THE POWER OF DATA ANALYSIS TO INFORM IMPROVEMENT

A Presentation to
MSBA Leadership Conference

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Office of Social and Economic Data Analysis
University of Missouri

June 6, 2008

SESSION GOALS

- Explore the power of data to inform school improvement
- Explore types of data of importance to school board members
- Exchange experiences and ideas
- Think, apply and dream

SESSION AGENDA

- Introduction
- Data 101
- Discuss the Board's Role
- Demographic Data
- Resource Data
- Process Data
- Performance Data
- Reflection and Feedback

WHO ARE WE? WHO ARE YOU?

THE OFFICE OF SOCIAL AND ECONOMIC DATA ANALYSIS (OSEDA)

THE UNIVERSITY OF MISSOURI

OSEDA Values:

As part of the University of Missouri, we honor the public trust placed in our institution and accept our responsibility to be effective stewards of that trust. **We acknowledge our duty to acquire, create, transmit and preserve knowledge and to promote understanding**. We embrace the University of Missouri values of Respect, Responsibility, Discovery and Excellence.

In particular, at OSEDA we foster:

Accessibility: Public data and information should be readily accessible.

Collaboration: Collaboration and engagement is essential for the construction of meaningful policy information.

Trust: Trustworthy relationships and information contribute to sound policy development and decision-making.

Excellence: Our users deserve excellence. Excellence is achieved through the diligent individual and collaborative efforts of a skilled and experienced team of faculty and staff.

OSEDA Vision:

Policy development and **decision-making** is more effective because of the **collaborative application** of social and economic information.

OSEDA Mission:

We sustain high quality data and data analysis capabilities in order to **collaborate with partners** in the analysis of social and economic data in ways that contribute to the development of improvements in the health, **education** and well-being of people and communities in Missouri and the world.

WHY ARE WE SO INTERESTED IN DATA?

For just a minute, think about some important decision you and your fellow board members made this year when additional data analysis would have made you more confident in your decision.

DATA 101:
From Data to Information

Our conceptual frameworks define the meaning and relevance of data

- Data
- Information
- Knowledge
- Wisdom

Our conceptual frameworks define the meaning and relevance of data

- Data
- Information
- Knowledge
- Wisdom

"The construction of knowledge involves the orderly loss of information, not its mindless accumulation." — Boulding

Indicators are conceptually connected data.

They're answers to questions arising from the logic of the model.

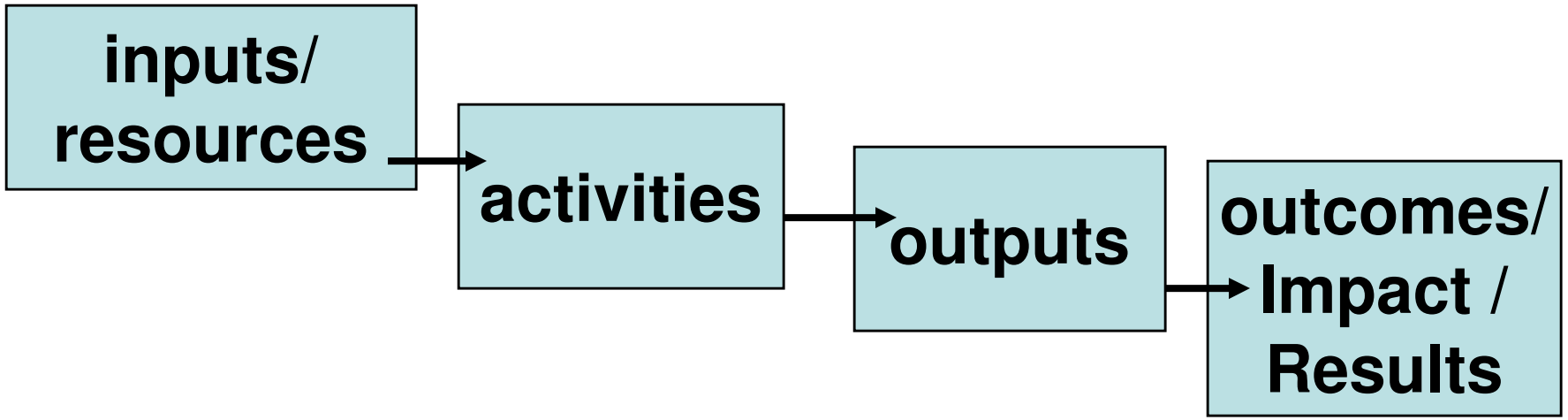
They may be quantitative or qualitative.

Utilization Focused Evaluation

Evaluative *answers* are *"useful"* when they reduce the risks of making the wrong *decision.*

To know you have asked the "right" questions and produced "useful" answers….you must understand who the* decision makers *are and what* kinds of decisions *they need to make.

— Michael Patton



THE RESULTS

of our ***efforts*** are what make
a lasting difference in communities.

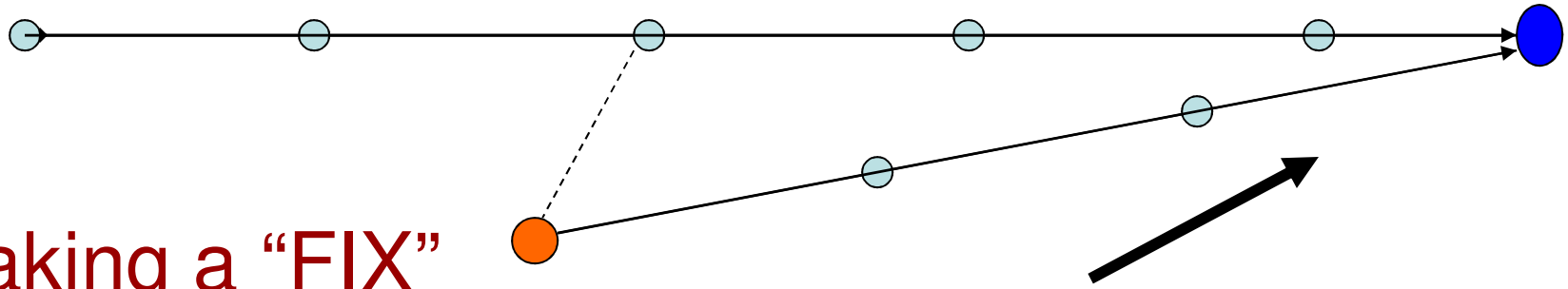
Process is important but we ***plan*** for
and ***evaluate results***.

Purposes

- **Formative**
  - "Improve"
  - Periodic and timely
  - Focus on program activities and outputs
  - Leads to early recommendations for program improvement
- **Summative**
  - "Prove"
  - Were resources committed worthwhile?
  - Focus on outcomes and impact
  - Measures value of program based on impact

"Summative" Result

Plotting a Course ➔ Estimating Position ➔ Choosing and Getting to Port
(Making a plan) (Where we might be) (Where we're going)



Taking a "FIX"
(where we really are)
"Set and Drift"

Adjusting Course

"Formative" Information

Missouri School Improvement Program (MSIP): Theory of Action

- ***Resources*** deployed
- To engage ***educational processes*** to
- Bring about ***student outcomes/ performance***
- Within a ***demographic context***

The MSIP Standards and Indicators describe a good school, and to some extent categorize important data sources

Missouri School District Profiles - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://dese.mo.gov/planning/profile/010093.html

COLUMBIA 93 (010093)

- Missouri School Directory

Summary Reports

- 2007 Annual Performance Report (APR) and AYP
- 2007 School District "Report Cards"
- Statistical Profile of District
- Special Education Profile
- Building Data in Detail

Demographics

- County and District Maps
- 2000 Census Demographics (Profile 1)
- 2000 Census Demographics (Profile 3)
- Census Demographic Trends 1990-2000
- Missouri KIDS COUNT
- County Profiles

Educational Resources

- Calendar Days and Hours
- Student Demographics
- Student Staff Ratios
- Teacher Characteristics
- Teacher Certification
- School Finance Data
- Monthly Transmittal and Calculation Sheets
- Census of Technology

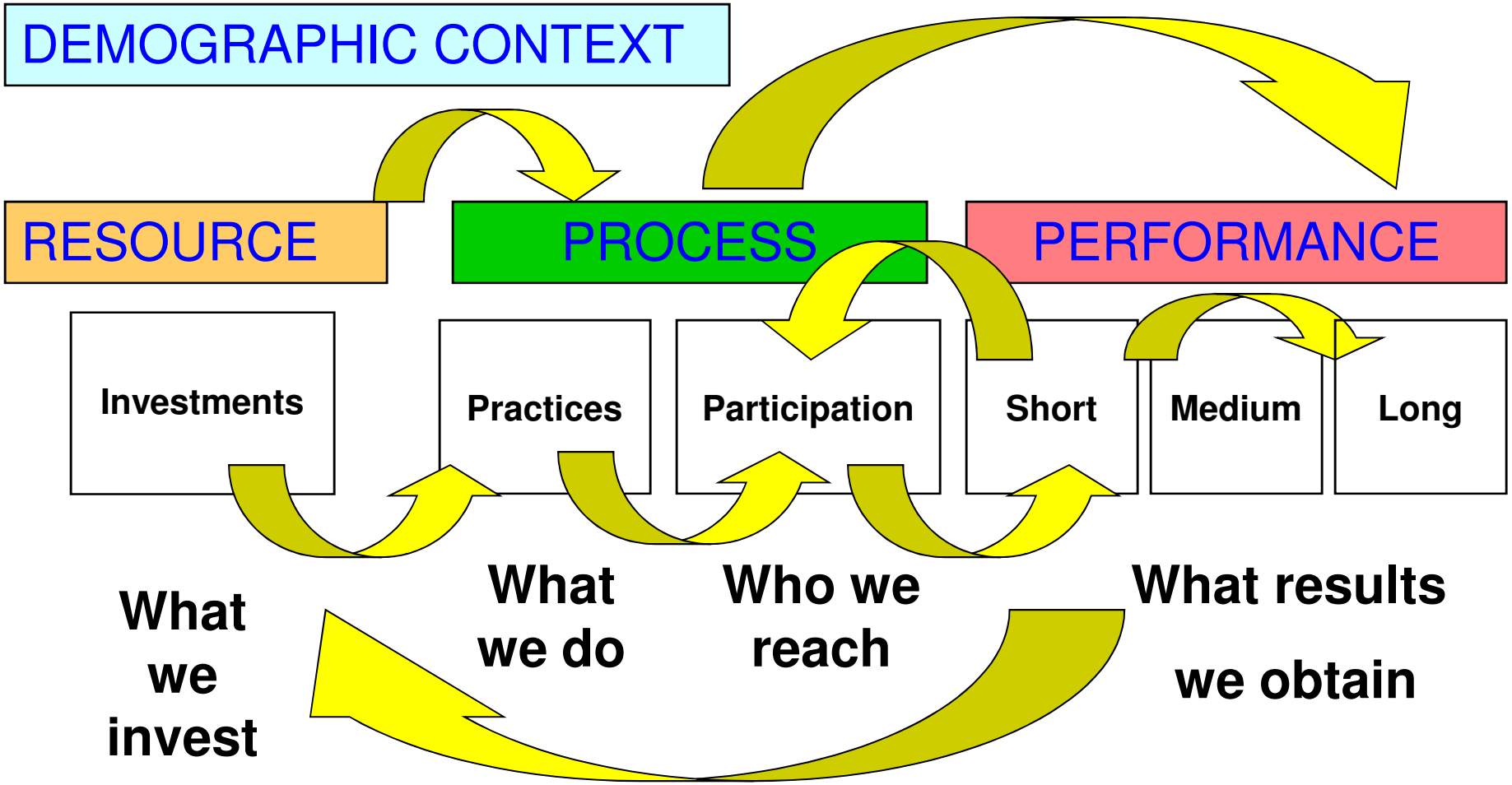
Educational Process Data

- MSIP Fourth Cycle Information
  - Frequency Distribution Report
- MSIP Third Cycle Information
  - MSIP Review AQ Report (Word Document)
  - Frequency Distribution Report
  - Indicator Analysis

Educational Performance Data

- District Accreditation
- Attendance Rate
- Discipline Incidents
- Dropouts
- Graduation Rates
- Graduate Analysis
- High School Grads Performance Report (DHE)

The MSIP Theory of Action…



Focusing On School/Education Data:

THE BOARD'S ROLE

NSBA's "Key Work of School Boards"

Framework of eight essential key action areas that **focus and guide school boards** in their efforts to improve student achievement.

The Eight Key Action Areas

1. **Vision**
2. **Standards**
3. **Assessment**
4. **Accountability**
5. **Alignment**
6. Climate
7. **Collaborative Relationships***
8. **Continuous Improvement**

Are data necessary to fulfill the Key Work of School Boards? What kinds of data would you need to know if you were doing your job regarding collaborative relationship?

Guiding Documents:

THE BOARD'S LEGAL RESPONSIBILITY

- District Policy
- Budget
- CSIP
- Professional Development Plan
- District Curriculum

CATEGORIES OF SCHOOL DATA

- Performance Data
- Resource Data
- Process Data
- Demographic Data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Department of Elementary & Secondary Education
Google Search
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Advanced Search
About Us
Accountability/MSIP
Career Education
Curriculum/Assessment
Educator Quality
School Laws
School Finance
School Statistics
Special Education
Vocational Rehabilitation
DESE Mailbag
DESE Web Applications
Get ADOBE READER
Annual Report of the Public Schools of Missouri
Data Download Site
MO Public School Accountability Report
School Data and Statistics
School Directory
School District Profiles
spotlight
Missouri Teacher of the Year Finalist: Sue Haugen encourages cooperative learning activities to promote higher-level thinking among her sixth-graders.
Virtual Art Gallery: Blue Eye School
News & Updates
UMSL College of Education Honors Russell Thompson, State Board President (5-29-08)
s Shine in International Competition
or School Administrators.
en for DESE's annual Cooperative
Administrators, Aug. 3-5, 2008. Hot
exams, autism, dropout prevention,
New "ABCTE" Certification Process
How Do I Find?
A-Z Index
A+ Schools
Background Checks
Calendars
Charter Schools
Conferences
Directory of Public Schools
Early Childhood Education
Employment Opportunities
ePeGS
FAQs
NCLB/Federal Programs
GED
Grade-Level Expectations
Leadership Academy
MOSIS
MoVIP
News Releases
Popular Links
Publications A-Z
School Directory

Missouri Department of Elementary and Secondary Education

Home : School Data

School Data and Statistics

This page provides links to data about public schools in Missouri. You will find extensive educational statistics of interest to educators, parents and policymakers. Other resources provided here are intended to assist local officials with school-improvement planning and meeting the state's accreditation requirements.

Limited data about charter schools are available. Charter schools operate only within the boundaries of the Kansas City and St. Louis school districts. They are not subject to the same data-reporting and accreditation requirements as public schools.

To obtain the latest statistics, select a school district or charter school from the lists at right. Click on "Load Profile." This will connect you to an index of all the statistics about that district or school. To obtain building-level data, select "School District Report Cards" in the top-right corner of the index page.

Search School Data and Statistics

Search

Make a Selection

Alphabetical List of School Districts

- Independence 30(048077)
- Iron Co. C-4(047065)
- Jackson R-II(016090)
- Jamestown C-1(068074)
- Jasper Co. R-V(049137)

Load Profile

Alphabetical List of Kansas City Charter Schools

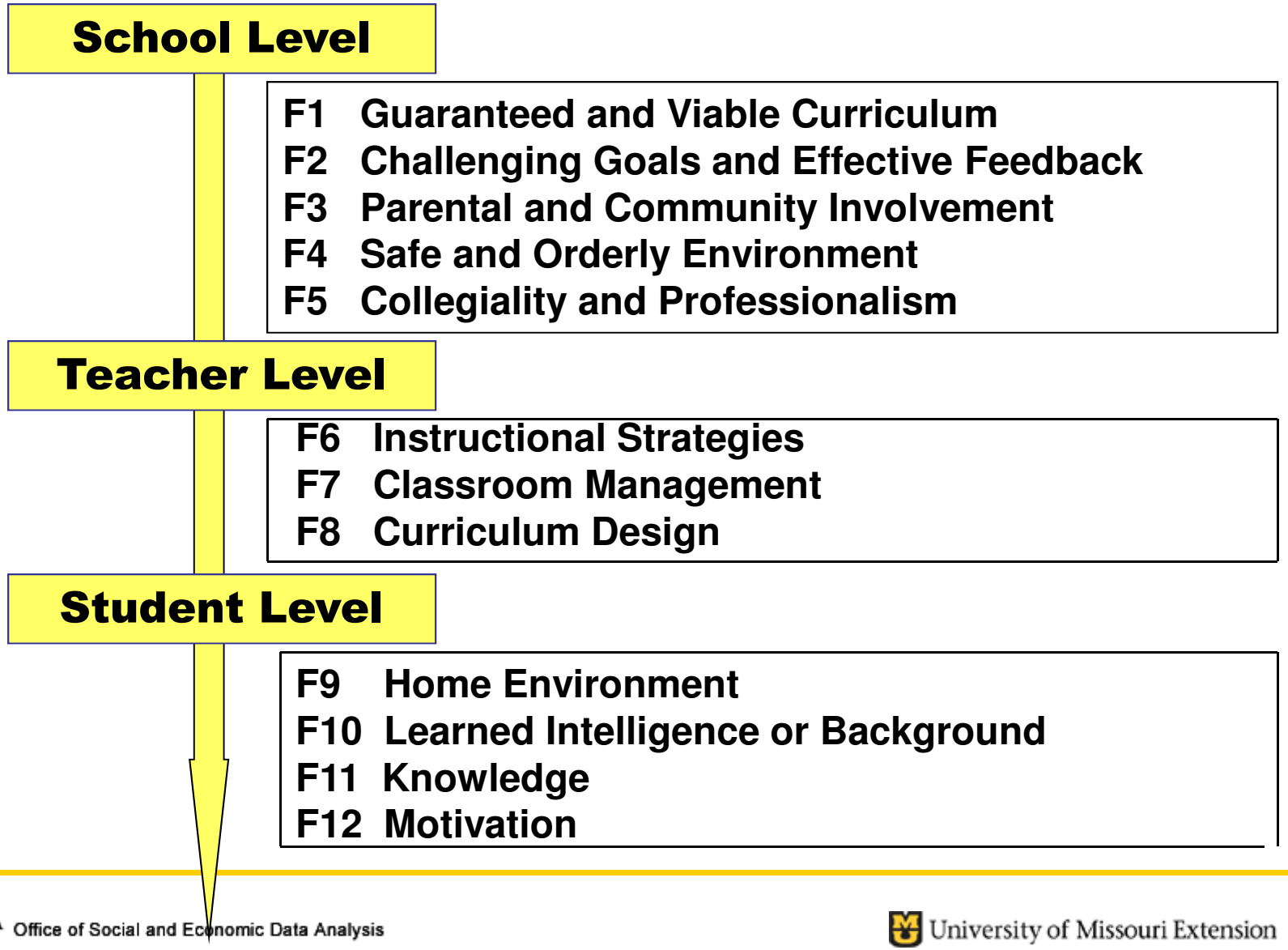
- – Acadamie Lafayette(048914)
- – Academy of Kansas City(048908)
- – Allen Village(048909)
- – Alta Vista Charter Sch.(048902)
- – B. Banneker Academy(048911)

Load Profile

Alphabetical List of St. Louis City Charter Schools

- – Confluence Academies
- – Construction Career Ctr.
- – Ethel Hedgeman Lyle Academy
- – Lift For Life Academy
- – Paideia Academy

Research on Factors That Influence Student Achievement



EXAMPLES:
PERFORMANCE DATA

- Annual Performance Report (APR)
- APR and AYP disaggregated by gender, race, free and reduced lunch, etc.
- District Report Card
- Nationally Standardized Test Scores

EXAMPLES: RESOURCE DATA

- Budget
- MSIP Resource Report
- Unqualified Teacher List
- Official District Audit
- Technology Audit
- Facilities Audit

EXAMPLES: PROCESS DATA

- MSIP Advance Questionnaire (AQ)
- MSIP Observation Summary Report
- Report from MSIP Review Team
- District Observation Reports
- Program Evaluations

EXAMPLES: DEMOGRAPHIC DATA

- Enrollment trends
- Free and reduced lunch count
- Kids Count
- Census data

DEMOGRAPHIC DATA

Percent Population Change

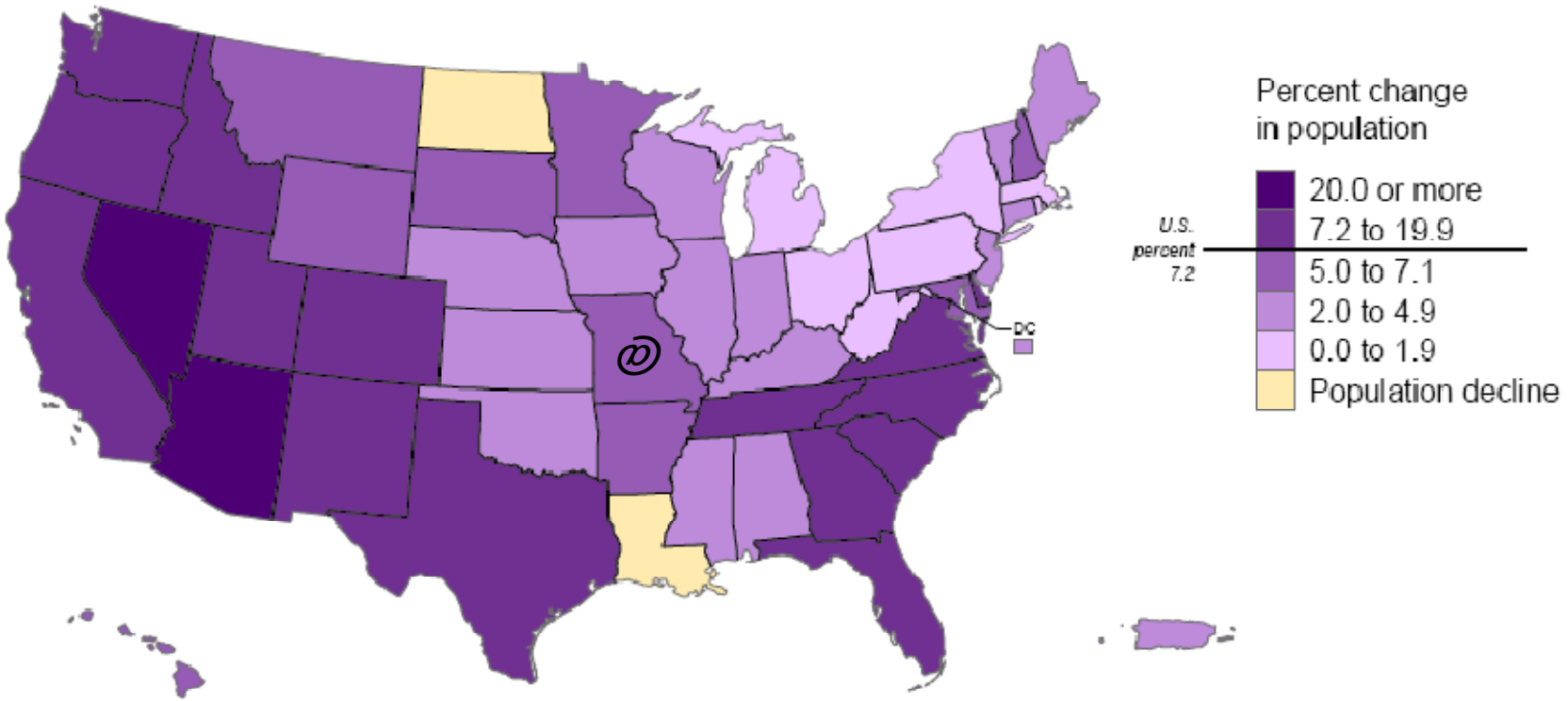
April 1, 2000 to July 1, 2007

Total Population

World: 6.7 Billion

U.S.: 302 Million

Mo.: 5,878,415



Source: U.S. Census Bureau, Population Division, 2007

OSEDA Office of Social and Economic Data Analysis

University of Missouri Extension

Percent Population Change

April 1, 2000 to July 1, 2007

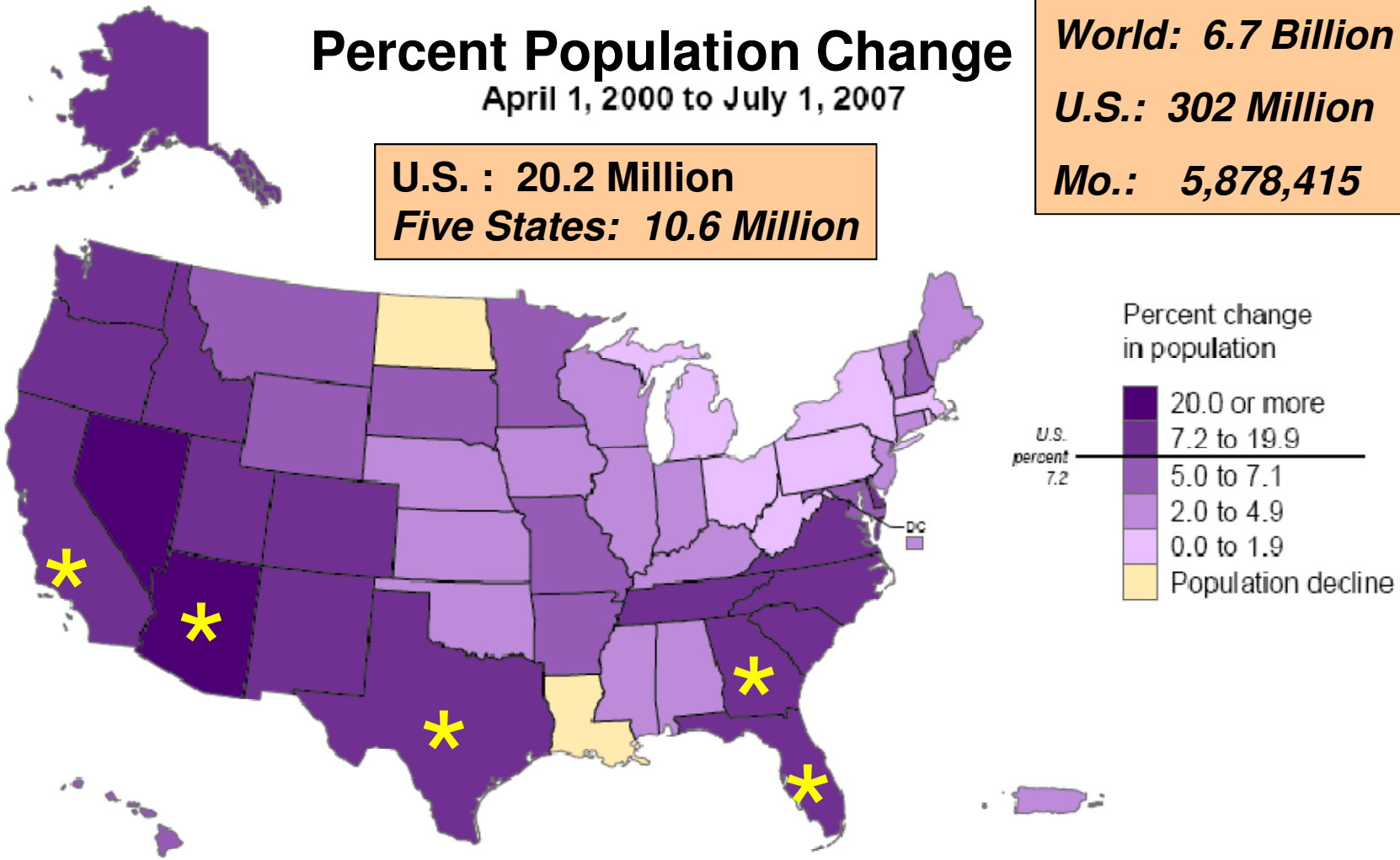
U.S. : 20.2 Million
Five States: 10.6 Million

Total Population

World: 6.7 Billion

U.S.: 302 Million

Mo.: 5,878,415



Source: U.S. Census Bureau, Population Division, 2007

Percent Population Change

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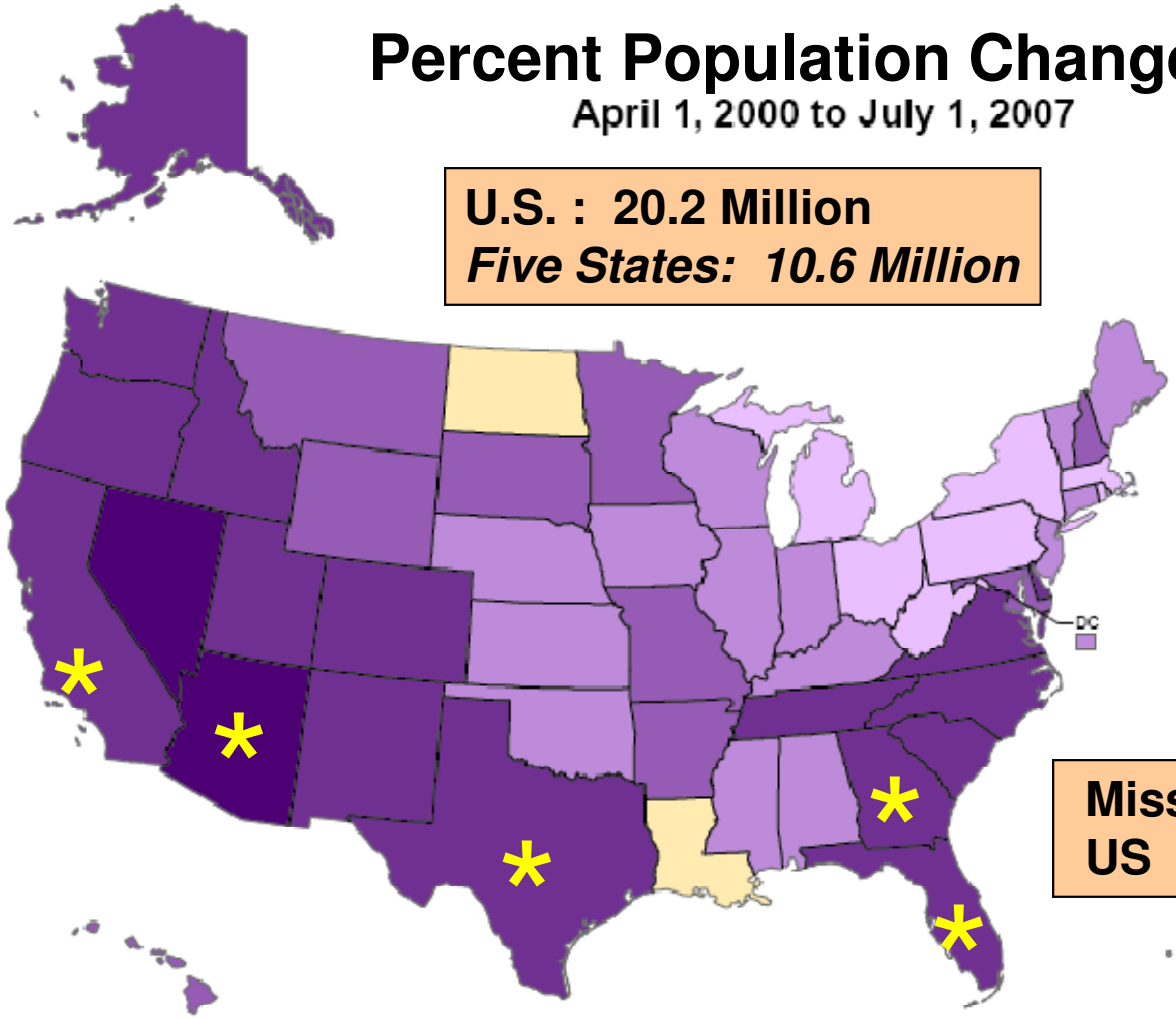


Total Population

World: 6.7 Billion

U.S.: 302 Million

Mo.: 5,878,415

Boone: 152,435

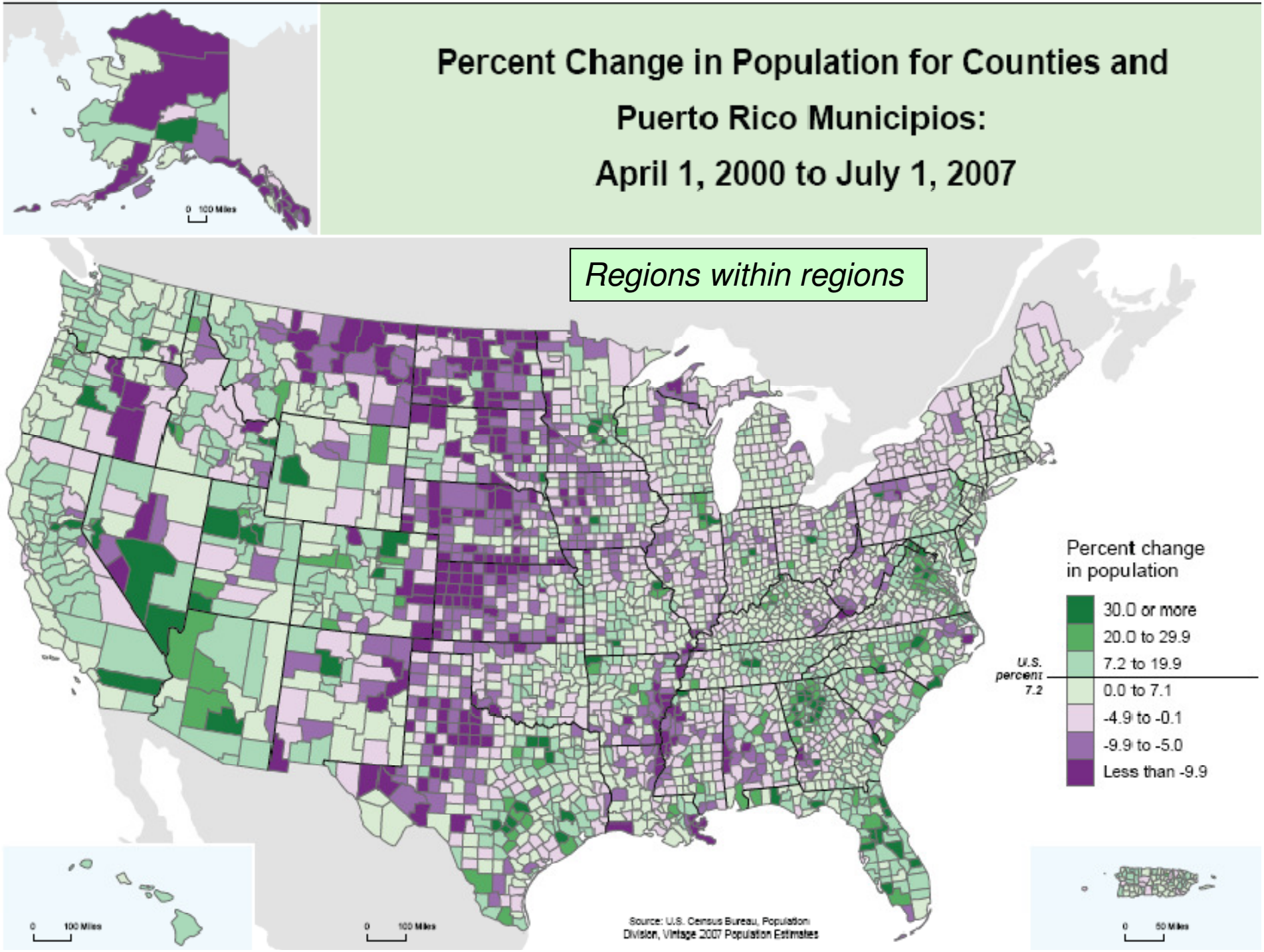
Percent change in population

U.S. percent 7.2

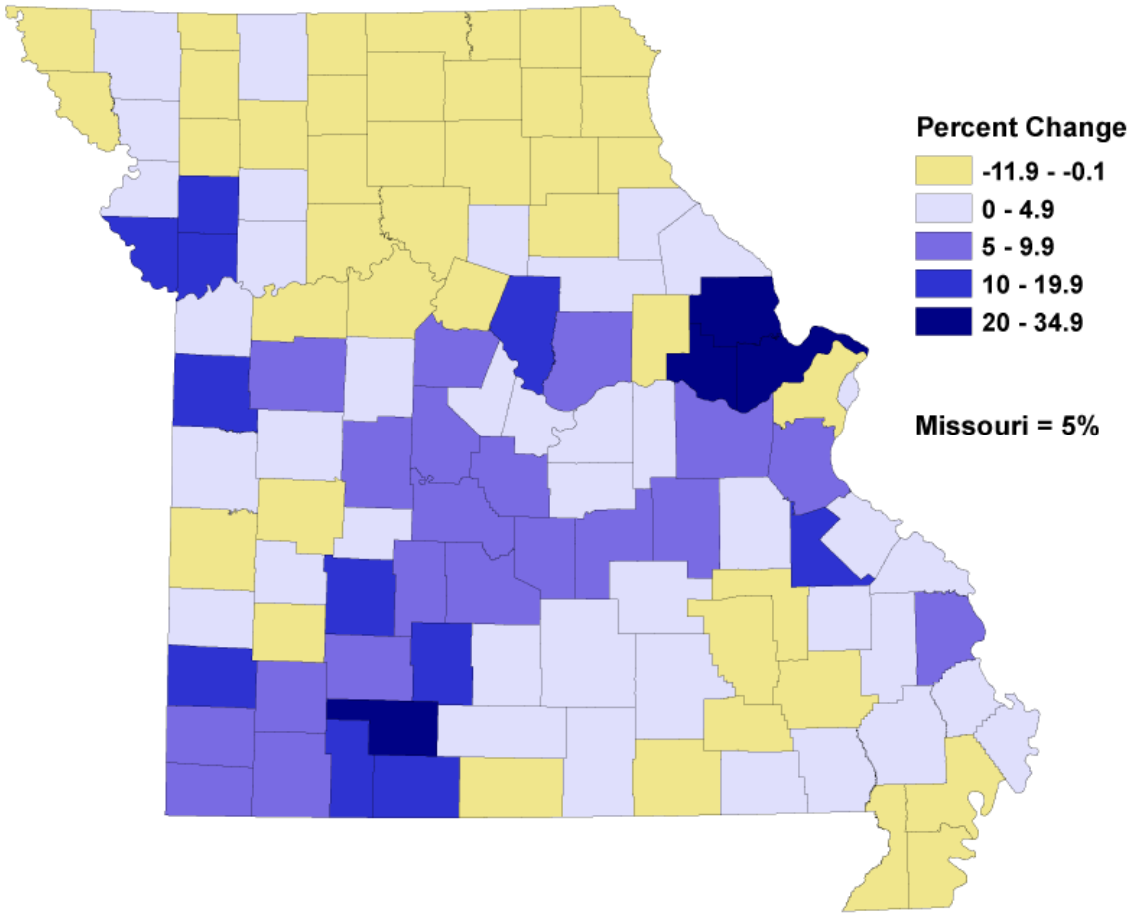
- 20.0 or more
- 7.2 to 19.9
- 5.0 to 7.1
- 2.0 to 4.9
- 0.0 to 1.9
- Population decline

Missouri	**5.0%**
US	**7.2%**

Source: U.S. Census Bureau, Population Division, 2007

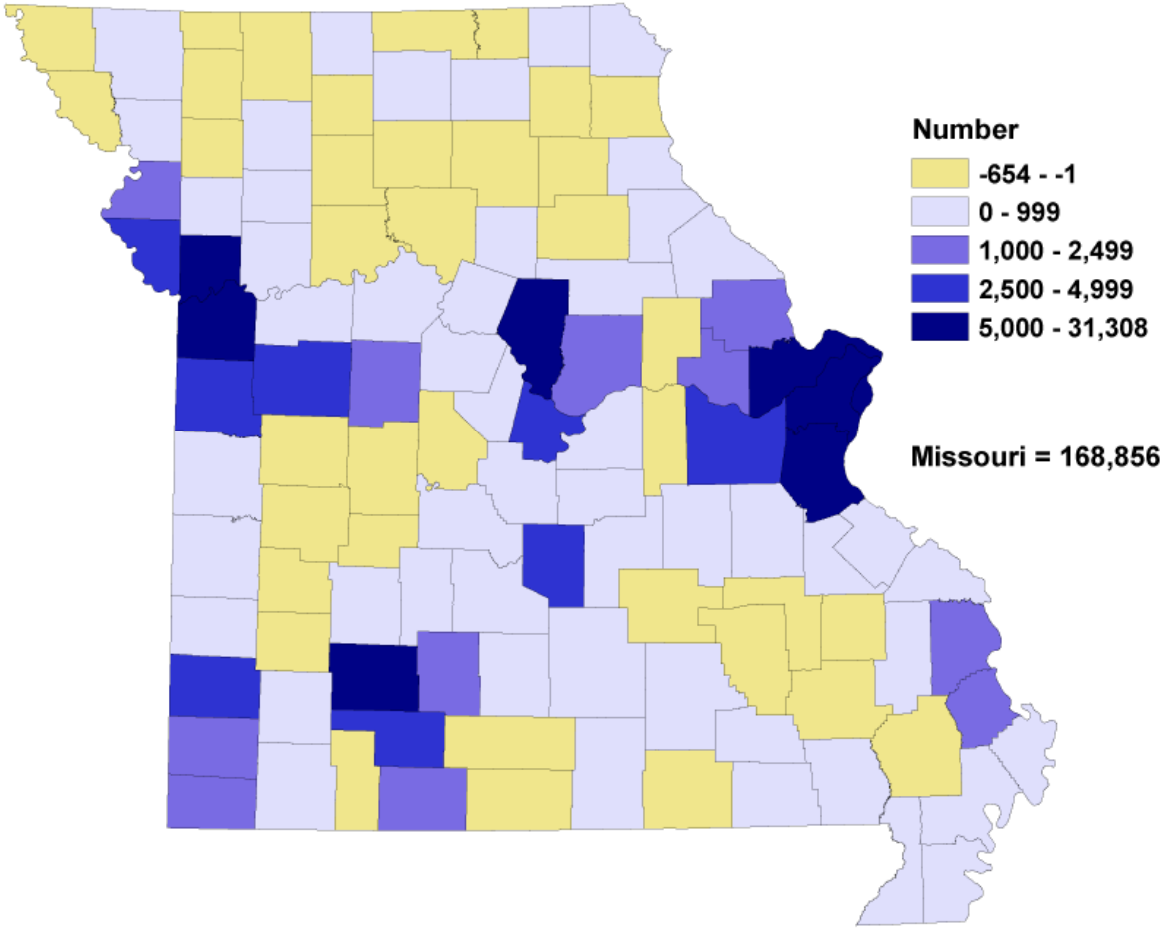

Percent Change in Population for Counties and Puerto Rico Municipios:
April 1, 2000 to July 1, 2007
Regions within regions
Percent change in population
30.0 or more
20.0 to 29.9
7.2 to 19.9
0.0 to 7.1
-4.9 to -0.1
-9.9 to -5.0
Less than -9.9
U.S. percent 7.2
0 100 Miles
0 100 Miles
0 100 Miles
0 50 Miles
Source: U.S. Census Bureau, Population Division, Vintage 2007 Population Estimates

Percent Population Change in Missouri, by County 2000-2007



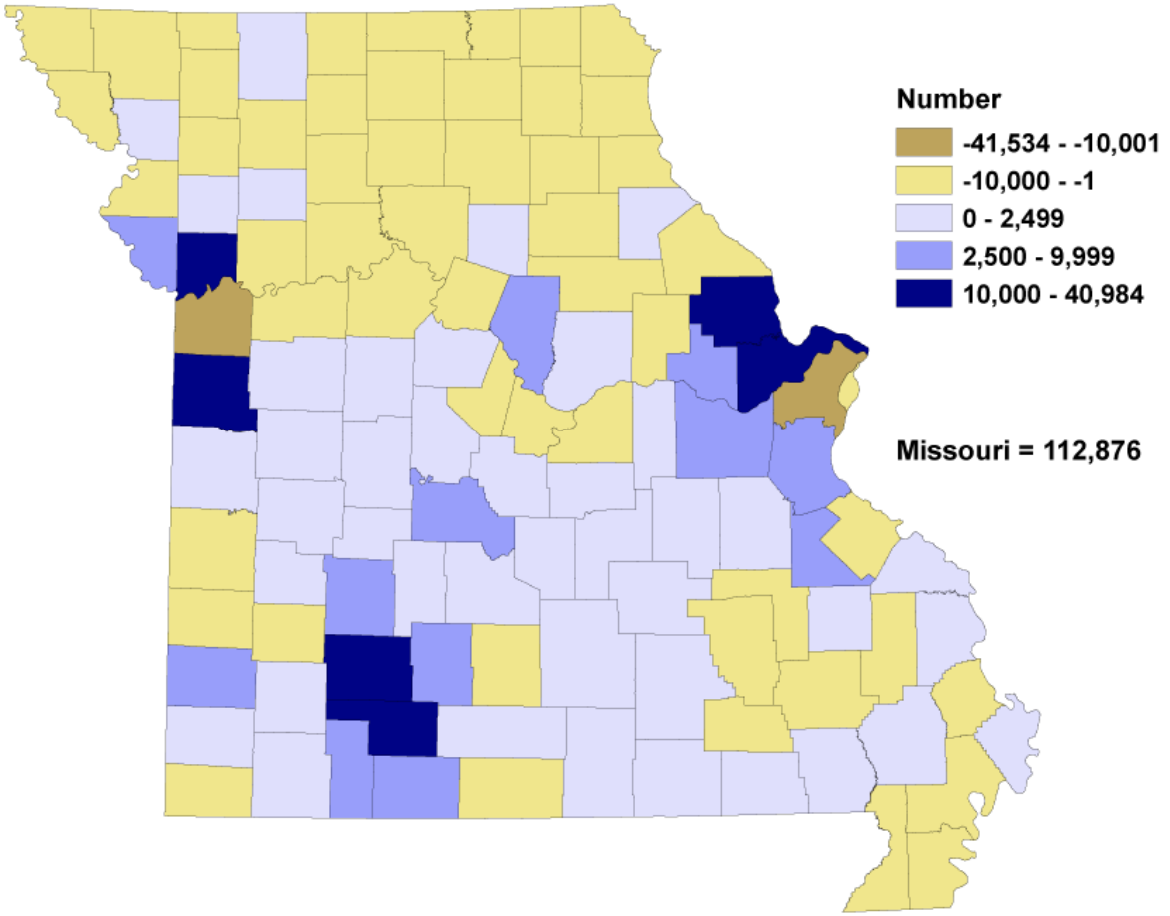
Source: Population Division, U. S. Census Bureau, Annual Estimates, April 1, 2000 - July 1, 2007.
Prepared by: University of Missouri Extension, Office of Social and Economic Data Analysis (OSEDA)
Map Generated on: 23 Apr 2008

Natural Increase in Missouri Population by County 2000-2007



Source: Population Division, U. S. Census Bureau, Annual Estimates, April 1, 2000 - July 1, 2007.
Prepared by: University of Missouri Extension, Office of Social and Economic Data Analysis (OSEDA)
Map Generated on: 23 Apr 2008

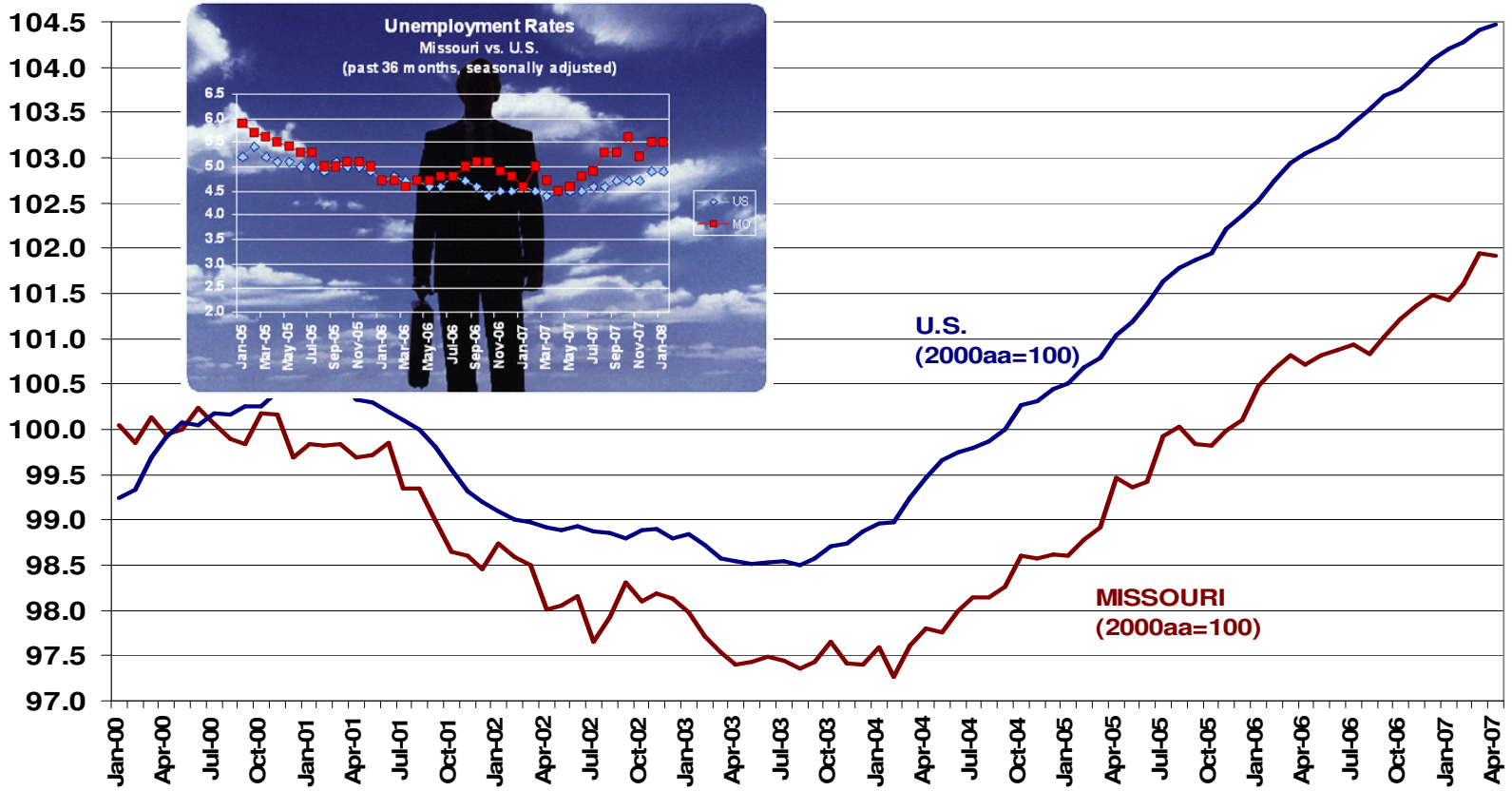
Net Migration in Missouri Population by County 2000-2007



Source: Population Division, U. S. Census Bureau, Annual Estimates, April 1, 2000 - July 1, 2007.
Prepared by: University of Missouri Extension, Office of Social and Economic Data Analysis (OSEDA)
Map Generated on: 23 Apr 2008

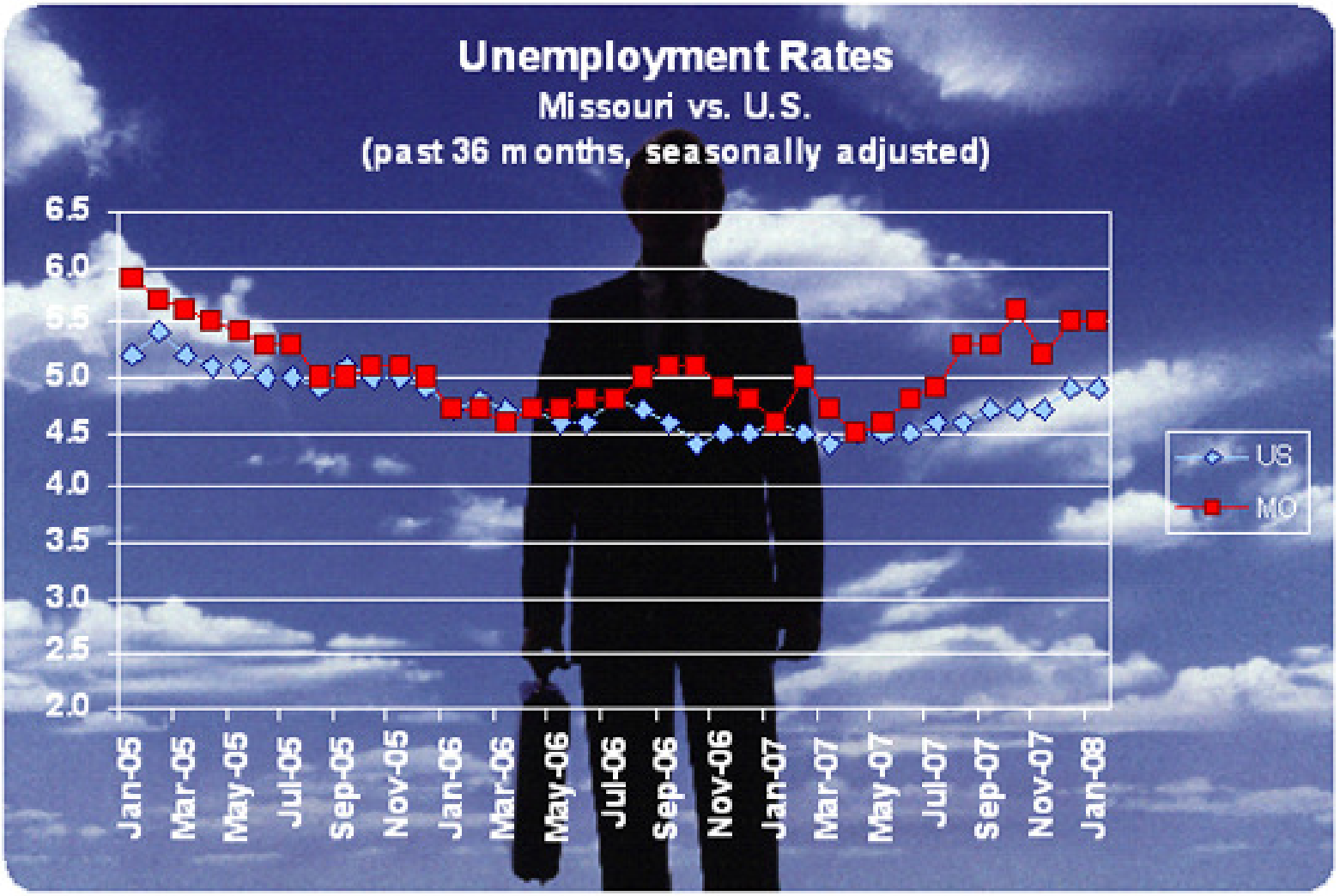
Employment

U.S. AND MISSOURI PAYROLL EMPLOYMENT
Index: 2000 annual average = 100



Employment in Missouri increased by 33,100 from April 2006 to April 2007, seasonally adjusted.

Source: MERIC and U.S. Bureau of Labor Statistics


Unemployment Rates
Missouri vs. U.S.
(past 36 months, seasonally adjusted)
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
Jan-05
Mar-05
May-05
Jul-05
Sep-05
Nov-05
Jan-06
Mar-06
May-06
Jul-06
Sep-06
Nov-06
Jan-07
Mar-07
May-07
Jul-07
Sep-07
Nov-07
Jan-08
US
MO

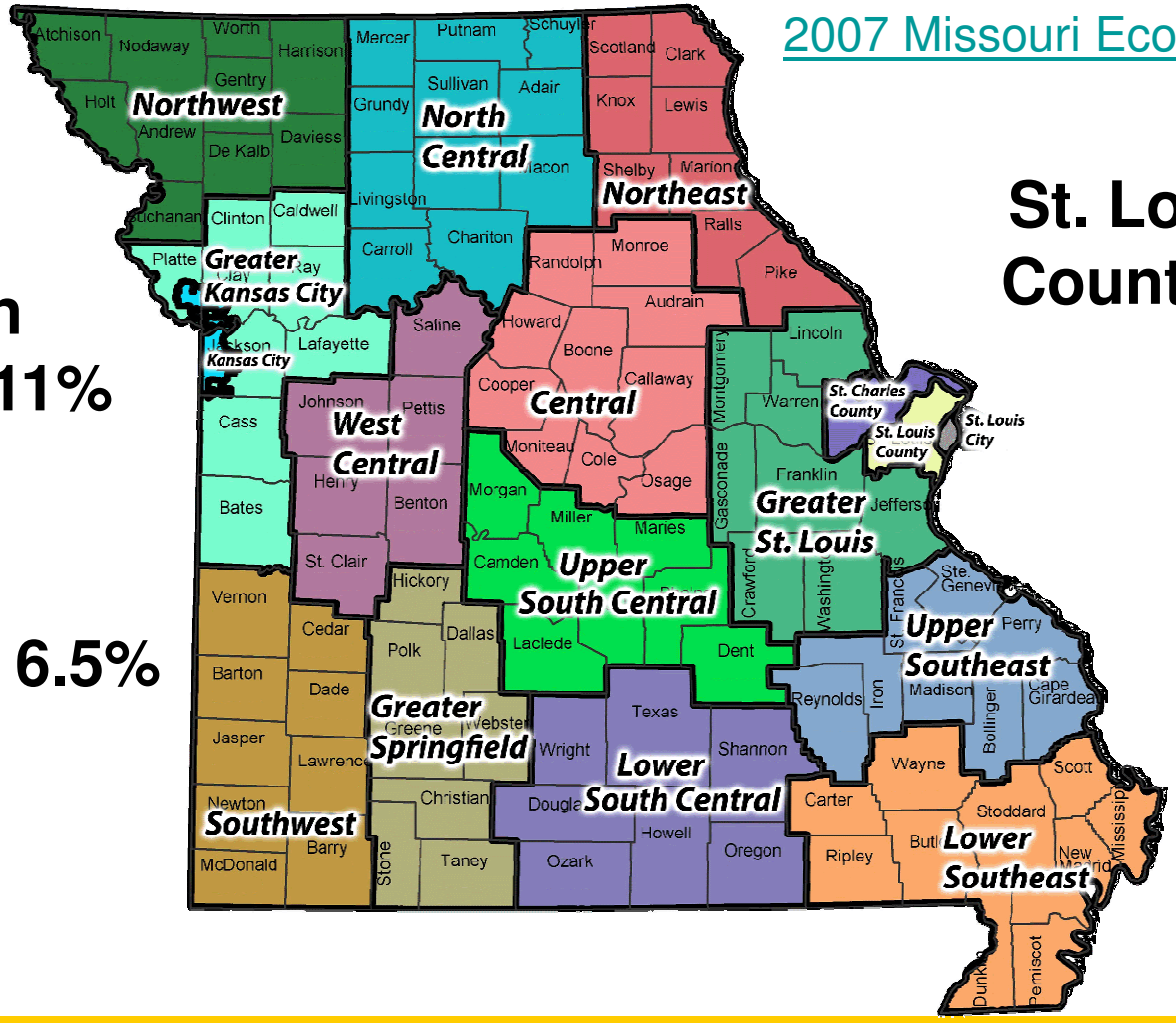
Regional Economic Share

[2007 Missouri Economic Report]

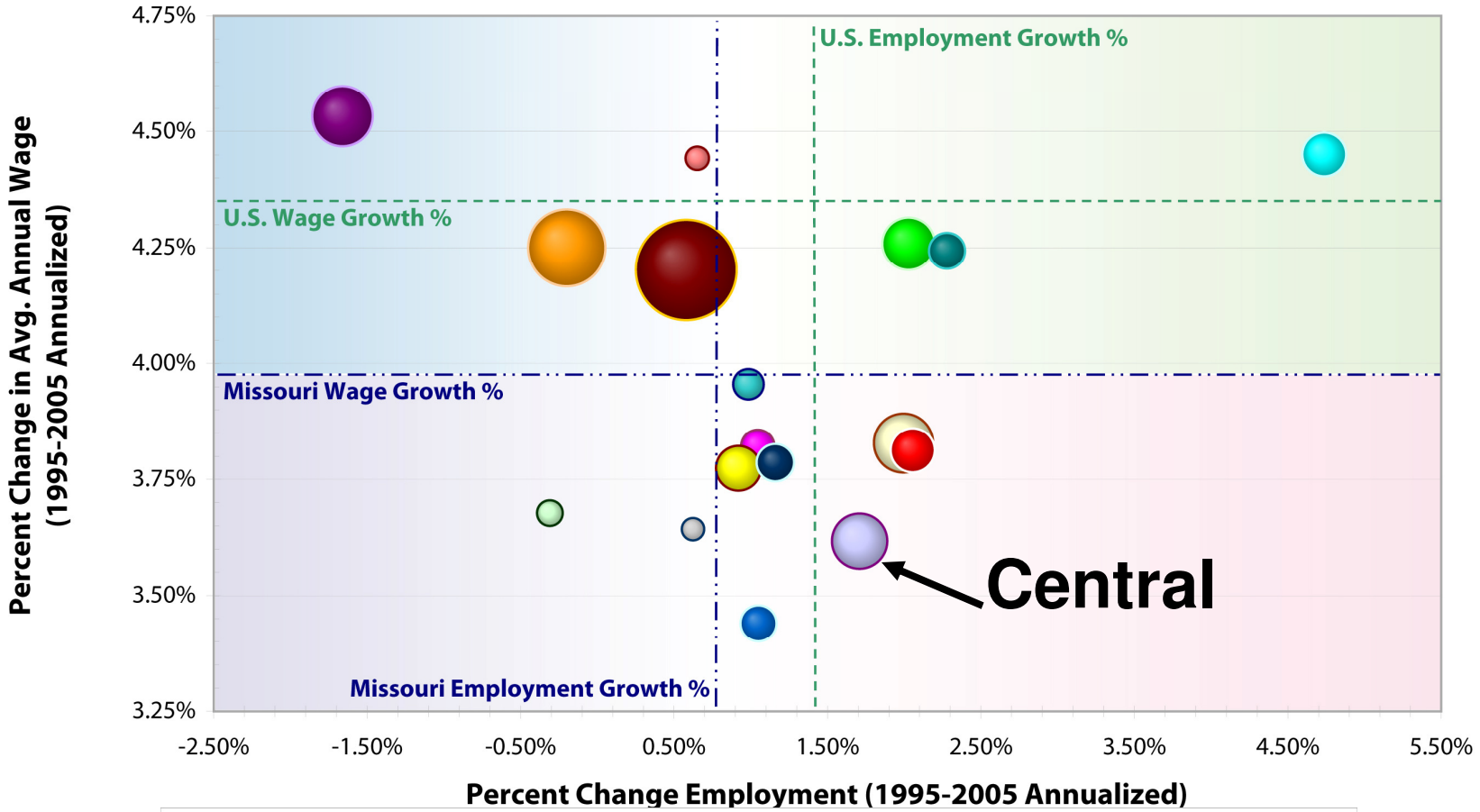
Jackson County 11%

Central 6.5%

St. Louis County 21%



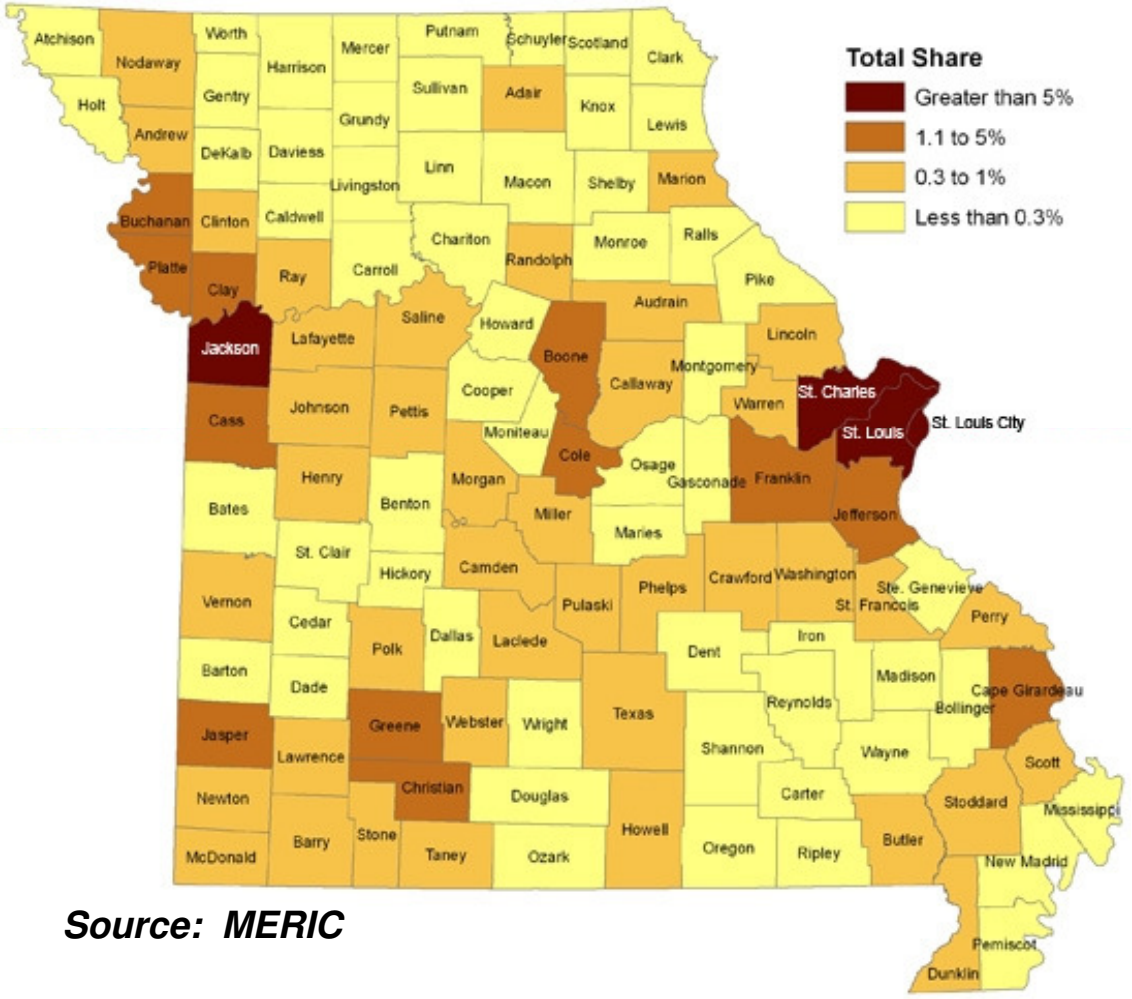
Comparative Performance of Economic Areas in Missouri



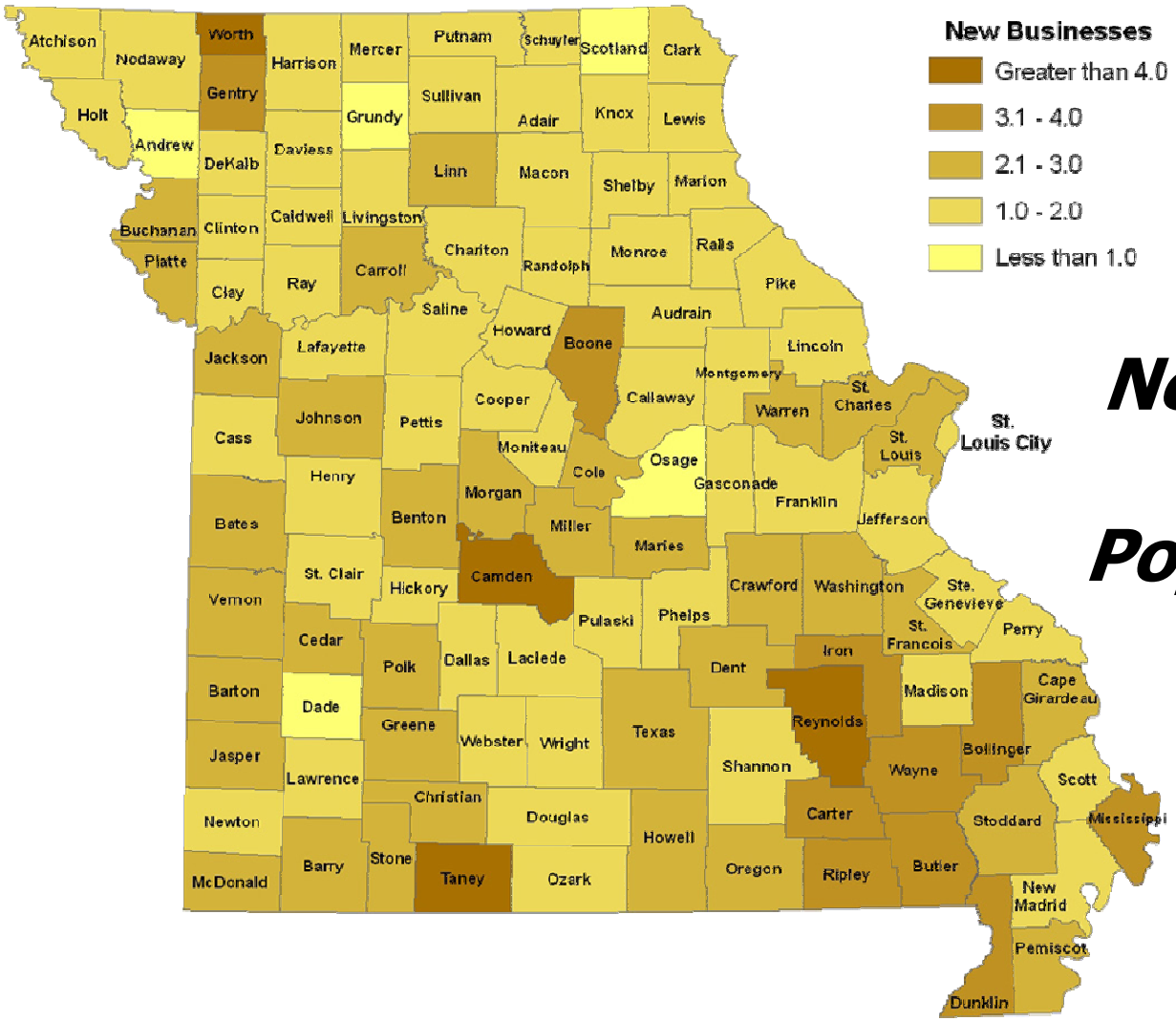
Source: MERIC

Central, Greater Kansas City, Greater Springfield, Greater St. Louis, Kansas City, Lower South Central, Lower Southeast, North Central, Northeast, Northwest, Southwest, St. Charles County, St. Louis City, St. Louis County, Upper South Central, Upper Southeast, West Central

Economic Share in Missouri by County, 2006



Source: MERIC



New Businesses per 1,000 Population, 2006

Source: MERIC

How ***flat*** the world is depends on where you're standing…

- ***The World is Flat – "new oil wells"***

  — Thomas Friedman

- ***Making Globalization Work***

  — Joseph Stiglitz

- ***Networking Diverse Assets, especially human capital… "collaboration" is hard***

America's Perfect Storm

Three Forces Changing Our Nation's Future

- Divergent skill distributions
- The changing economy
- Demographic shifts

Educational Testing Service **www.ets.org**

State New Economy Index

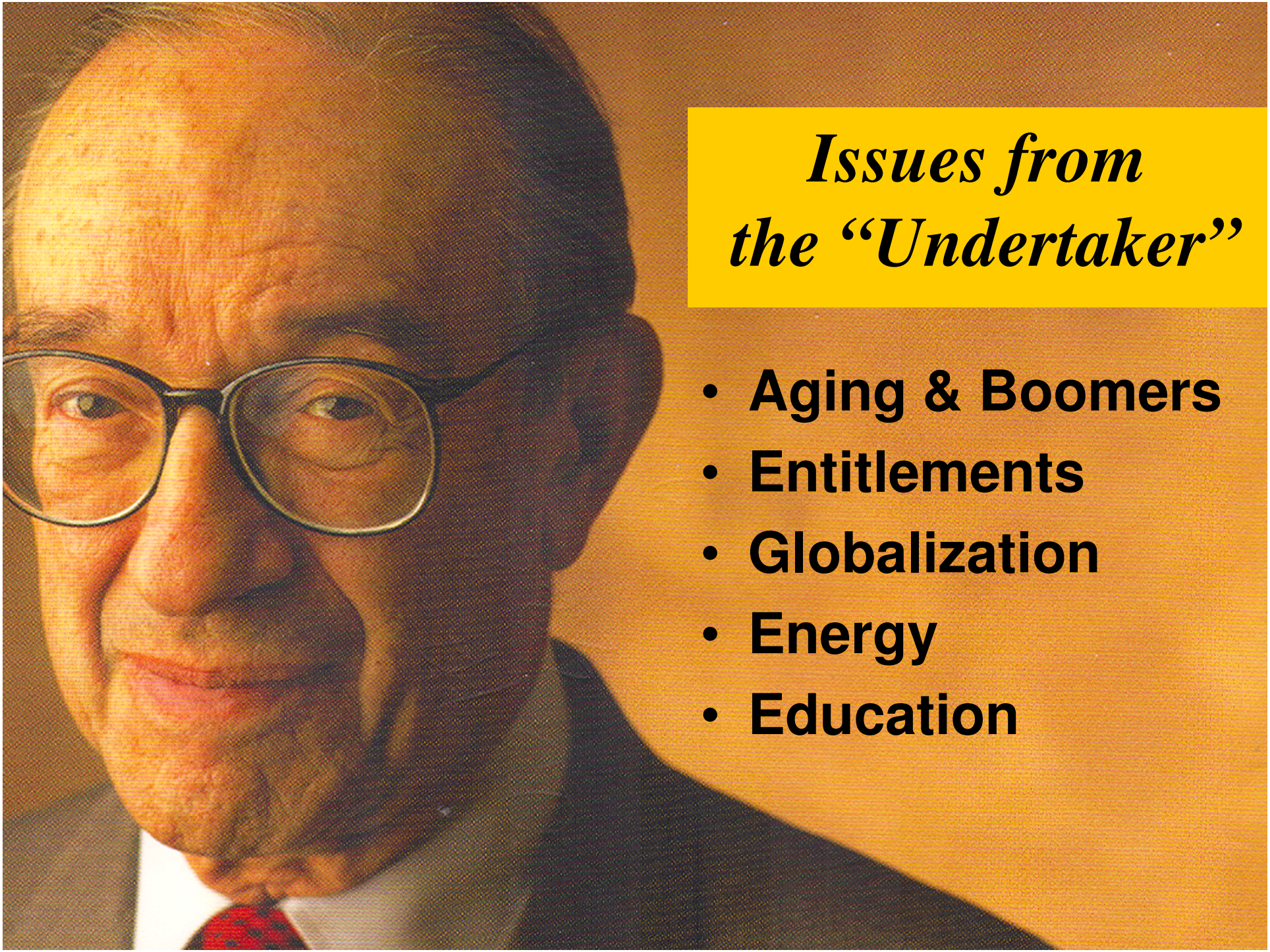
Ewing Marion Kauffman Foundation

Benchmarking

Economic

Transformation

Missouri's rating declined from 28th in 2002 to 35th in 2007


Issues from
the "Undertaker"
• Aging & Boomers
• Entitlements
• Globalization
• Energy
• Education

Change in the Hispanic Population 2000 - 2006

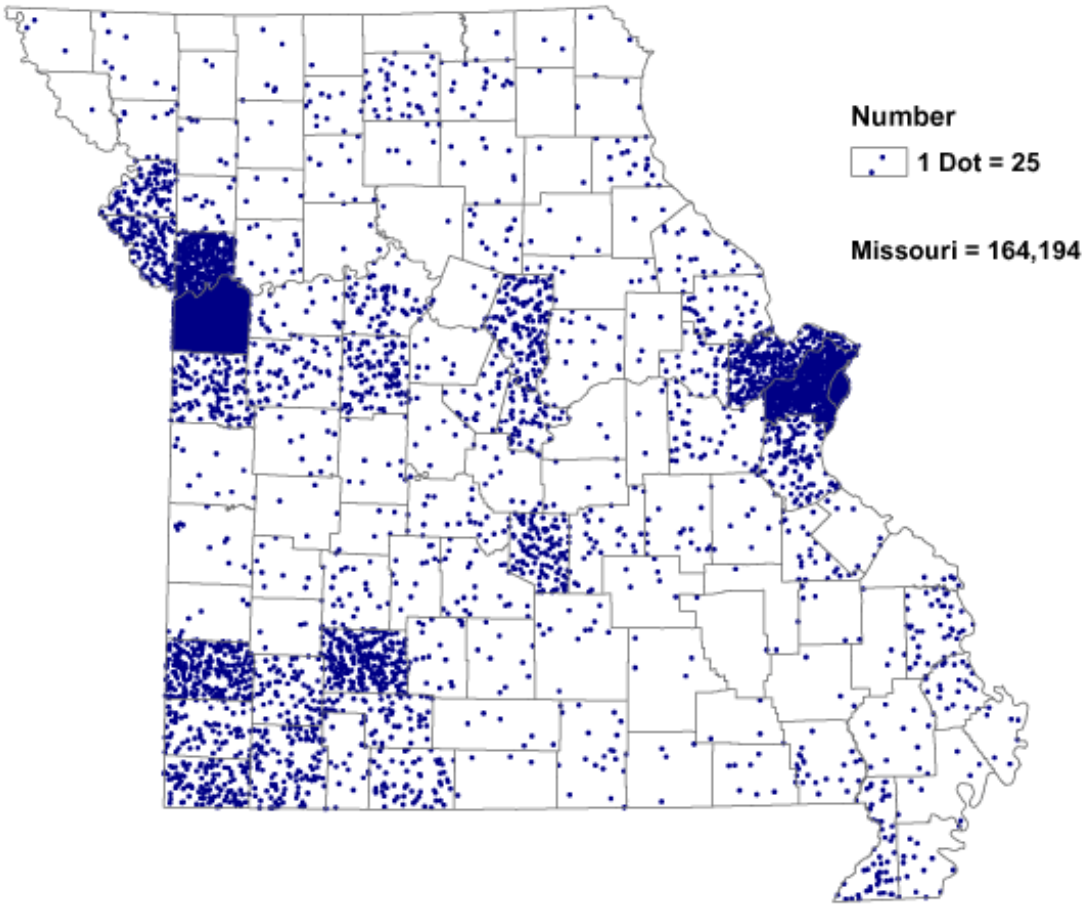
- Percent Change: U.S. 6.4% -- Hispanic 25.5%
- Hispanics (44.3 million)
- Blacks (38.3 million)
- Missouri Hispanic Population 2006
  - 164,194
  - 38.4% gain since 2000

Enrollment Change

From 1.4% to 2.8% in 5 years

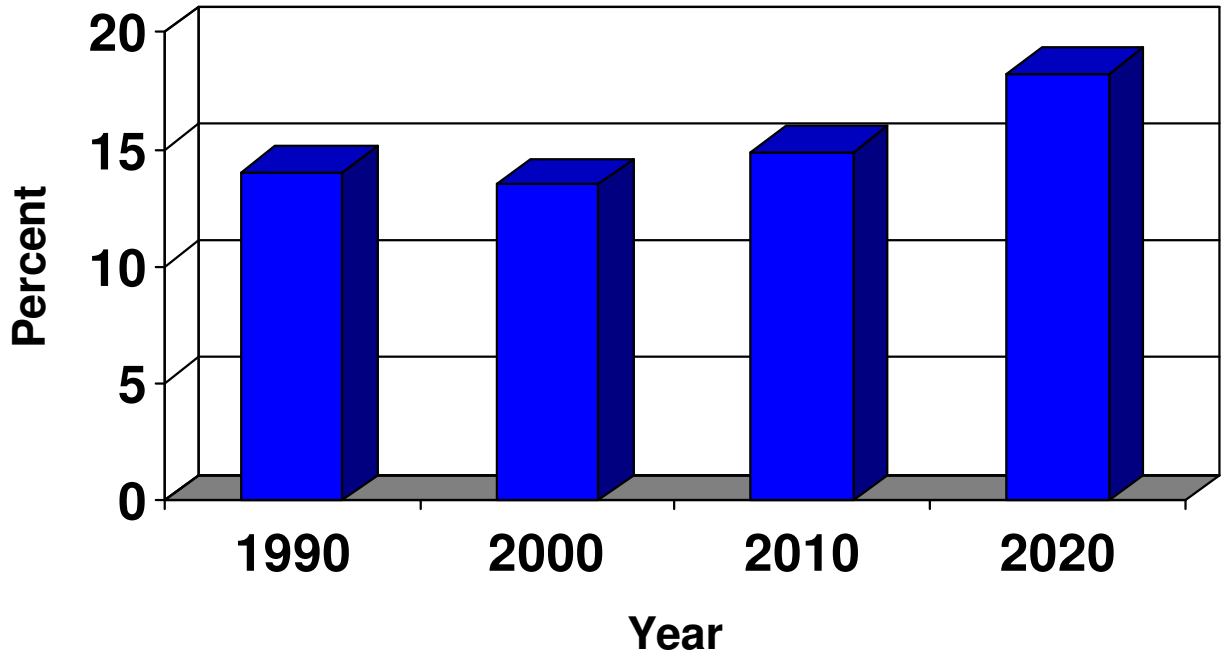
	1999	2005	Change	Pct Change
Total	896,910	894,855	-2,055	-0.2%
Hispanic	12,633	25,166	12,533	99.2%

Hispanic Population in Missouri, 2006



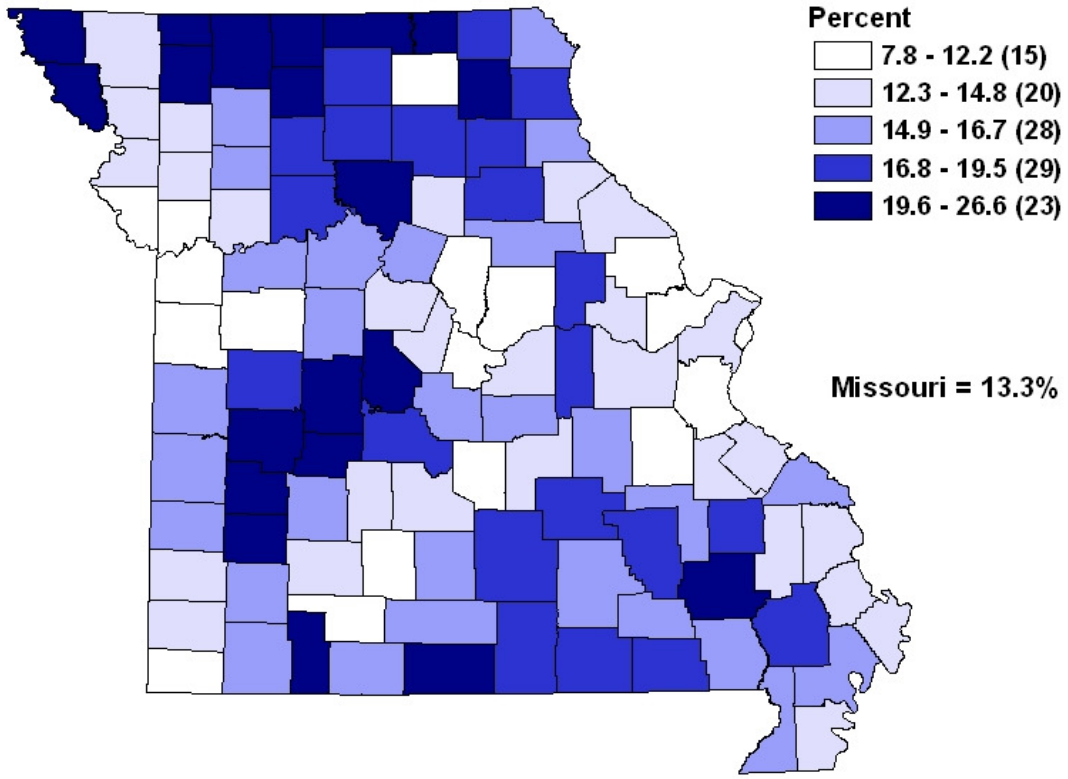
Source: USDC, Bureau of the Census, (2006 Estimates)
Prepared by: University of Missouri Extension, Office of Social and Economic Data Analysis (OSEDA)
Map Generated on 13 Nov 2007

Percent Missouri Population Age 65+: 1990-2020



SOURCE: Census Bureau/NCHS. Projection algorithm, programming by OSEDA
Chart Prepared by: University of Missouri Extension, Office of Social and Economic Data Analysis
24March2006

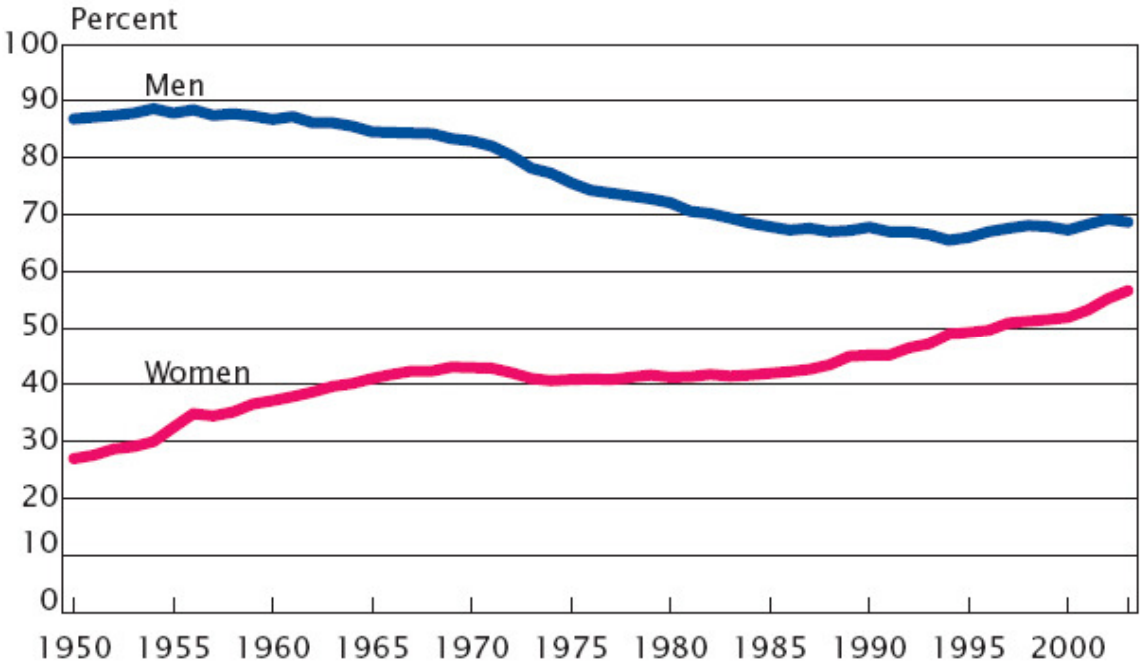
Percent of Missouri's Population, 2005: Age 65 and Older



Source: USDC, Bureau of the Census, 2000 Decennial Census
Produced by: University of Missouri Extension, Office of Social and Economic Data Analysis
Map generated on 28June2007

Figure 4-5.

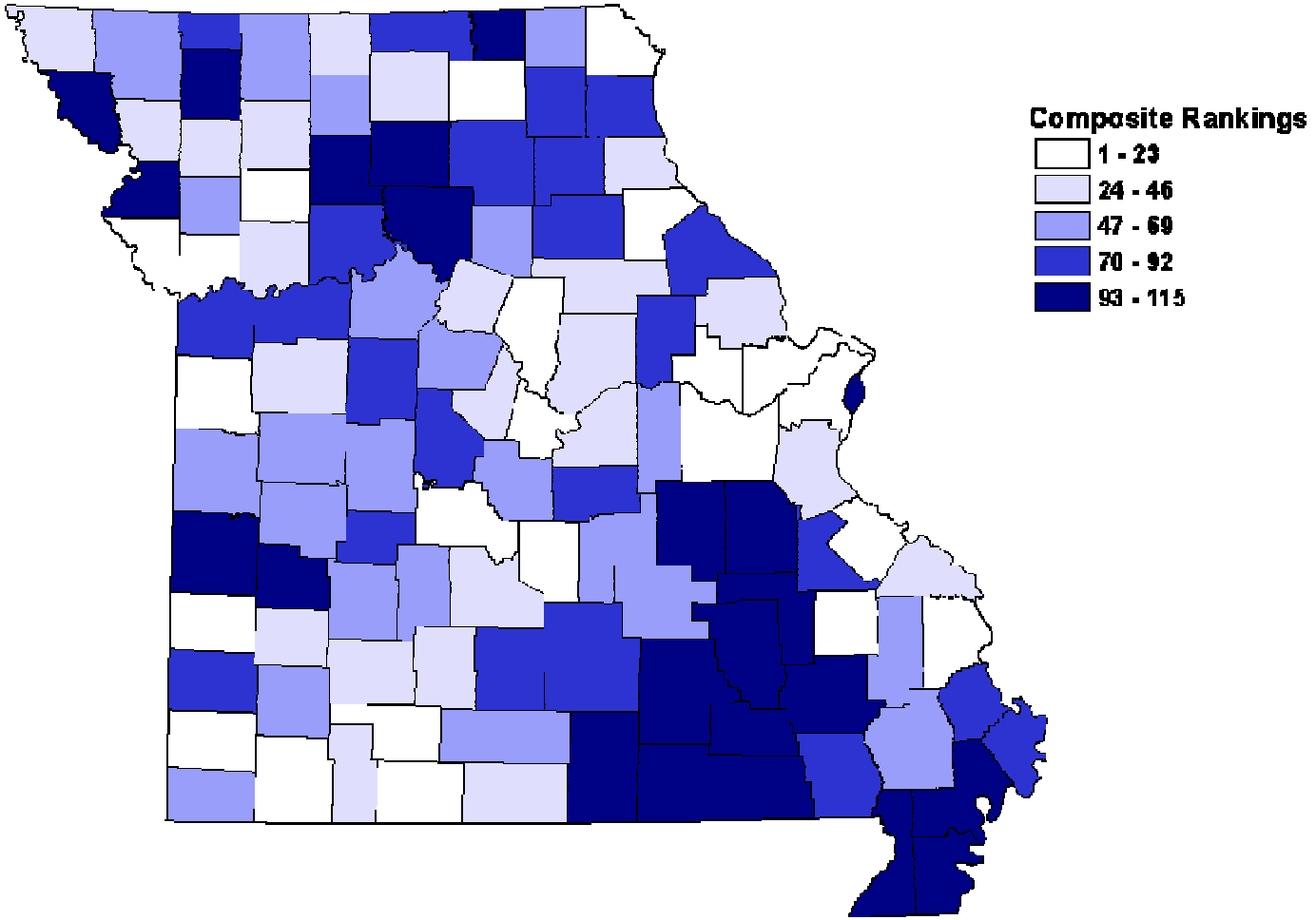
Labor Force Participation Rates for the Population Aged 55 to 64 by Sex: 1950 to 2003



Note: The reference population for these data is the civilian noninstitutionalized population.

Source: Bureau of Labor Statistics, 2004c. For full citation, see references at end of chapter.

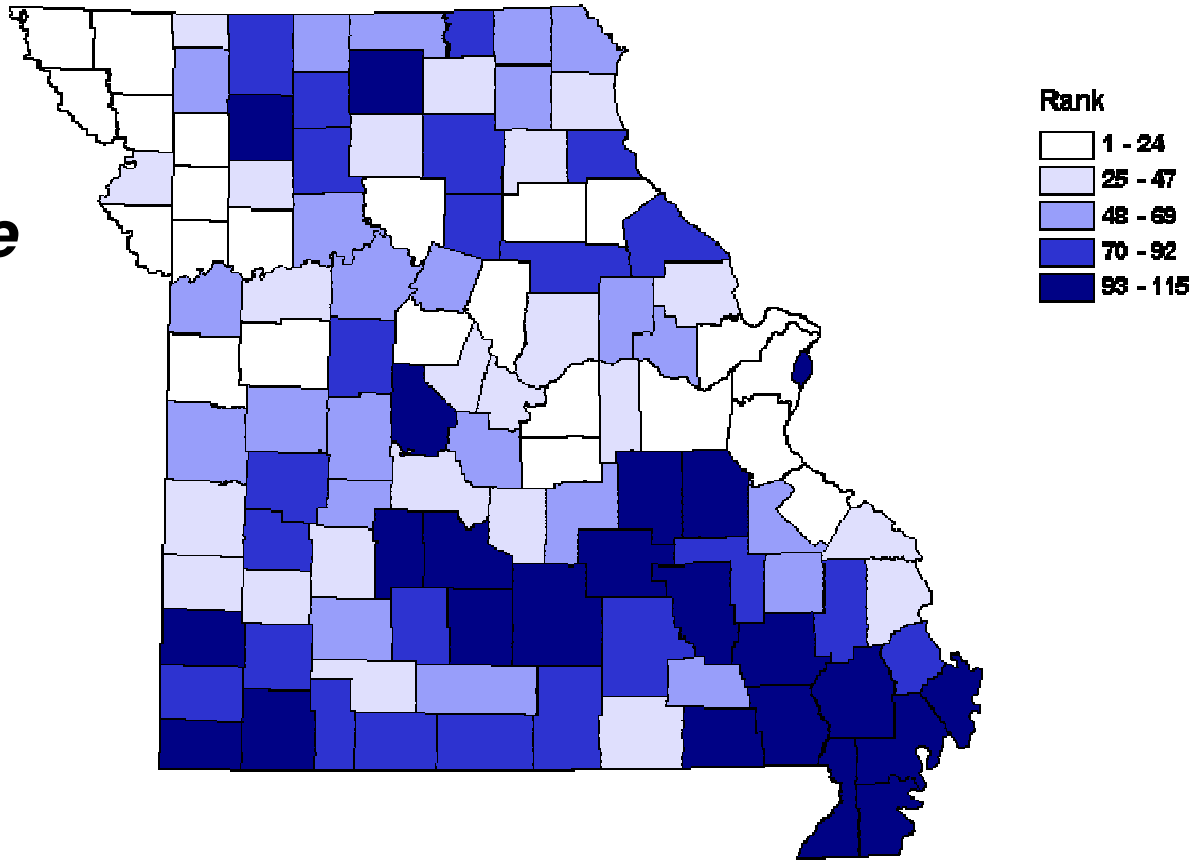
Missouri Senior Report, 2007 Composite County Rankings



Prepared by: Office of Social and Economic Data Analysis (OSEDA)
Map Created On: 12.14.2007

Composite Kids Count Ratings, 2007

Quality of Life Indicators for Kids



Source: University of Missouri, Office of Social and Economic Data Analysis
Prepared by: University of Missouri Extension, Office of Social and Economic Data Analysis (OSEDA)
Map Generated on: 11.8.2006

REFLECTION

What are three demographic trends that you believe will impact your district?

The New Census

- The “Short Form” – once a decade
- The “Long Form”
  - The American Community Survey (ACS) is the new “long form” and will be annual.

ACS Plans

- ACS data are available now for areas with populations of 65,000 or more.
- In 2008, the Census Bureau will release the three-year estimates for areas with populations of ***20,000 or more***.
- In 2010, 5-year estimates will be released including the smallest of geographic areas —down to the tract and block group levels.

For example, Missouri Median Household Income…

American Community Survey **(Adjusted to 2006)**

- **2005 $43,310 +/- $456**
- **2006 $42,841 +/- $449**

Change - $469 +/- $640

Note Margins of Error +/-

Missouri Median Household Income

American Community Survey (Adjusted to 2006)

- **2005 $43,310 +/- $456**
- **2006 $42,841 +/- $449**
- **Change - $469 +/- $640**

Note differences in the 90 percent margins of error between the ACS and CPS

Current Population Survey (not adj.)

- **2005 $44,686 +/- $1,465**
- **2006 $44,487 +/- $1,647**

(None of the differences are statistically significant.)

Key Elements

- **Geography** Nation, states, cities, counties and ***school districts.***
- Now 65,000+ Eventually, areas as small as ***census tracts*** using multi-year averages.
- **Sample Size** ***About 3 million addresses*** per year. Data are collected from about one-twelfth of the sample each month.

ACS Implications

- Annual small area estimates & indicators
- Methods may better reflect seasonal areas
- Change more ***apparent*** in larger areas
- Estimates and projections reworked
- Demand for integration and meaning

…Google Earth on data steroids…

Google OSEDA for More

RESOURCE DATA

Resources Are Needed To Get Done
What Needs To Get Done

- It all starts with the budget!
- Is the district budget an important part of your work?
- Is the budget the educational plan, and are priorities expressed in dollars and cents?

Is Our Only Valuable Resource The Money?

- What are the intangible assets or resources that you value in your district?
- Do you gather information regarding how you identify and make use of these intangible resources (social capital)?

MSIP Resource Standards

- Program of Studies
- Class Size/Assigned Enrollments
- Professional Support Staff
- Administrative Staff
- Certification
- Planning Time

PROCESS DATA

THE MSIP ADVANCE QUESTIONNAIRE (AQ):

A storehouse of often underutilized but important perceptual data

The Advance Questionnaire (AQ)

- Perceptual data obtained through a questionnaire(s)
- Provides a voice for all key stakeholder groups
- Includes questions based on critical research-based elements
- Allows development of additive scales consistent with Effective Schools Research

The Advance Questionnaire (AQ)

- Longitudinal data available from 1990 to present in the form of legacy scales & items.
- Unlike many perceptual data collection tools & processes, the AQ offers checks on reliability and validity.
- Scales directly relate to MSIP standards & indicators.

Response Rates for the State Sample 2006- 07

	N Received	Population Estimate	Response Rate
Students	106,034	127,758	83%
Parents	76,297	152,468	50%
Faculty	11,740	14,646	80%

Selected Additive Scales/Definitions

- **Leadership:** This scale identifies the degree to which leadership is perceived as effective in improving student learning.
- **School Climate:** This scale identifies the degree to which all students feel respected and valued.
- **Efficacy and Expectations:** This scale identifies the degree to which teachers and students believe that they are capable of impacting student achievement.

Additive Scales and Definitions *(cont.)*

- **Differentiated Instruction:** This scale identifies the degree to which teachers vary and revise instruction to meet the needs of students.
- **Safe and Orderly Environment:** This scale identifies the degree to which the school environment is safe and orderly.

Efficacy/Expectations Scale
(Faculty)

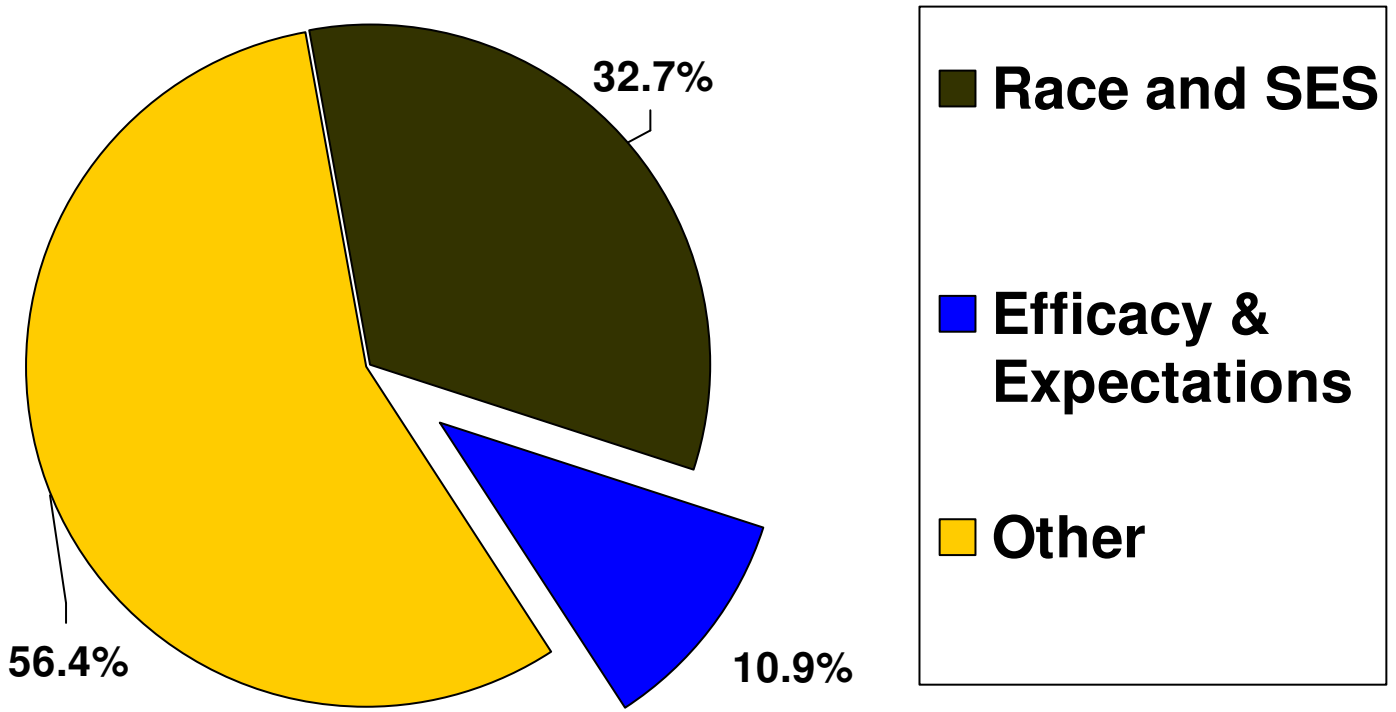
1. There are effective supports in place to assist students who are in jeopardy of academic failure.
2. I emphasize the importance of effort with students.
3. I have the skills necessary to meet the needs of all learners in my classroom.
4. I believe that I can positively impact student performance.

Efficacy/Expectations Scale
(Faculty)

5. Students are held accountable for doing quality work.
6. All staff in our school hold high expectations for student learning.
7. There are avenues for recognizing and rewarding the accomplishments of all students.

Variance In MAP Communication Arts Achievement is Explained by…

FACULTY: Efficacy & expectations explains 10.9% of the variance in communication arts achievement



Example from Happy Valley R-IX School District

The efficacy and expectations scale from the faculty Advance Questionnaire identifies the degree to which teachers believe that they are capable of impacting student achievement.

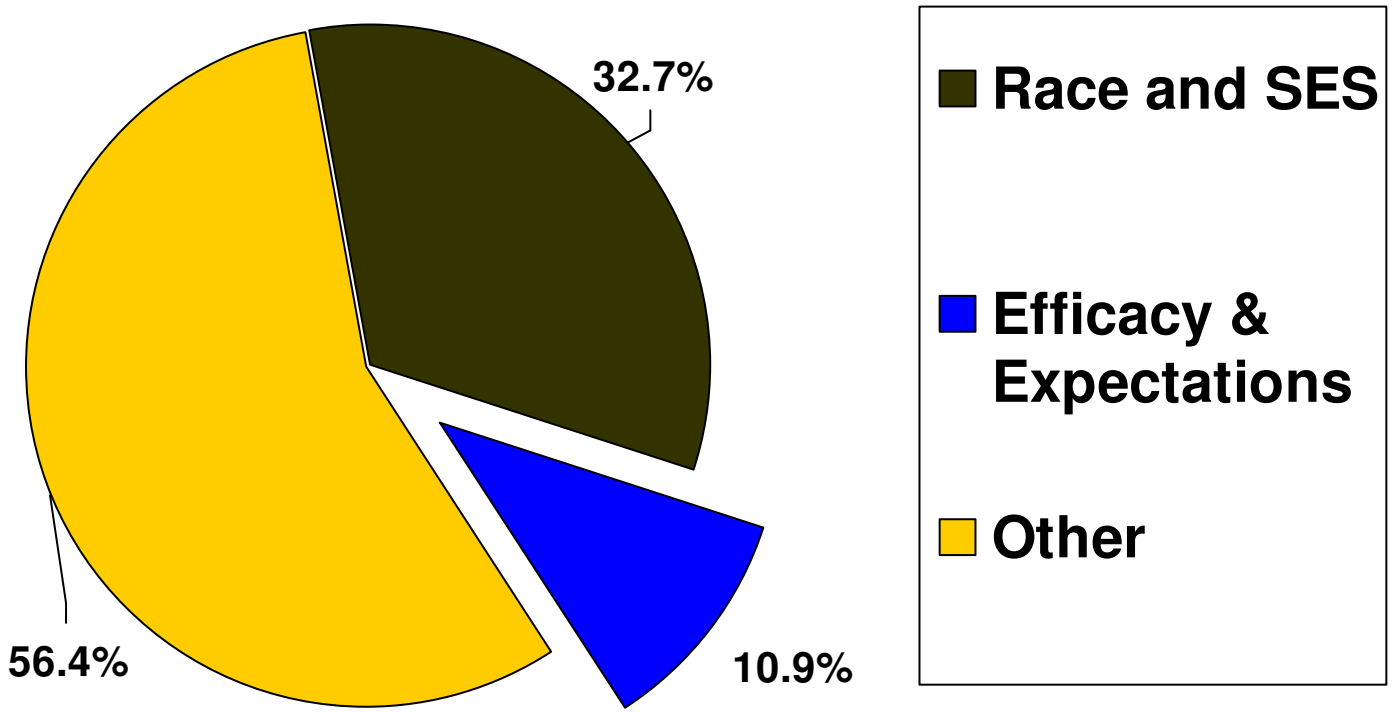
The Faculty scale for Efficacy & Expectations consists of seven questions:

Happy Valley District Faculty	*percentile*	*mean*	*std dev*	*n*
All staff in our school hold high expectations for student learning.	53	4.18	0.79	173
I believe that I can positively impact student performance.	35	4.56	0.52	173
I emphasize the importance of effort with students.	60	4.75	0.55	173
I have the skills necessary to meet the needs of all learners in my classroom.	29	4.19	0.77	173
Students are held accountable for doing quality work.	72	4.22	0.71	173
There are avenues for recognizing and rewarding the accomplishments of all students.	61	4.36	0.58	173
There are effective supports in place to assist students who are in jeopardy of academic failure.	30	4.01	0.94	173

School Building Results for Efficacy and Expectations Faculty Scale

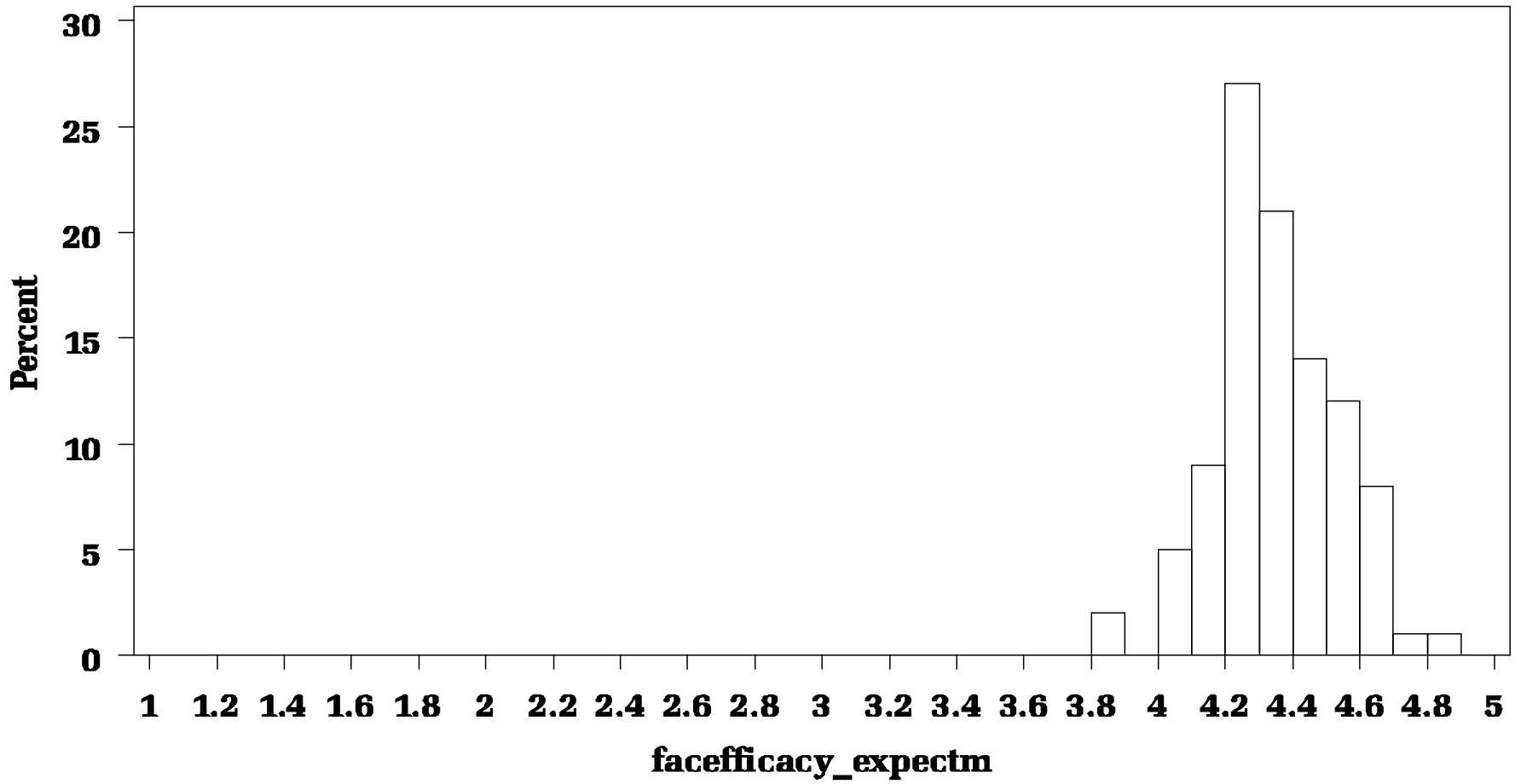
district	*school_name*	*percent ile*	*mean*	*std_dev*	*n*
HAPPY VALLEY	DISTRICT	53	4.32	0.45	173
HAPPY VALLEY	HAPPY VALLEY HIGH	43	4.19	0.51	48
HAPPY VALLEY	HAPPY VALLEY MIDDLE	80	4.44	0.43	35
HAPPY VALLEY	HILL TOP ELEM.	10	4.14	0.39	13
HAPPY VALLEY	JOHNSON ELEM.	62	4.46	0.42	13
HAPPY VALLEY	PARK ELEM.	39	4.35	0.41	21
HAPPY VALLEY	DEERFIELD ELEM.	45	4.38	0.39	38

FACULTY: Efficacy & expectations explains 10.9% of the variance in communication arts achievement



State Distribution — Faculty

facefficacy_expect district level



Student Perceptions:
Happy Valley R-IX School District

The efficacy and expectations scale from the student (grade 3 and older) Advance Questionnaire identifies the degree to which students believe that they are capable of impacting student achievement.

The Student scale for Efficacy & Expectations consists of six questions:

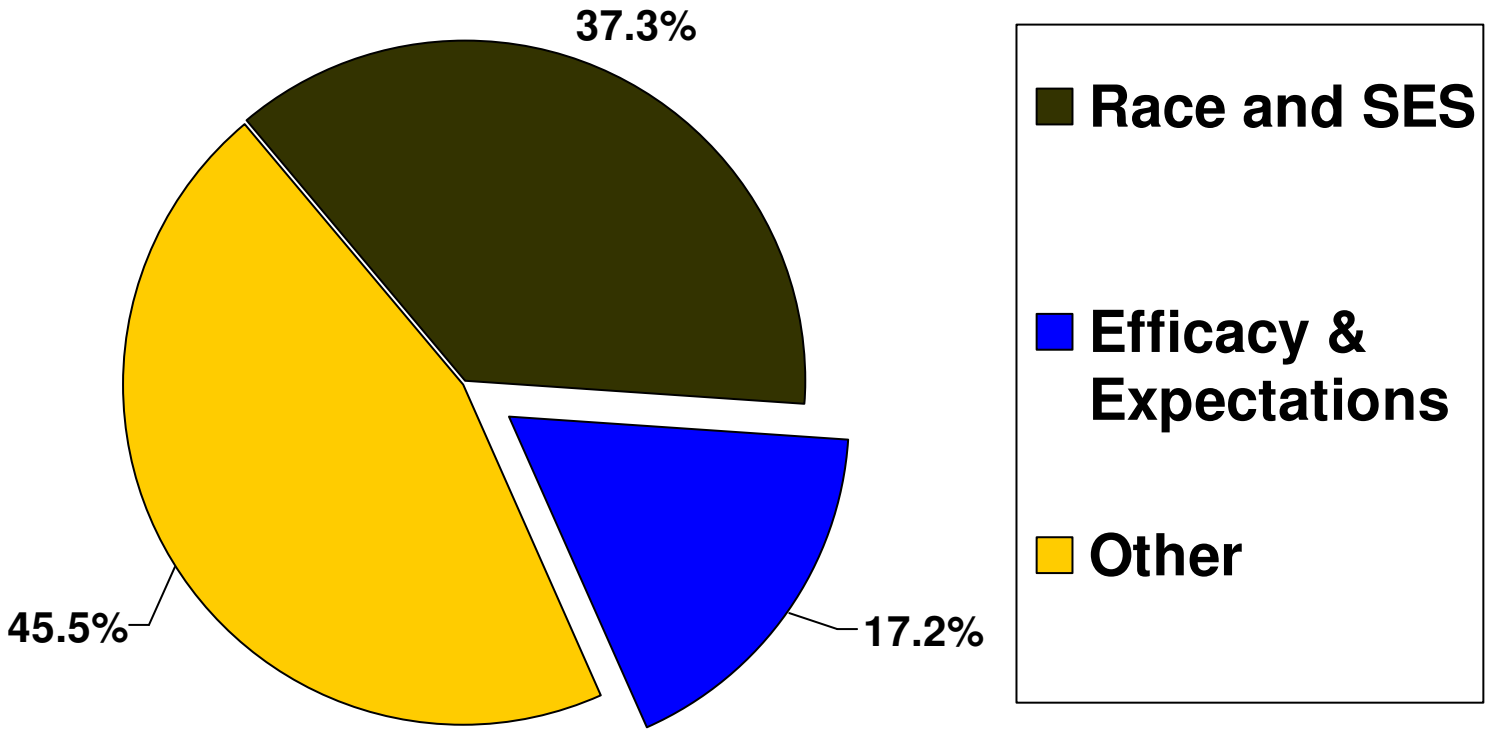
Efficacy/Expectations Scale
(Students)

1. If I do well in school, it will help me when I grow up.
2. Being successful in school today will help me in my future.
3. I can do well in school.
4. I learn a lot in this school.

Efficacy/Expectations Scale
(Students)

5. My teachers think I can learn.
6. My family believes that I can do well in school.
7. My teachers expect very good work from me.

STUDENTS: Efficacy & expectations explains 17.2% of the variance in communication arts achievement

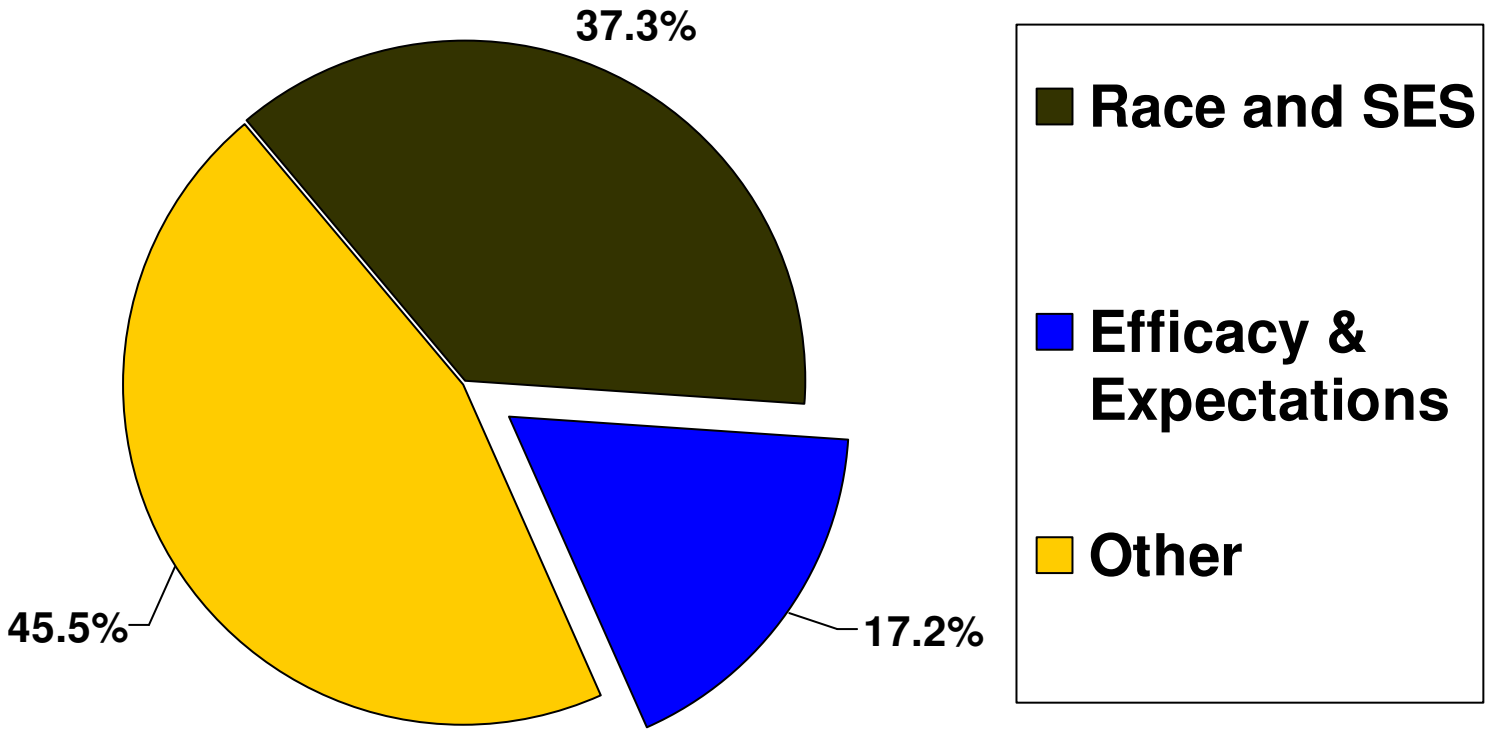


Student	*percentile*	*mean*	*std dev*	*n*
Being successful in school today will help me in my future.	78	4.59	0.77	1618
I can do well in school.	80	4.41	0.76	1618
I learn a lot in this school.	65	4.12	0.95	1618
My family believes that I can do well in school.	80	4.65	0.67	1618
My teachers expect very good work from me.	75	4.33	0.8	1618
My teachers think I can learn.	77	4.43	0.74	1618

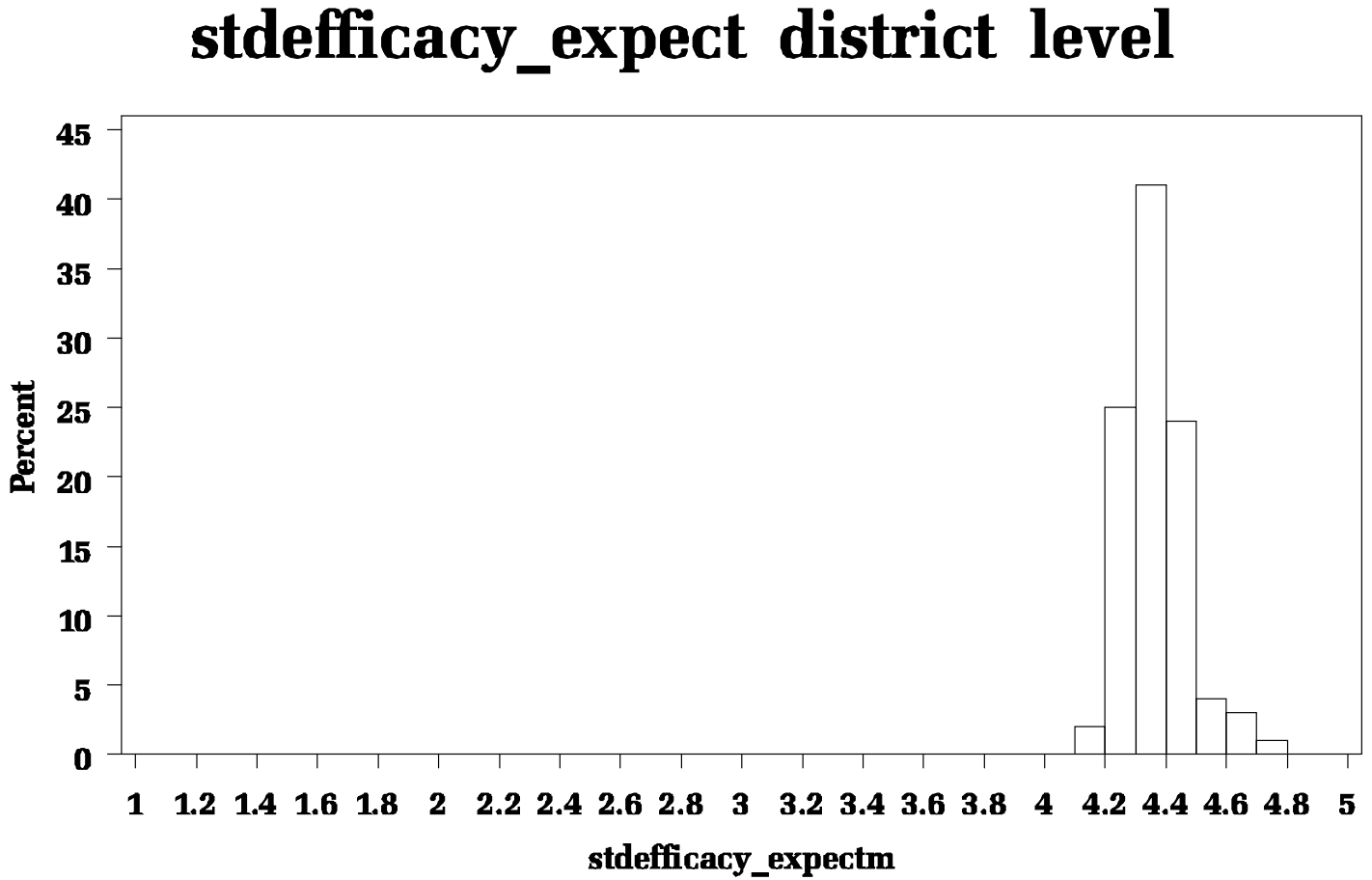
School Building Results for Efficacy & Expectations Student Scale

district	*school_name*	*percentile*	*mean*	*std_dev*	*n*
HAPPY VALLEY	DISTRICT	77	4.42	0.56	1618
HAPPY VALLEY	HAPPY VALLEY HIGH	69	4.16	0.62	590
HAPPY VALLEY	HAPPY VALLEY MIDDLE	85	4.44	0.55	438
HAPPY VALLEY	HILL TOP ELEM.	16	4.58	0.46	85
HAPPY VALLEY	JOHNSON ELEM.	52	4.69	0.34	67
HAPPY VALLEY	PARK ELEM.	64	4.71	0.34	161
HAPPY VALLEY	DEERFIELD	42	4.67	0.33	277

STUDENTS: Efficacy & expectations explains 17.2% of the variance in communication arts achievement



State Distribution — Student



Lets examine the results from a single school building: Hill Top Elem.

First for Faculty, then Students.

Hill Top Faculty	*percentile*	*mean*	*std dev*	*n*
All staff in our school hold high expectations for student learning.	43	4.31	0.63	13
I believe that I can positively impact student performance.	25	4.54	0.52	13
I emphasize the importance of effort with students.	47	4.77	0.44	13
I have the skills necessary to meet the needs of all learners in my classroom.	5	3.92	0.76	13
Students are held accountable for doing quality work.	13	4	0.41	13
There are avenues for recognizing and rewarding the accomplishments of all students.	6	3.85	0.69	13
There are effective supports in place to assist students who are in jeopardy of academic failure.	8	3.62	0.96	13

Hill Top Elem. Students	*percentile*	*mean*	*std dev*	*n*
Being successful in school today will help me in my future.	14	4.7	0.58	85
I can do well in school.	26	4.39	0.71	85
I learn a lot in this school.	17	4.4	0.78	85
My family believes that I can do well in school.	8	4.7	0.55	85
My teachers expect very good work from me.	27	4.61	0.66	85
My teachers think I can learn.	15	4.64	0.59	85

Student Perceptions:
Happy Valley R-IX School District

6.3.1.6 The instructional strategies scale from the student (grade 6 and older) Advance Questionnaires identifies the degree to which teachers use instructional strategies that research indicates are likely to result in improved student learning.

The Student scale for Instructional Strategies consists of seven questions.

What can we observe from this scale?

Hill Top Students	*percentile*	*mean*	*std_dev*	*n*
I am asked to identify similarities and differences.	29	3.04	1.02	27
I am asked to revise or correct errors in my work.	3	2.58	1.14	27
I am asked to summarize new material.	7	2.52	1.05	27
I am asked to use pictures, graphs, maps, or charts to present my information.	3	2.31	0.84	27
I am given opportunities to present what I have learned to other students.	21	2.74	0.94	27
I am required to take notes.	4	2.44	0.89	27
My teachers place students in small groups.	43	3.11	0.97	27

THE MSIP 4TH CYCLE CLASSROOM OBSERVATION TOOL:

A New Way To Examine Prevailing Instructional Practice

MSIP CLASSROOM OBSERVATION "LOOK FORS"

(As with the AQ, based on latest effective schools research by Robert Marzano, MCREL, and others)

"LOOK FORS"

- Differentiated instruction
- Instructional delivery methods
- Instructional strategies
- Level of engagement
- Depth of knowledge (higher order thinking)

"LOOK FORS"

- Classroom learning environment
- Instructional climate
- Student work displayed
- Technology use

Implications Of Classroom Observation Data

- What is prevailing instructional practice now?
- What does the research say about instructional strategies and the effect on student performance?
- Is our professional development bringing about changes in instruction?

PERCEPTUAL DATA COLLECTION TECHNIQUES

- Survey/Questionnaires (web-based or traditional paper forms)
- Focus groups
- Interviews
- Town hall meetings
- Clicker activity
- Colored dots to prioritize and categorize

PERFORMANCE DATA

MSIP Performance Standards/APR

- MAP
- ACT
- Advanced courses
- Career education courses
- College placement
- Career education placement
- Attendance
- Graduation rate

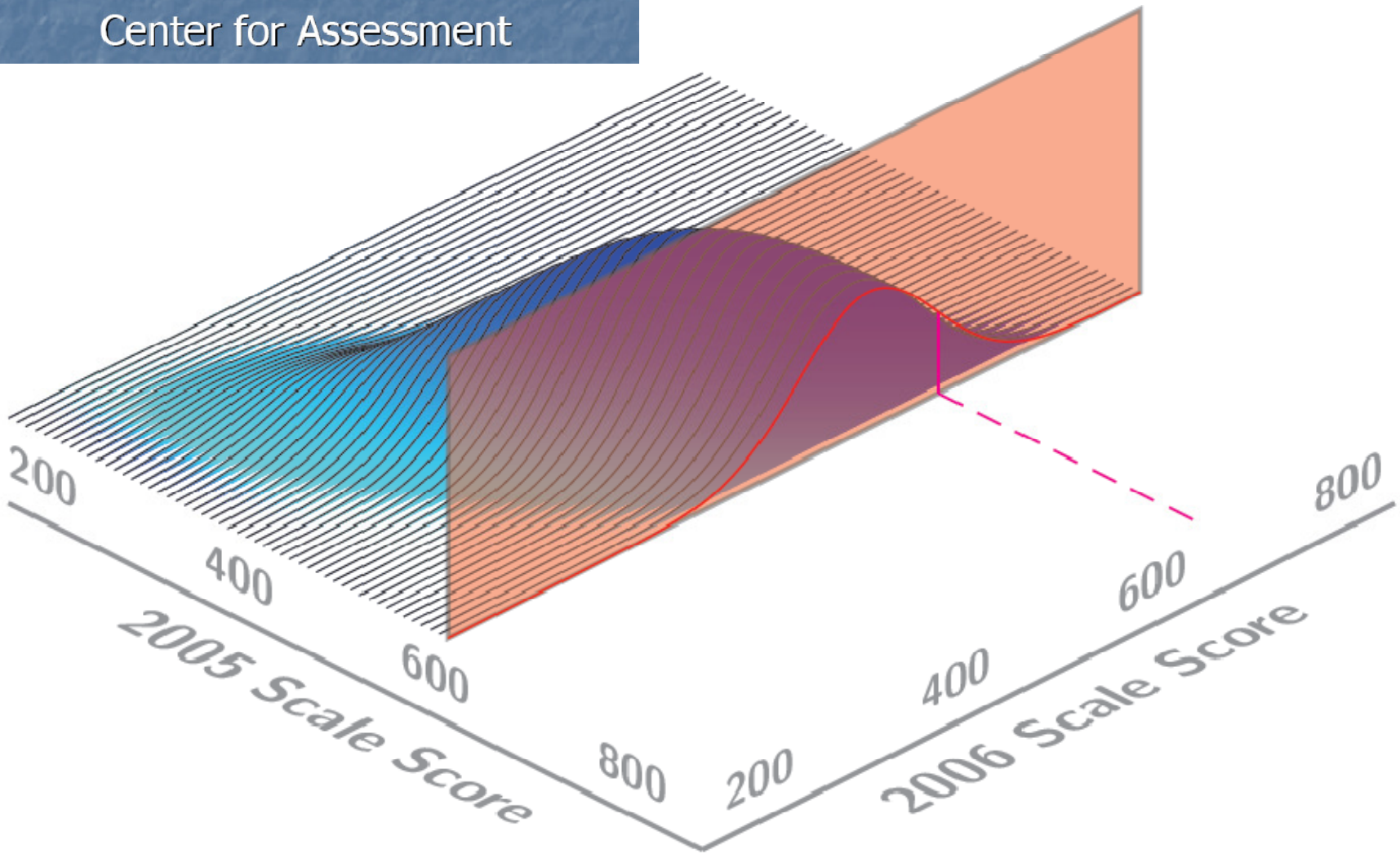
Sources: Performance Data

- Annual Performance Report (APR)
- Disaggregated with Multiple Years
- MAP Index by Subject Area
- Attendance
- Graduation Rate
- College and Career Preparation Indicators

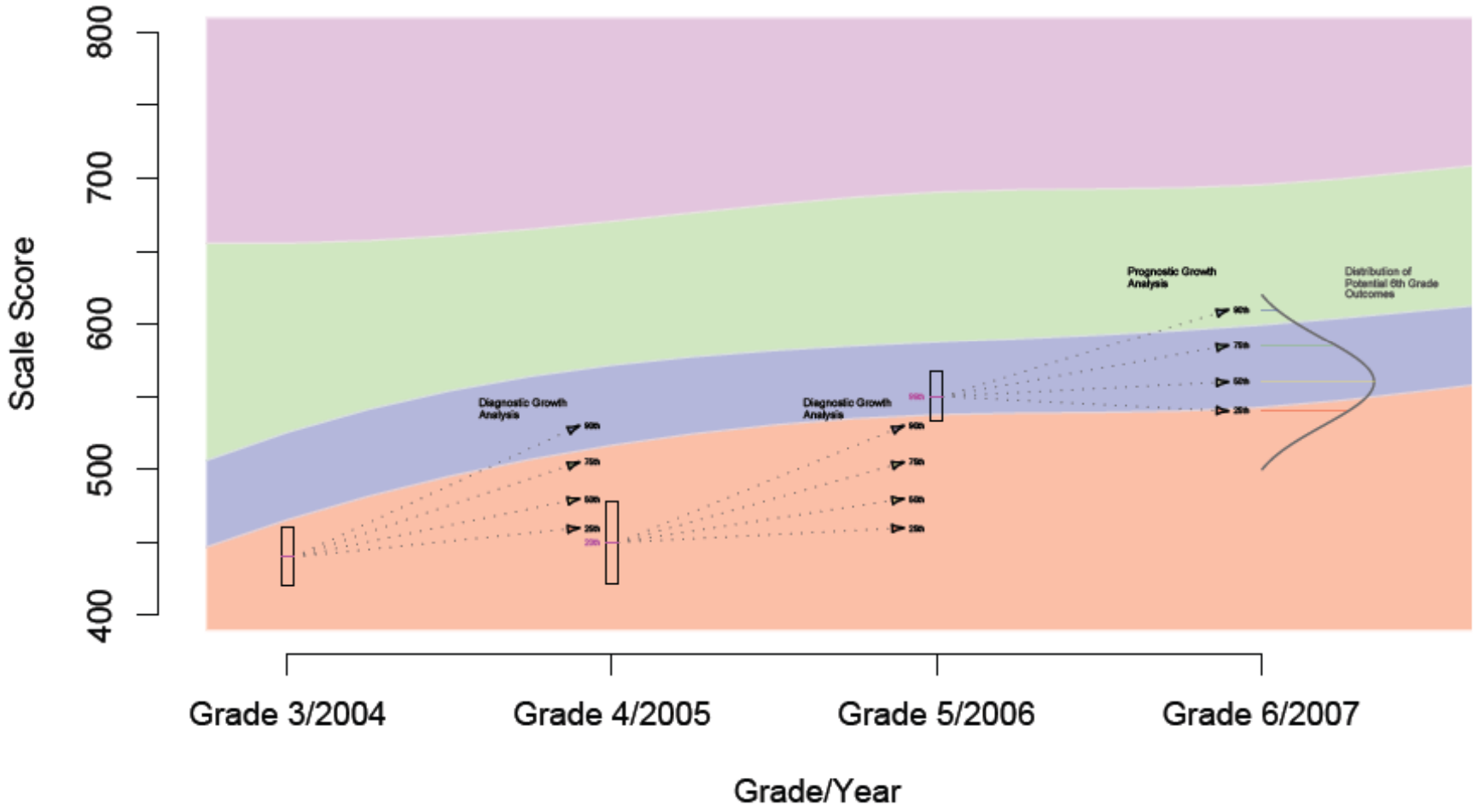
Annual Performance Report (APR)

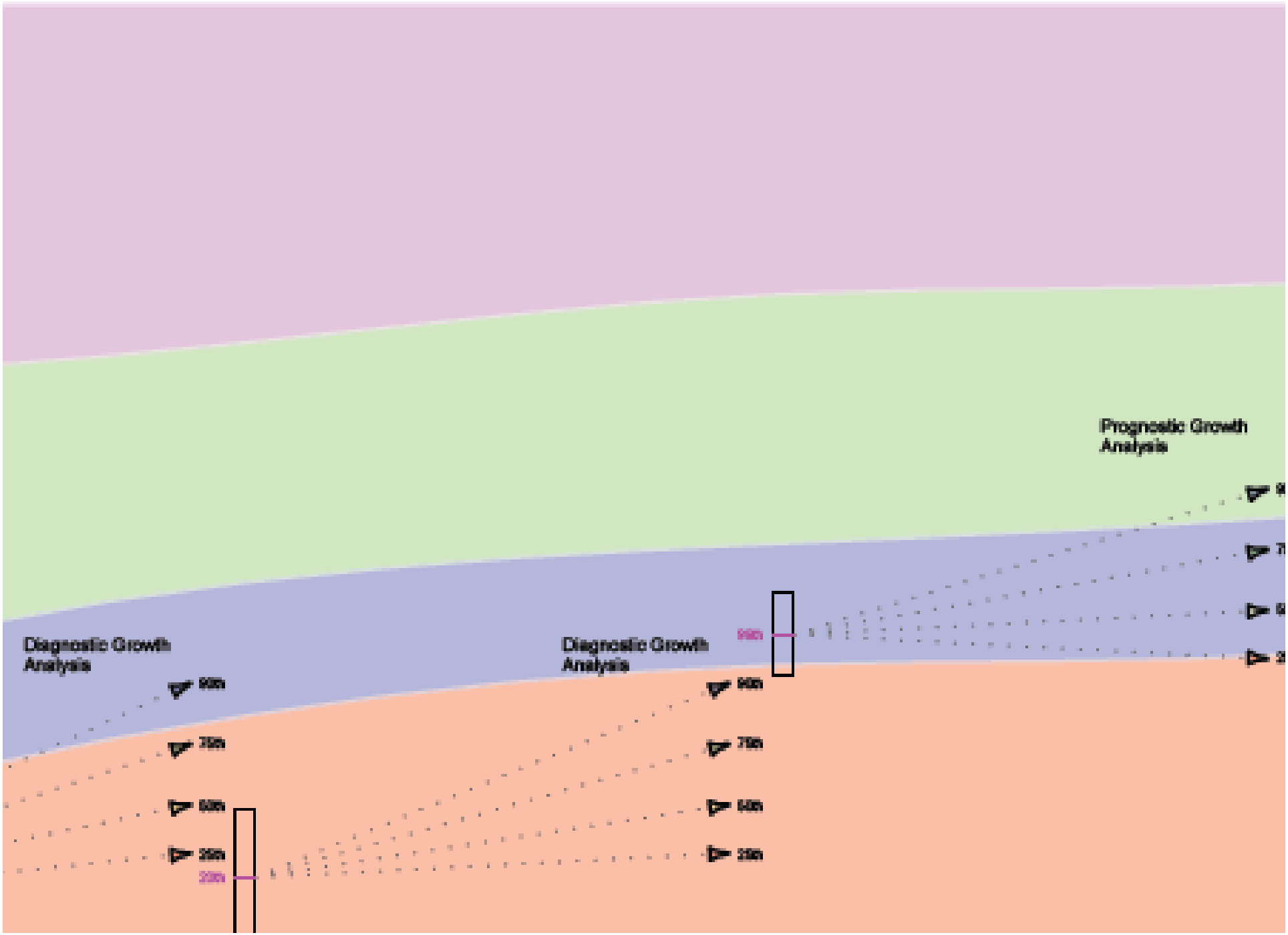
- Explore the district APR in the handouts
- There is valuable information in the front section, but don't neglect the "rest of the story."

Scott Marion & Damian Betebenner
Center for Assessment

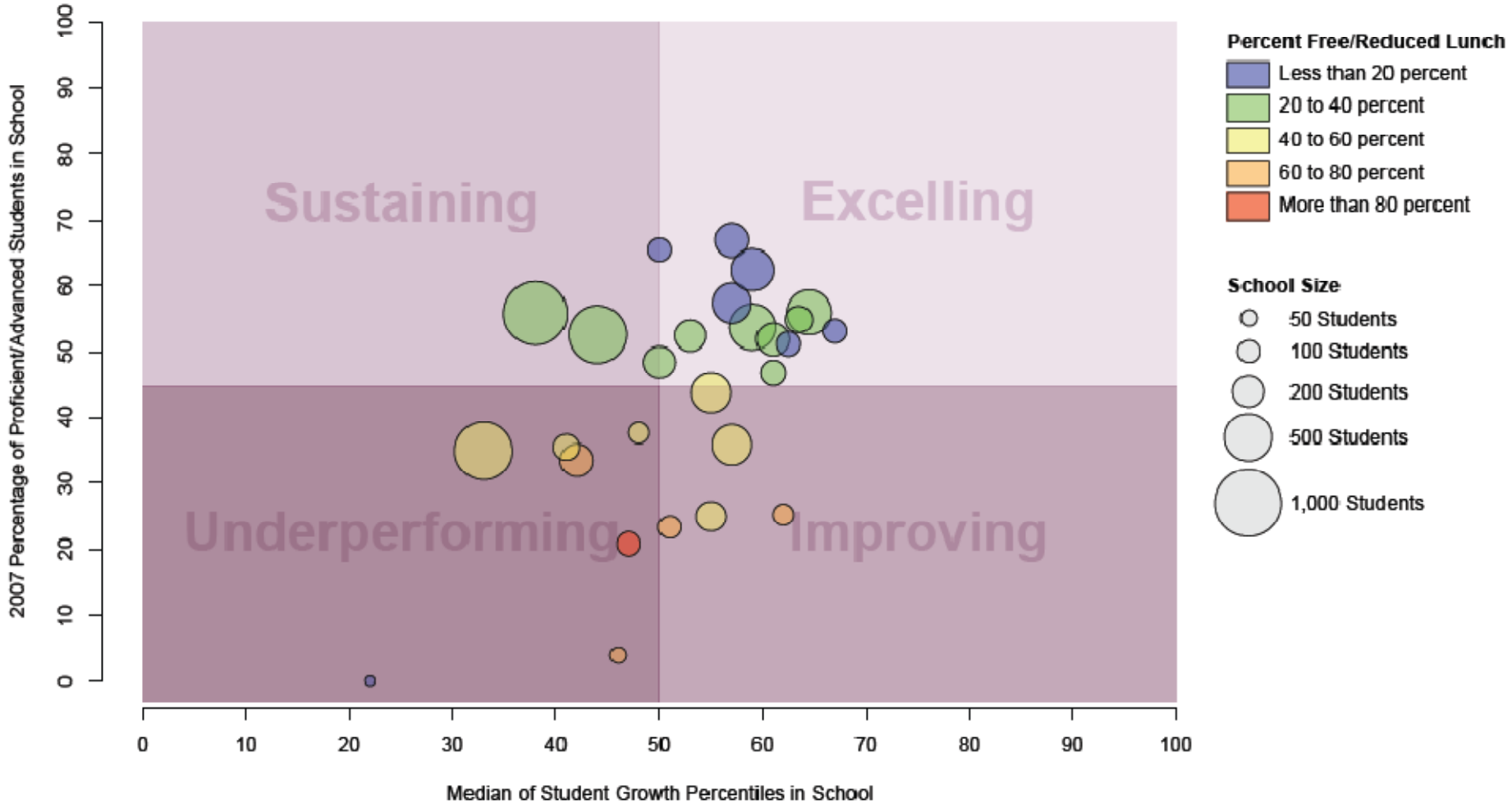


Diagnostic/Prognostic Individual Growth Chart




Diagnostic Growth Analysis
Diagnostic Growth Analysis
Prognostic Growth Analysis

Student Growth versus 2007 Student Achievement by Free/Reduced Lunch Percentage



CONCLUDING THOUGHTS YOURS AND OURS

- What about leadership?
- How can we make data-based decision making for boards of education more accessible and meaningful?

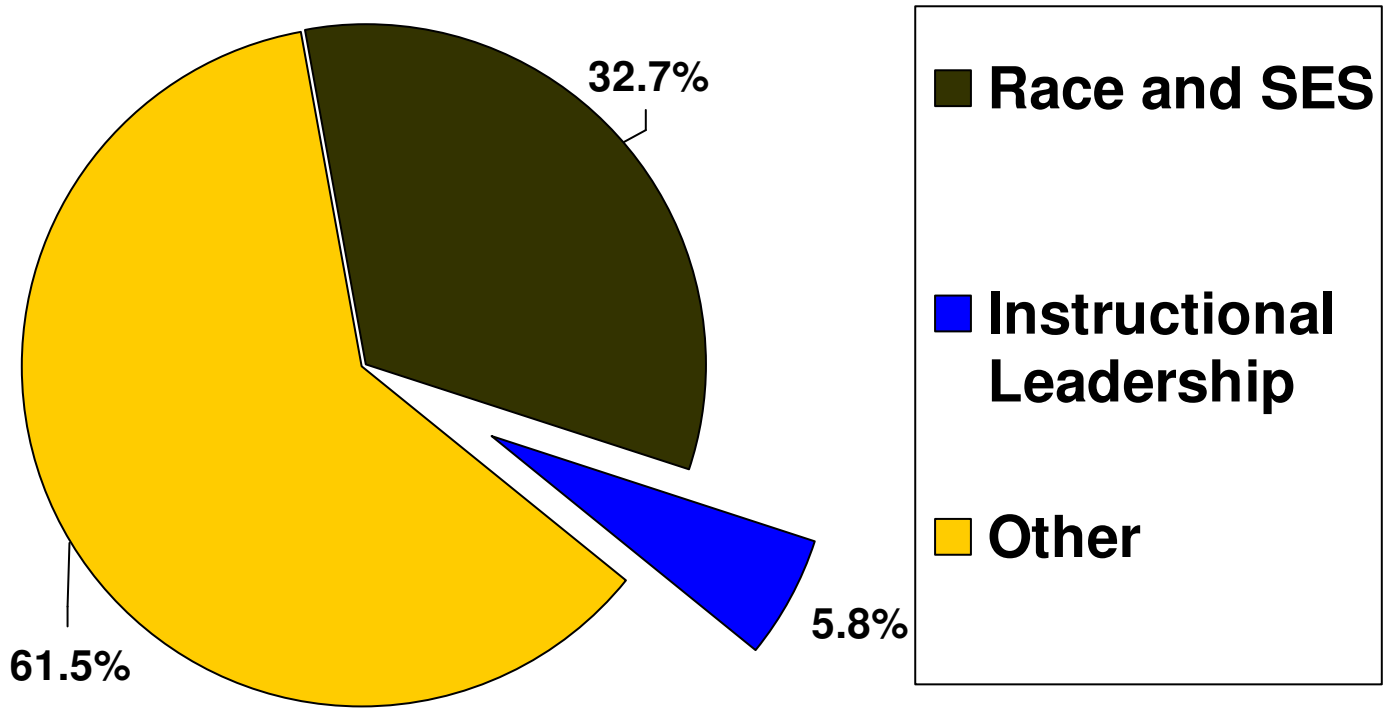
Leadership:

Marzano indicates that leaders create a purposeful community—

"One with the collective efficacy and capacity to develop and use assets to accomplish goals that matter to all community members through agreed-upon processes."

Not just for school, but the entire community enterprise

FACULTY: Instructional leadership explains 5.8% of the variance in communication arts achievement



Instructional Leadership Scale
(Faculty)

1. The mission of this school is clearly defined.
2. All staff in our school hold high expectations for student learning.
3. There are open channels of communication among students, staff and administrators.

Data Axioms

- Our job is not the mindless accumulation of data, rather the prudent reduction of unnecessary data
- Averages don't tell you much about individuals
- Two data points do not a trend make
- Always remember it isn't the numbers that are important, it is the people

THE POWER OF DATA ANALYSIS TO INFORM IMPROVEMENT

A Presentation to
MSBA Leadership Conference

Bill Elder, Keith Jamtgaard and Howard Jones
Office of Social and Economic Data Analysis
University of Missouri

June 6, 2008