%
English Language Learners	0.0%	0.0%	26.5%
Students with Disabilities	15.9%	18.7%	12.4%
Inputs			
Core Spending (per student)	\$8,703	\$6,792	\$8,455
Outputs			
Reading and Math Proficiency Rate	71.4%	83.9%	88.1%
Reading (grades 3-8)	73.0%	87.0%	84.4%
Reading (high school)	63.5%	83.8%	84.0%
Math (grades 3-8)	75.7%	86.3%	94.8%
Math (high school)	49.7%	64.0%	78.7%
Reading and Math Performance Index	39.4%	55.8%	58.9%
Reading (grades 3-8)	41.1%	56.7%	54.4%
Reading (high school)	29.5%	55.3%	62.3%
Math (grades 3-8)	43.1%	59.6%	63.1%
Math (high school)	25.6%	41.1%	57.5%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Liberal (D0480)

Region: Southwest Kansas (Seward County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **94.90%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score = 94.90%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	56.0%	59.0%
Performance Index	32.7%	36.3%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Liberal (D0480)

Region: Southwest Kansas (Seward County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Liberal with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Liberal	Dodge City	Gardner-Edgerton
District Code	D0480	D0443	D0231
County	Seward	Ford	Johnson
Enrollment	4,533	5,947	3,782
Constraints			
Economically Disadvantaged Students	64.1%	68.9%	21.5%
English Language Learners	35.4%	40.1%	0.9%
Students with Disabilities	9.2%	13.2%	12.2%
Inputs			
Core Spending (per student)	\$6,623	\$7,703	\$5,565
Outputs		•	
Reading and Math Proficiency Rate	56.0%	57.2%	89.0%
Reading (grades 3-8)	61.0%	60.0%	88.9%
Reading (high school)	60.8%	56.8%	87.6%
Math (grades 3-8)	58.3%	61.1%	92.0%
Math (high school)	25.8%	35.6%	78.7%
Reading and Math Performance Index	32.7%	32.9%	61.5%
Reading (grades 3-8)	35.0%	33.8%	59.6%
Reading (high school)	34.2%	32.5%	63.8%
Math (grades 3-8)	34.8%	35.8%	65.9%
Math (high school)	15.7%	21.9%	50.3%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Lincoln (D0298)

Region: North Central Kansas (Lincoln County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **95.69%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score = 95.69%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	86.1%	90.0%
Performance Index	56.5%	59.1%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on cor

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Lincoln (D0298)

Region: North Central Kansas (Lincoln County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Lincoln with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Lincoln	Halstead	Leoti
District Code	D0298	D0440	D0467
County	Lincoln	Harvey	Wichita
Enrollment	389	735	501
Constraints			
Economically Disadvantaged Students	44.7%	34.7%	39.5%
English Language Learners	0.1%	0.0%	26.5%
Students with Disabilities	17.8%	18.7%	12.4%
Inputs			
Core Spending (per student)	\$8,372	\$6,792	\$8,455
Outputs			
Reading and Math Proficiency Rate	86.1%	83.9%	88.1%
Reading (grades 3-8)	89.6%	87.0%	84.4%
Reading (high school)	75.4%	83.8%	84.0%
Math (grades 3-8)	92.6%	86.3%	94.8%
Math (high school)	60.0%	64.0%	78.7%
Reading and Math Performance Index	56.5%	55.8%	58.9%
Reading (grades 3-8)	58.9%	56.7%	54.4%
Reading (high school)	40.0%	55.3%	62.3%
Math (grades 3-8)	63.4%	59.6%	63.1%
Math (high school)	42.1%	41.1%	57.5%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Little River (D0444)

Region: South Central Kansas (Rice County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **73.49%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 73.49%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**. This district's unattainable proficiency output target (greater than 100%) indicates that reaching the efficient frontier would also require reducing inputs; improving outputs alone would not be sufficient.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	78.5%	>100%
Performance Index	46.7%	66.2%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Note: A target value of ">100%" indicates that output improvements alone are not sufficient; input reductions are also necessary.

Which data are included in the calculation of the district's efficiency score?

Inputs

- **Outputs**
- Core Spending
 (\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index

 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level "basic",
 "proficient", "advanced", and "exemplary" with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Little River (D0444)

Region: South Central Kansas (Rice County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Little River with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Little River	Halstead	Waconda
District Code	D0444	D0440	D0272
County	Rice	Harvey	Mitchell
Enrollment	297	735	365
Constraints			
Economically Disadvantaged Students	28.3%	34.7%	44.3%
English Language Learners	0.0%	0.0%	0.0%
Students with Disabilities	15.5%	18.7%	12.9%
Inputs			
Core Spending (per student)	\$9,403	\$6,792	\$9,480
Outputs			
Reading and Math Proficiency Rate	78.5%	83.9%	94.5%
Reading (grades 3-8)	83.6%	87.0%	96.9%
Reading (high school)	77.3%	83.8%	88.6%
Math (grades 3-8)	85.0%	86.3%	96.6%
Math (high school)	48.6%	64.0%	92.0%
Reading and Math Performance Index	46.7%	55.8%	70.2%
Reading (grades 3-8)	51.4%	56.7%	70.4%
Reading (high school)	39.0%	55.3%	61.8%
Math (grades 3-8)	50.9%	59.6%	77.0%
Math (high school)	28.1%	41.1%	64.0%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Lorraine (D0328)

Region: North Central Kansas (Ellsworth County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **89.29%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score = 89.29%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	80.4%	90.0%
Performance Index	52.3%	58.6%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on cor

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Lorraine (D0328)

Region: North Central Kansas (Ellsworth County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Lorraine with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

		Most Similar	Best-Performing
Indicator	This District	Frontier District*	Frontier District**
District Name	Lorraine	Osawatomie	Baldwin City
District Code	D0328	D0367	D0348
County	Ellsworth	Miami	Douglas
Enrollment	473	1,235	1,407
Constraints			
Economically Disadvantaged Students	46.8%	50.8%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	14.3%	15.3%	13.7%
Inputs			
Core Spending (per student)	\$8,600	\$6,193	\$6,490
Outputs			
Reading and Math Proficiency Rate	80.4%	75.5%	88.7%
Reading (grades 3-8)	87.2%	78.5%	94.3%
Reading (high school)	80.9%	78.4%	72.2%
Math (grades 3-8)	86.8%	81.4%	94.3%
Math (high school)	60.2%	39.7%	66.1%
Reading and Math Performance Index	52.3%	45.7%	64.0%
Reading (grades 3-8)	61.5%	48.0%	67.4%
Reading (high school)	44.7%	43.0%	44.6%
Math (grades 3-8)	56.8%	50.1%	74.1%
Math (high school)	33.9%	22.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Louisburg (D0416)

Region: Southeast Kansas (Miami County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **94.64%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score = 94.64%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	83.4%	88.1%
Performance Index	50.8%	59.9%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on control

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Louisburg (D0416)

Region: Southeast Kansas (Miami County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Louisburg with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

		Most Similar	Best-Performing
Indicator	This District	Frontier District*	Frontier District**
District Name	Louisburg	Baldwin City	Gardner-Edgerton
District Code	D0416	D0348	D0231
County	Miami	Douglas	Johnson
Enrollment	1,520	1,407	3,782
Constraints			
Economically Disadvantaged Students	14.3%	15.2%	21.5%
English Language Learners	0.0%	0.1%	0.9%
Students with Disabilities	11.2%	13.7%	12.2%
Inputs			
Core Spending (per student)	\$5,346	\$6,490	\$5,565
Outputs			
Reading and Math Proficiency Rate	83.4%	88.7%	89.0%
Reading (grades 3-8)	85.6%	94.3%	88.9%
Reading (high school)	83.8%	72.2%	87.6%
Math (grades 3-8)	84.8%	94.3%	92.0%
Math (high school)	72.3%	66.1%	78.7%
Reading and Math Performance Index	50.8%	64.0%	61.5%
Reading (grades 3-8)	51.7%	67.4%	59.6%
Reading (high school)	53.4%	44.6%	63.8%
Math (grades 3-8)	51.9%	74.1%	65.9%
Math (high school)	41.5%	40.1%	50.3%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Lyndon (D0421)

Region: Northeast Kansas (Osage County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **76.21%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 76.21%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	69.5%	91.2%
Performance Index	41.4%	55.9%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Lyndon (D0421)

Region: Northeast Kansas (Osage County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Lyndon with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance. In this case, the comparison district under both criteria is the same.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Lyndon	Halstead	Halstead
District Code	D0421	D0440	D0440
County	Osage	Harvey	Harvey
Enrollment	462	735	735
Constraints			
Economically Disadvantaged Students	24.1%	34.7%	34.7%
English Language Learners	0.0%	0.0%	0.0%
Students with Disabilities	17.2%	18.7%	18.7%
Inputs			
Core Spending (per student)	\$7,268	\$6,792	\$6,792
Outputs			
Reading and Math Proficiency Rate	69.5%	83.9%	83.9%
Reading (grades 3-8)	69.8%	87.0%	87.0%
Reading (high school)	81.1%	83.8%	83.8%
Math (grades 3-8)	68.2%	86.3%	86.3%
Math (high school)	61.1%	64.0%	64.0%
Reading and Math Performance Index	41.4%	55.8%	55.8%
Reading (grades 3-8)	41.7%	56.7%	56.7%
Reading (high school)	49.8%	55.3%	55.3%
Math (grades 3-8)	38.3%	59.6%	59.6%
Math (high school)	44.2%	41.1%	41.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Macksville (D0351)

Region: South Central Kansas (Stafford County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **91.92%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 91.92%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	72.6%	79.0%
Performance Index	41.1%	49.0%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Macksville (D0351)

Region: South Central Kansas (Stafford County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Macksville with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

		Most Similar	Best-Performing
Indicator	This District	Frontier District*	Frontier District**
District Name	Macksville	Rolla	Waconda
District Code	D0351	D0217	D0272
County	Stafford	Morton	Mitchell
Enrollment	303	212	365
Constraints			
Economically Disadvantaged Students	57.6%	53.5%	44.3%
English Language Learners	14.4%	15.2%	0.0%
Students with Disabilities	8.3%	10.7%	12.9%
Inputs			
Core Spending (per student)	\$9,210	\$11,780	\$9,480
Outputs			
Reading and Math Proficiency Rate	72.6%	78.6%	94.5%
Reading (grades 3-8)	77.1%	88.6%	96.9%
Reading (high school)	79.3%	74.2%	88.6%
Math (grades 3-8)	74.1%	77.2%	96.6%
Math (high school)	58.4%	44.1%	92.0%
Reading and Math Performance Index	41.1%	50.0%	70.2%
Reading (grades 3-8)	43.7%	55.7%	70.4%
Reading (high school)	49.5%	47.3%	61.8%
Math (grades 3-8)	41.5%	48.5%	77.0%
Math (high school)	31.4%	33.4%	64.0%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Madison-Virgil (D0386)

Region: Southeast Kansas (Greenwood County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **82.09%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 82.09%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	76.9%	93.6%
Performance Index	46.0%	60.4%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Madison-Virgil (D0386)

Region: Southeast Kansas (Greenwood County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Madison-Virgil with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Madison-Virgil	Halstead	Leoti
District Code	D0386	D0440	D0467
County	Greenwood	Harvey	Wichita
Enrollment	257	735	501
Constraints			
Economically Disadvantaged Students	45.1%	34.7%	39.5%
English Language Learners	0.0%	0.0%	26.5%
Students with Disabilities	17.4%	18.7%	12.4%
Inputs			
Core Spending (per student)	\$8,965	\$6,792	\$8,455
Outputs			
Reading and Math Proficiency Rate	76.9%	83.9%	88.1%
Reading (grades 3-8)	78.6%	87.0%	84.4%
Reading (high school)	65.3%	83.8%	84.0%
Math (grades 3-8)	81.5%	86.3%	94.8%
Math (high school)	63.9%	64.0%	78.7%
Reading and Math Performance Index	46.0%	55.8%	58.9%
Reading (grades 3-8)	46.1%	56.7%	54.4%
Reading (high school)	35.9%	55.3%	62.3%
Math (grades 3-8)	50.1%	59.6%	63.1%
Math (high school)	38.7%	41.1%	57.5%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Maize (D0266)

Region: South Central Kansas (Sedgwick County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **92.89%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 92.89%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	79.6%	85.7%
Performance Index	50.9%	56.8%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on core day-to-day operations,

adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Maize (D0266)

Region: South Central Kansas (Sedgwick County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Maize with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

		Most Similar	Best-Performing
	This	Frontier	Frontier
Indicator	District	District*	District**
District Name	Maize	DeSoto	Gardner-Edgerton
District Code	D0266	D0232	D0231
County	Sedgwick	Johnson	Johnson
Enrollment	6,027	5,090	3,782
Constraints			
Economically Disadvantaged Students	9.5%	11.7%	21.5%
English Language Learners	1.5%	2.7%	0.9%
Students with Disabilities	9.5%	8.6%	12.2%
Inputs			
Core Spending (per student)	\$5,357	\$5,385	\$5,565
Outputs			
Reading and Math Proficiency Rate	79.6%	81.0%	89.0%
Reading (grades 3-8)	82.4%	84.5%	88.9%
Reading (high school)	75.2%	77.7%	87.6%
Math (grades 3-8)	81.4%	82.8%	92.0%
Math (high school)	68.3%	61.5%	78.7%
Reading and Math Performance Index	50.9%	54.1%	61.5%
Reading (grades 3-8)	52.8%	57.1%	59.6%
Reading (high school)	47.1%	50.2%	63.8%
Math (grades 3-8)	51.8%	55.7%	65.9%
Math (high school)	43.9%	37.2%	50.3%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Manhattan (D0383)

Region: North Central Kansas (Riley County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **83.36%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score = 83.36%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	78.7%	94.4%
Performance Index	51.2%	61.4%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on con-

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Manhattan (D0383)

Region: North Central Kansas (Riley County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Manhattan with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Manhattan	Newton	Gardner-Edgerton
District Code	D0383	D0373	D0231
County	Riley	Harvey	Johnson
Enrollment	5,182	3,731	3,782
Constraints	,	,	,
Economically Disadvantaged Students	31.0%	45.5%	21.5%
English Language Learners	2.5%	5.9%	0.9%
Students with Disabilities	15.6%	15.4%	12.2%
Inputs			
Core Spending (per student)	\$8,693	\$5,915	\$5,565
Outputs			
Reading and Math Proficiency Rate	78.7%	75.1%	89.0%
Reading (grades 3-8)	83.1%	80.8%	88.9%
Reading (high school)	80.7%	72.8%	87.6%
Math (grades 3-8)	79.3%	76.7%	92.0%
Math (high school)	65.4%	55.1%	78.7%
Reading and Math Performance Index	51.2%	50.6%	61.5%
Reading (grades 3-8)	53.2%	54.7%	59.6%
Reading (high school)	52.8%	48.1%	63.8%
Math (grades 3-8)	52.8%	52.2%	65.9%
Math (high school)	42.6%	36.5%	50.3%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Marais Des Cygnes (D0456)

Region: Northeast Kansas (Osage County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **88.42%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 88.42%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	67.8%	76.7%
Performance Index	39.7%	51.0%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

• Core Spending (\$ per student spent on c

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Marais Des Cygnes (D0456)

Region: Northeast Kansas (Osage County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Marais Des Cygnes with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Marais Des Cygnes	West Elk	Halstead
District Code	D0456	D0282	D0440
County	Osage	Elk	Harvey
Enrollment	272	445	735
Constraints			
Economically Disadvantaged Students	55.2%	54.7%	34.7%
English Language Learners	0.0%	0.1%	0.0%
Students with Disabilities	28.6%	27.7%	18.7%
Inputs			
Core Spending (per student)	\$7,784	\$8,950	\$6,792
Outputs			
Reading and Math Proficiency Rate	67.8%	85.1%	83.9%
Reading (grades 3-8)	71.4%	89.0%	87.0%
Reading (high school)	62.9%	70.5%	83.8%
Math (grades 3-8)	60.4%	92.6%	86.3%
Math (high school)	85.1%	62.0%	64.0%
Reading and Math Performance Index	39.7%	56.6%	55.8%
Reading (grades 3-8)	38.9%	58.4%	56.7%
Reading (high school)	37.7%	40.3%	55.3%
Math (grades 3-8)	35.3%	66.4%	59.6%
Math (high school) *Efficient frontier district with most similar cons	60.5%	34.7%	41.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Marion (D0408)

Region: North Central Kansas (Marion County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **92.25%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 92.25%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	78.5%	85.1%
Performance Index	49.4%	56.4%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on core day-to-day operations,

adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Marion (D0408)

Region: North Central Kansas (Marion County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Marion with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Marion	Halstead	Baldwin City
District Code	D0408	D0440	D0348
County	Marion	Harvey	Douglas
Enrollment	666	735	1,407
Constraints			
Economically Disadvantaged Students	39.0%	34.7%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	20.1%	18.7%	13.7%
Inputs			
Core Spending (per student)	\$7,481	\$6,792	\$6,490
Outputs			
Reading and Math Proficiency Rate	78.5%	83.9%	88.7%
Reading (grades 3-8)	78.0%	87.0%	94.3%
Reading (high school)	84.2%	83.8%	72.2%
Math (grades 3-8)	82.0%	86.3%	94.3%
Math (high school)	59.1%	64.0%	66.1%
Reading and Math Performance Index	49.4%	55.8%	64.0%
Reading (grades 3-8)	47.6%	56.7%	67.4%
Reading (high school)	54.4%	55.3%	44.6%
Math (grades 3-8)	52.4%	59.6%	74.1%
Math (high school)	36.6%	41.1%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Marmaton Valley (D0256)

Region: Southeast Kansas (Allen County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **87.77%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 87.77%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	78.6%	89.5%
Performance Index	48.3%	58.0%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on c

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Marmaton Valley (D0256)

Region: Southeast Kansas (Allen County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Marmaton Valley with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Marmaton Valley	Halstead	Leoti
District Code	D0256	D0440	D0467
County	Allen	Harvey	Wichita
Enrollment	379	735	501
Constraints			
Economically Disadvantaged Students	48.8%	34.7%	39.5%
English Language Learners	0.0%	0.0%	26.5%
Students with Disabilities	17.6%	18.7%	12.4%
Inputs			
Core Spending (per student)	\$8,870	\$6,792	\$8,455
Outputs			
Reading and Math Proficiency Rate	78.6%	83.9%	88.1%
Reading (grades 3-8)	85.6%	87.0%	84.4%
Reading (high school)	83.1%	83.8%	84.0%
Math (grades 3-8)	78.3%	86.3%	94.8%
Math (high school)	55.6%	64.0%	78.7%
Reading and Math Performance Index	48.3%	55.8%	58.9%
Reading (grades 3-8)	51.6%	56.7%	54.4%
Reading (high school)	50.1%	55.3%	62.3%
Math (grades 3-8)	48.7%	59.6%	63.1%
Math (high school) * Efficient frontier district with most similar cons	42.8%	41.1%	57.5%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Marysville (D0364)

Region: Northeast Kansas (Marshall County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **81.49%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 81.49%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**. This district's unattainable proficiency output target (greater than 100%) indicates that reaching the efficient frontier would also require reducing inputs; improving outputs alone would not be sufficient.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	81.2%	>100%
Performance Index	54.6%	67.0%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Note: A target value of ">100%" indicates that output improvements alone are not sufficient; input reductions are also necessary.

Which data are included in the calculation of the district's efficiency score?

Inputs

- **Outputs**
- Core Spending
 (\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index

 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level "basic",
 "proficient", "advanced", and "exemplary" with higher scores awarded more points than lower scores)

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Marysville (D0364)

Region: Northeast Kansas (Marshall County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Marysville with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Marysville	Osawatomie	Baldwin City
District Code	D0364	D0367	D0348
County	Marshall	Miami	Douglas
Enrollment	819	1,235	1,407
Constraints			
Economically Disadvantaged Students	32.7%	50.8%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	15.5%	15.3%	13.7%
Inputs			
Core Spending (per student)	\$8,599	\$6,193	\$6,490
Outputs		•	
Reading and Math Proficiency Rate	81.2%	75.5%	88.7%
Reading (grades 3-8)	88.4%	78.5%	94.3%
Reading (high school)	76.4%	78.4%	72.2%
Math (grades 3-8)	83.2%	81.4%	94.3%
Math (high school)	65.7%	39.7%	66.1%
Reading and Math Performance Index	54.6%	45.7%	64.0%
Reading (grades 3-8)	60.2%	48.0%	67.4%
Reading (high school)	44.8%	43.0%	44.6%
Math (grades 3-8)	59.9%	50.1%	74.1%
Math (high school)	39.7%	22.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Mayetta (D0337)

Region: Northeast Kansas (Jackson County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **74.75%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 74.75%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	66.2%	88.6%
Performance Index	38.0%	56.0%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Mayetta (D0337)

Region: Northeast Kansas (Jackson County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Mayetta with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Mayetta	Osawatomie	Baldwin City
District Code	D0337	D0367	D0348
County	Jackson	Miami	Douglas
Enrollment	961	1,235	1,407
Constraints			
Economically Disadvantaged Students	39.4%	50.8%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	14.1%	15.3%	13.7%
Inputs			
Core Spending (per student)	\$7,223	\$6,193	\$6,490
Outputs			
Reading and Math Proficiency Rate	66.2%	75.5%	88.7%
Reading (grades 3-8)	71.9%	78.5%	94.3%
Reading (high school)	72.0%	78.4%	72.2%
Math (grades 3-8)	66.6%	81.4%	94.3%
Math (high school)	50.4%	39.7%	66.1%
Reading and Math Performance Index	38.0%	45.7%	64.0%
Reading (grades 3-8)	41.3%	48.0%	67.4%
Reading (high school)	42.0%	43.0%	44.6%
Math (grades 3-8)	38.4%	50.1%	74.1%
Math (high school)	26.9%	22.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: McLouth (D0342)

Region: Northeast Kansas (Jefferson County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **83.25%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 83.25%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	73.4%	88.2%
Performance Index	44.4%	53.4%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on cordinate spent)

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: McLouth (D0342)

Region: Northeast Kansas (Jefferson County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares McLouth with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	701. *	Most Similar	Best-Performing
Indicator	This District	Frontier District*	Frontier District**
District Name	McLouth	Burlingame	Baldwin City
District Code	D0342	D0454	D0348
County	Jefferson	Osage	Douglas
Enrollment	564	351	1,407
Constraints			
Economically Disadvantaged Students	23.5%	31.1%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	19.1%	21.6%	13.7%
Inputs			
Core Spending (per student)	\$7,124	\$6,794	\$6,490
Outputs			
Reading and Math Proficiency Rate	73.4%	81.6%	88.7%
Reading (grades 3-8)	82.3%	82.1%	94.3%
Reading (high school)	72.3%	72.1%	72.2%
Math (grades 3-8)	69.4%	87.5%	94.3%
Math (high school)	54.6%	64.5%	66.1%
Reading and Math Performance Index	44.4%	48.3%	64.0%
Reading (grades 3-8)	50.0%	47.4%	67.4%
Reading (high school)	47.8%	40.8%	44.6%
Math (grades 3-8)	42.3%	53.7%	74.1%
Math (high school)	28.5%	35.7%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: McPherson (D0418)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **89.53%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = **89.53%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	81.6%	94.2%
Performance Index	56.3%	62.9%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: McPherson (D0418)

Region: North Central Kansas (McPherson County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares McPherson with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance. In this case, the comparison district under both criteria is the same.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	McPherson	Gardner- Edgerton	Gardner-Edgerton
District Code	D0418	D0231	D0231
County	McPherson	Johnson	Johnson
Enrollment	2,496	3,782	3,782
Constraints			
Economically Disadvantaged Students	25.5%	21.5%	21.5%
English Language Learners	0.9%	0.9%	0.9%
Students with Disabilities	15.7%	12.2%	12.2%
Inputs			
Core Spending (per student)	\$7,466	\$5,565	\$5,565
Outputs			
Reading and Math Proficiency Rate	81.6%	89.0%	89.0%
Reading (grades 3-8)	87.1%	88.9%	88.9%
Reading (high school)	76.5%	87.6%	87.6%
Math (grades 3-8)	84.8%	92.0%	92.0%
Math (high school)	63.9%	78.7%	78.7%
Reading and Math Performance Index	56.3%	61.5%	61.5%
Reading (grades 3-8)	58.4%	59.6%	59.6%
Reading (high school)	51.8%	63.8%	63.8%
Math (grades 3-8)	62.2%	65.9%	65.9%
Math (high school) * Efficient frontier district with most similar cons	41.1%	50.3%	50.3%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Meade (D0226)

Region: Southwest Kansas (Meade County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **94.80%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score = 94.80%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	81.7%	86.2%
Performance Index	50.9%	55.5%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Meade (D0226)

Region: Southwest Kansas (Meade County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Meade with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Meade	Lyons	Baldwin City
District Code	D0226	D0405	D0348
	Meade		
County		Rice	Douglas
Enrollment	500	904	1,407
Constraints			
Economically Disadvantaged Students	36.4%	61.6%	15.2%
English Language Learners	6.4%	12.6%	0.1%
Students with Disabilities	17.1%	19.0%	13.7%
Inputs			
Core Spending (per student)	\$8,353	\$9,018	\$6,490
Outputs			
Reading and Math Proficiency Rate	81.7%	75.3%	88.7%
Reading (grades 3-8)	88.8%	81.6%	94.3%
Reading (high school)	77.3%	69.5%	72.2%
Math (grades 3-8)	80.0%	76.6%	94.3%
Math (high school)	67.8%	60.1%	66.1%
Reading and Math Performance Index	50.9%	46.6%	64.0%
Reading (grades 3-8)	56.8%	51.4%	67.4%
Reading (high school)	46.4%	44.4%	44.6%
Math (grades 3-8)	49.3%	46.2%	74.1%
Math (high school)	40.5%	36.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Minneola (D0219)

Region: Southwest Kansas (Clark County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **79.20%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = **79.20%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**. This district's unattainable proficiency output target (greater than 100%) indicates that reaching the efficient frontier would also require reducing inputs; improving outputs alone would not be sufficient.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	83.0%	>100%
Performance Index	53.6%	68.1%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Note: A target value of ">100%" indicates that output improvements alone are not sufficient; input reductions are also necessary.

Which data are included in the calculation of the district's efficiency score?

Inputs

- **Outputs**
- Core Spending
 (\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index

 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level "basic",
 "proficient", "advanced", and "exemplary" with higher scores awarded more points than lower scores)

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Minneola (D0219)

Region: Southwest Kansas (Clark County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Minneola with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance. In this case, the comparison district under both criteria is the same.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	This District	District*	District**
District Name	Minneola	Waconda	Waconda
District Code	D0219	D0272	D0272
County	Clark	Mitchell	Mitchell
Enrollment	264	365	365
Constraints			
Economically Disadvantaged Students	36.8%	44.3%	44.3%
English Language Learners	0.2%	0.0%	0.0%
Students with Disabilities	13.7%	12.9%	12.9%
Inputs			
Core Spending (per student)	\$9,351	\$9,480	\$9,480
Outputs			
Reading and Math Proficiency Rate	83.0%	94.5%	94.5%
Reading (grades 3-8)	83.1%	96.9%	96.9%
Reading (high school)	74.6%	88.6%	88.6%
Math (grades 3-8)	88.2%	96.6%	96.6%
Math (high school)	81.9%	92.0%	92.0%
Reading and Math Performance Index	53.6%	70.2%	70.2%
Reading (grades 3-8)	57.8%	70.4%	70.4%
Reading (high school)	43.3%	61.8%	61.8%
Math (grades 3-8)	56.7%	77.0%	77.0%
Math (high school)	42.2%	64.0%	64.0%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Morris (D0417)

Region: North Central Kansas (Morris County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **83.13%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 83.13%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	75.0%	90.3%
Performance Index	48.2%	57.9%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index
 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic",
 "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Morris (D0417)

Region: North Central Kansas (Morris County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Morris with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Morris	Osawatomie	Baldwin City
District Code	D0417	D0367	D0348
County	Morris	Miami	Douglas
Enrollment	884	1,235	1,407
Constraints			
Economically Disadvantaged Students	39.2%	50.8%	15.2%
English Language Learners	0.4%	0.0%	0.1%
Students with Disabilities	13.6%	15.3%	13.7%
Inputs			
Core Spending (per student)	\$7,353	\$6,193	\$6,490
Outputs			
Reading and Math Proficiency Rate	75.0%	75.5%	88.7%
Reading (grades 3-8)	80.7%	78.5%	94.3%
Reading (high school)	65.1%	78.4%	72.2%
Math (grades 3-8)	81.2%	81.4%	94.3%
Math (high school)	59.5%	39.7%	66.1%
Reading and Math Performance Index	48.2%	45.7%	64.0%
Reading (grades 3-8)	51.6%	48.0%	67.4%
Reading (high school)	39.8%	43.0%	44.6%
Math (grades 3-8)	53.4%	50.1%	74.1%
Math (high school)	35.3%	22.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Moundridge (D0423)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **73.07%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 73.07%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**. This district's unattainable proficiency output target (greater than 100%) indicates that reaching the efficient frontier would also require reducing inputs; improving outputs alone would not be sufficient.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	80.5%	>100%
Performance Index	53.4%	73.1%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Note: A target value of ">100%" indicates that output improvements alone are not sufficient; input reductions are also necessary.

Which data are included in the calculation of the district's efficiency score?

Inputs

- **Outputs**
- Core Spending
 (\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index

 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level "basic",
 "proficient", "advanced", and "exemplary" with higher scores awarded more points than lower scores)

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: Moundridge (D0423)

Region: North Central Kansas (McPherson County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Moundridge with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Moundridge	Halstead	Waconda
District Code	D0423	D0440	D0272
County	McPherson	Harvey	Mitchell
Enrollment	427	735	365
Constraints			
Economically Disadvantaged Students	23.2%	34.7%	44.3%
English Language Learners	0.0%	0.0%	0.0%
Students with Disabilities	15.0%	18.7%	12.9%
Inputs			
Core Spending (per student)	\$9,725	\$6,792	\$9,480
Outputs			
Reading and Math Proficiency Rate	80.5%	83.9%	94.5%
Reading (grades 3-8)	80.5%	87.0%	96.9%
Reading (high school)	91.3%	83.8%	88.6%
Math (grades 3-8)	80.3%	86.3%	96.6%
Math (high school)	73.2%	64.0%	92.0%
Reading and Math Performance Index	53.4%	55.8%	70.2%
Reading (grades 3-8)	50.4%	56.7%	70.4%
Reading (high school)	58.8%	55.3%	61.8%
Math (grades 3-8)	55.8%	59.6%	77.0%
Math (high school)	49.6%	41.1%	64.0%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Mulvane (D0263)

Region: South Central Kansas (Sedgwick County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **83.09%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score = 83.09%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	70.1%	84.4%
Performance Index	42.6%	58.1%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Mulvane (D0263)

Region: South Central Kansas (Sedgwick County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Mulvane with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance. In this case, the comparison district under both criteria is the same.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Mulvane	Gardner- Edgerton	Gardner-Edgerton
District Code	D0263	D0231	D0231
County	Sedgwick	Johnson	Johnson
Enrollment	1,930	3,782	3,782
Constraints			
Economically Disadvantaged Students	24.2%	21.5%	21.5%
English Language Learners	0.3%	0.9%	0.9%
Students with Disabilities	12.0%	12.2%	12.2%
Inputs			
Core Spending (per student)	\$5,459	\$5,565	\$5,565
Outputs			
Reading and Math Proficiency Rate	70.1%	89.0%	89.0%
Reading (grades 3-8)	76.7%	88.9%	88.9%
Reading (high school)	73.2%	87.6%	87.6%
Math (grades 3-8)	70.9%	92.0%	92.0%
Math (high school)	45.3%	78.7%	78.7%
Reading and Math Performance Index	42.6%	61.5%	61.5%
Reading (grades 3-8)	45.6%	59.6%	59.6%
Reading (high school)	44.8%	63.8%	63.8%
Math (grades 3-8)	44.3%	65.9%	65.9%
Math (high school) * Efficient frontier district with most similar cons	28.4%	50.3%	50.3%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Nemaha Valley (D0442)

Region: Northeast Kansas (Nemaha County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **96.89%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score = 96.89%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	81.7%	84.4%
Performance Index	52.5%	54.2%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on cor

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index
 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic",
 "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Nemaha Valley (D0442)

Region: Northeast Kansas (Nemaha County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Nemaha Valley with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

T W	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Nemaha Valley	Halstead	Baldwin City
District Code	D0442	D0440	D0348
County	Nemaha	Harvey	Douglas
Enrollment	544	735	1,407
Constraints			
Economically Disadvantaged Students	23.1%	34.7%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	18.0%	18.7%	13.7%
Inputs			
Core Spending (per student)	\$6,636	\$6,792	\$6,490
Outputs			
Reading and Math Proficiency Rate	81.7%	83.9%	88.7%
Reading (grades 3-8)	84.1%	87.0%	94.3%
Reading (high school)	88.0%	83.8%	72.2%
Math (grades 3-8)	80.4%	86.3%	94.3%
Math (high school)	76.8%	64.0%	66.1%
Reading and Math Performance Index	52.5%	55.8%	64.0%
Reading (grades 3-8)	55.0%	56.7%	67.4%
Reading (high school)	55.3%	55.3%	44.6%
Math (grades 3-8)	51.8%	59.6%	74.1%
Math (high school)	50.1%	41.1%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Neodesha (D0461)

Region: Southeast Kansas (Wilson County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **75.70%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 75.70%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	69.5%	91.8%
Performance Index	41.9%	58.3%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Neodesha (D0461)

Region: Southeast Kansas (Wilson County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Neodesha with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Neodesha	Osawatomie	Baldwin City
District Code	D0461	D0367	D0348
County	Wilson	Miami	Douglas
Enrollment	784	1,235	1,407
Constraints			
Economically Disadvantaged Students	45.7%	50.8%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	11.9%	15.3%	13.7%
Inputs			
Core Spending (per student)	\$8,672	\$6,193	\$6,490
Outputs		•	
Reading and Math Proficiency Rate	69.5%	75.5%	88.7%
Reading (grades 3-8)	76.4%	78.5%	94.3%
Reading (high school)	71.8%	78.4%	72.2%
Math (grades 3-8)	70.8%	81.4%	94.3%
Math (high school)	42.5%	39.7%	66.1%
Reading and Math Performance Index	41.9%	45.7%	64.0%
Reading (grades 3-8)	47.0%	48.0%	67.4%
Reading (high school)	40.9%	43.0%	44.6%
Math (grades 3-8)	42.4%	50.1%	74.1%
Math (high school)	26.0%	22.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Ness City (D0303)

Region: Southwest Kansas (Ness County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **82.57%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 82.57%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	76.5%	92.6%
Performance Index	47.8%	57.9%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on c

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Ness City (D0303)

Region: Southwest Kansas (Ness County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Ness City with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Ness City	Burlingame	Halstead
District Code	D0303	D0454	D0440
County	Ness	Osage	Harvey
Enrollment	291	351	735
Constraints			
Economically Disadvantaged Students	23.5%	31.1%	34.7%
English Language Learners	0.0%	0.0%	0.0%
Students with Disabilities	18.5%	21.6%	18.7%
Inputs			
Core Spending (per student)	\$7,919	\$6,794	\$6,792
Outputs			
Reading and Math Proficiency Rate	76.5%	81.6%	83.9%
Reading (grades 3-8)	68.4%	82.1%	87.0%
Reading (high school)	86.9%	72.1%	83.8%
Math (grades 3-8)	82.8%	87.5%	86.3%
Math (high school)	63.3%	64.5%	64.0%
Reading and Math Performance Index	47.8%	48.3%	55.8%
Reading (grades 3-8)	41.0%	47.4%	56.7%
Reading (high school)	55.1%	40.8%	55.3%
Math (grades 3-8)	51.3%	53.7%	59.6%
Math (high school)	42.6%	35.7%	41.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Nickerson (D0309)

Region: South Central Kansas (Reno County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **98.08%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score = 98.08%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	77.8%	79.3%
Performance Index	49.0%	50.0%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on c

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Nickerson (D0309)

Region: South Central Kansas (Reno County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Nickerson with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

Indicator	This District	Most Similar Frontier District*	Best-Performing Frontier District**
District Name	Nickerson	Arkansas City	Baldwin City
District Code	D0309	D0470	D0348
County	Reno	Cowley	Douglas
Enrollment	1,190	2,941	1,407
Constraints			
Economically Disadvantaged Students	51.8%	57.1%	15.2%
English Language Learners	2.3%	8.0%	0.1%
Students with Disabilities	14.6%	20.2%	13.7%
Inputs			
Core Spending (per student)	\$7,487	\$7,541	\$6,490
Outputs			
Reading and Math Proficiency Rate	77.8%	74.5%	88.7%
Reading (grades 3-8)	84.8%	79.8%	94.3%
Reading (high school)	71.1%	69.3%	72.2%
Math (grades 3-8)	77.1%	79.5%	94.3%
Math (high school)	63.7%	47.9%	66.1%
Reading and Math Performance Index	49.0%	47.5%	64.0%
Reading (grades 3-8)	53.5%	50.1%	67.4%
Reading (high school)	42.6%	42.8%	44.6%
Math (grades 3-8)	51.2%	53.0%	74.1%
Math (high school)	33.6%	26.8%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: North Jackson (D0335)

Region: Northeast Kansas (Jackson County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **88.67%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = **88.67%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	81.4%	91.8%
Performance Index	52.5%	62.4%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: North Jackson (D0335)

Region: Northeast Kansas (Jackson County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares North Jackson with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	North Jackson	Waconda	Halstead
District Code	D0335	D0272	D0440
County	Jackson	Mitchell	Harvey
Enrollment	426	365	735
Constraints			
Economically Disadvantaged Students	29.1%	44.3%	34.7%
English Language Learners	0.0%	0.0%	0.0%
Students with Disabilities	11.2%	12.9%	18.7%
Inputs			
Core Spending (per student)	\$6,678	\$9,480	\$6,792
Outputs			
Reading and Math Proficiency Rate	81.4%	94.5%	83.9%
Reading (grades 3-8)	82.8%	96.9%	87.0%
Reading (high school)	76.5%	88.6%	83.8%
Math (grades 3-8)	86.7%	96.6%	86.3%
Math (high school)	66.0%	92.0%	64.0%
Reading and Math Performance Index	52.5%	70.2%	55.8%
Reading (grades 3-8)	53.4%	70.4%	56.7%
Reading (high school)	46.8%	61.8%	55.3%
Math (grades 3-8)	56.0%	77.0%	59.6%
Math (high school)	41.6%	64.0%	41.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: North Lyon (D0251)

Region: Northeast Kansas (Lyon County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **79.58%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = **79.58%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**. This district's unattainable proficiency output target (greater than 100%) indicates that reaching the efficient frontier would also require reducing inputs; improving outputs alone would not be sufficient.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	80.0%	>100%
Performance Index	48.8%	65.1%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Note: A target value of ">100%" indicates that output improvements alone are not sufficient; input reductions are also necessary.

Which data are included in the calculation of the district's efficiency score?

Inputs

- **Outputs**
- Core Spending
 (\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index

 (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level "basic",
 "proficient", "advanced", and "exemplary" with higher scores awarded more points than lower scores)

Electronic copy available at: https://ssrn.com/abstract=2355446

Kansas School District Efficiency Study

District: North Lyon (D0251)

Region: Northeast Kansas (Lyon County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	County	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares North Lyon with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	North Lyon	Waconda	Baldwin City
District Code	D0251	D0272	D0348
County	Lyon	Mitchell	Douglas
Enrollment	582	365	1,407
Constraints			
Economically Disadvantaged Students	34.1%	44.3%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	13.4%	12.9%	13.7%
Inputs			
Core Spending (per student)	\$8,345	\$9,480	\$6,490
Outputs			
Reading and Math Proficiency Rate	80.0%	94.5%	88.7%
Reading (grades 3-8)	82.5%	96.9%	94.3%
Reading (high school)	72.2%	88.6%	72.2%
Math (grades 3-8)	83.4%	96.6%	94.3%
Math (high school)	58.3%	92.0%	66.1%
Reading and Math Performance Index	48.8%	70.2%	64.0%
Reading (grades 3-8)	51.5%	70.4%	67.4%
Reading (high school)	46.6%	61.8%	44.6%
Math (grades 3-8)	48.4%	77.0%	74.1%
Math (high school)	39.6%	64.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: North Ottawa (D0239)

Region: North Central Kansas (Ottawa County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **86.47%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = 86.47%

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	81.5%	94.3%
Performance Index	49.2%	59.9%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending

 (\$ per student spent on co

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

<u>Constraints</u> (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: North Ottawa (D0239)

Region: North Central Kansas (Ottawa County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	County	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares North Ottawa with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	North Ottawa	Waconda	Baldwin City
District Code	D0239	D0272	D0348
County	Ottawa	Mitchell	Douglas
Enrollment	569	365	1,407
Constraints		•	
Economically Disadvantaged Students	37.6%	44.3%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	13.4%	12.9%	13.7%
Inputs			
Core Spending (per student)	\$7,772	\$9,480	\$6,490
Outputs			
Reading and Math Proficiency Rate	81.5%	94.5%	88.7%
Reading (grades 3-8)	87.7%	96.9%	94.3%
Reading (high school)	81.2%	88.6%	72.2%
Math (grades 3-8)	78.0%	96.6%	94.3%
Math (high school)	72.0%	92.0%	66.1%
Reading and Math Performance Index	49.2%	70.2%	64.0%
Reading (grades 3-8)	53.4%	70.4%	67.4%
Reading (high school)	46.1%	61.8%	44.6%
Math (grades 3-8)	47.2%	77.0%	74.1%
Math (high school)	46.0%	64.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Northeast (D0246)

Region: Southeast Kansas (Crawford County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **97.88%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score = 97.88%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	76.1%	77.7%
Performance Index	50.6%	51.7%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on c

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Northeast (D0246)

Region: Southeast Kansas (Crawford County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

District	<u>County</u>	District	<u>County</u>	District	County
Arkansas City	Cowley	Dodge City	Ford	Lyons	Rice
Ashland	Clark	Gardner-Edgerton	Johnson	Newton	Harvey
Baldwin City	Douglas	Great Bend	Barton	Osawatomie	Miami
Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Northeast with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	District	District*	District**
District Name	Northeast	Waconda	Baldwin City
District Code	D0246	D0272	D0348
County	Crawford	Mitchell	Douglas
Enrollment	617	365	1,407
Constraints			
Economically Disadvantaged Students	59.8%	44.3%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	11.1%	12.9%	13.7%
Inputs			
Core Spending (per student)	\$8,259	\$9,480	\$6,490
Outputs			
Reading and Math Proficiency Rate	76.1%	94.5%	88.7%
Reading (grades 3-8)	83.2%	96.9%	94.3%
Reading (high school)	46.8%	88.6%	72.2%
Math (grades 3-8)	85.7%	96.6%	94.3%
Math (high school)	27.7%	92.0%	66.1%
Reading and Math Performance Index	50.6%	70.2%	64.0%
Reading (grades 3-8)	53.5%	70.4%	67.4%
Reading (high school)	22.9%	61.8%	44.6%
Math (grades 3-8)	61.2%	77.0%	74.1%
Math (high school)	14.0%	64.0%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Norton (D0211)

Region: Northwest Kansas (Norton County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

What is a relative efficiency score? What does this district's score mean?

The relative efficiency score is derived by examining the relationship between three variables: **inputs** – how much the district spends per pupil; **outputs** – how well the district's students perform in reading and math; and **constraints** – how many of the district's students have special needs (i.e., economically disadvantaged backgrounds, physical or learning disabilities, or limited English proficiency), which are common factors that are outside of a district's control but can affect its spending and achievement levels.

Using linear mathematics, the district's data are then compared to all other school districts in the state to determine its relative efficiency score. Districts with the highest ratio of outputs to inputs in light of their constraints are considered to be on the efficiency frontier, and receive relative efficiency scores of 100%. Accordingly, they are referred to as **efficient frontier** districts. This district's score means that it is **89.92%** as efficient as the state's most efficient districts, taking into account its particular combination of inputs, outputs, and constraints.

This District's **Relative Efficiency Score** = **89.92%**

How could this district improve its efficiency score? As noted above, this district has produced less than 100% of the outputs that might have been expected for its level of inputs and constraints, based on the performance of other districts. Had the district been able to increase its outputs to the target values shown in the accompanying table, while maintaining its current level of inputs, it would have reached the **efficient frontier**.

Output Improvement Targets

Outputs	Actual Value	Target Value*
Proficiency Rate	82.0%	92.1%
Performance Index	55.2%	61.4%

*Had this district achieved the target values, it would have received a 100% relative efficiency score.

Which data are included in the calculation of the district's efficiency score?

Inputs

Core Spending
 (\$ per student spent on co.

(\$ per student spent on core day-to-day operations, adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

- Enrollment of Economically Disadvantaged Students
- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- Reading and Math Proficiency Rate (percent of reading and math tests scoring at the "proficient" standard or higher)
- Reading and Math Performance Index (an index that goes beyond measuring proficiency by awarding points for all tests that score above the lowest level – "basic", "proficient", "advanced", and "exemplary" – with higher scores awarded more points than lower scores)

Kansas School District Efficiency Study

District: Norton (D0211)

Region: Northwest Kansas (Norton County)

Which Kansas districts are the most efficient?

A total of 21 districts across the state have been identified as **efficient frontier** districts (achieving relative efficiency scores of 100%); these are listed alphabetically in the following table. One (or more) of these districts may serve as the source of promising practices that might be replicated in order to improve this district's performance.

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Brown County	Brown	Halstead	Harvey	Rolla	Morton
Burlingame	Osage	Kismet-Plains	Seward	Shawnee Mission	Johnson
Deerfield	Kearny	Lansing	Leavenworth	Waconda	Mitchell
DeSoto	Johnson	Leoti	Wichita	West Elk	Elk

How does this district compare to the state's most efficient districts?

The following table compares Norton with two of the state's **efficient frontier** districts using two different criteria. The first comparison is made to the efficient frontier district with the most similar demographic constraints to this district. The second comparison is made to a similarly-sized efficient frontier district that spends no more than this district and produces the highest overall student performance.

	This	Most Similar Frontier	Best-Performing Frontier
Indicator	This District	District*	District**
District Name	Norton	Halstead	Baldwin City
District Code	D0211	D0440	D0348
County	Norton	Harvey	Douglas
Enrollment	688	735	1,407
Constraints			
Economically Disadvantaged Students	35.5%	34.7%	15.2%
English Language Learners	0.0%	0.0%	0.1%
Students with Disabilities	20.2%	18.7%	13.7%
Inputs			
Core Spending (per student)	\$8,620	\$6,792	\$6,490
Outputs			
Reading and Math Proficiency Rate	82.0%	83.9%	88.7%
Reading (grades 3-8)	87.9%	87.0%	94.3%
Reading (high school)	80.3%	83.8%	72.2%
Math (grades 3-8)	87.3%	86.3%	94.3%
Math (high school)	49.4%	64.0%	66.1%
Reading and Math Performance Index	55.2%	55.8%	64.0%
Reading (grades 3-8)	58.9%	56.7%	67.4%
Reading (high school)	53.0%	55.3%	44.6%
Math (grades 3-8)	59.5%	59.6%	74.1%
Math (high school)	33.7%	41.1%	40.1%

* Efficient frontier district with most similar constraints as this district.

Kansas School District Efficiency Study

District: Norton (D0211)

Region: Northwest Kansas (Norton County)

Why was this profile produced?

Governor Sebelius and the Ewing Marion Kauffman Foundation commissioned Standard & Poor's to study the relative efficiency of the state's school districts. A key component of the study is this two-page profile, produced for each of the state's less efficient school districts to provide them with a resource to help in their efforts to become more efficient.

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Which data are included in the calculation of the district's efficiency score?

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 (\$ per student spent on core day-to-day operations,

adjusted for local differences in purchasing power)

Constraints (factors outside of the district's control)

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- Enrollment of English Language Learners
- Enrollment of Students with Disabilities

- **Reading and Math Proficiency Rate** (percent of reading and math tests scoring at the "proficient" standard or higher)
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Kansas School District Efficiency Study

District: Norton (D0211)

Region: Northwest Kansas (Norton County)

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Reading (grades 3-8)	58.9%	56.7%	67.4%
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