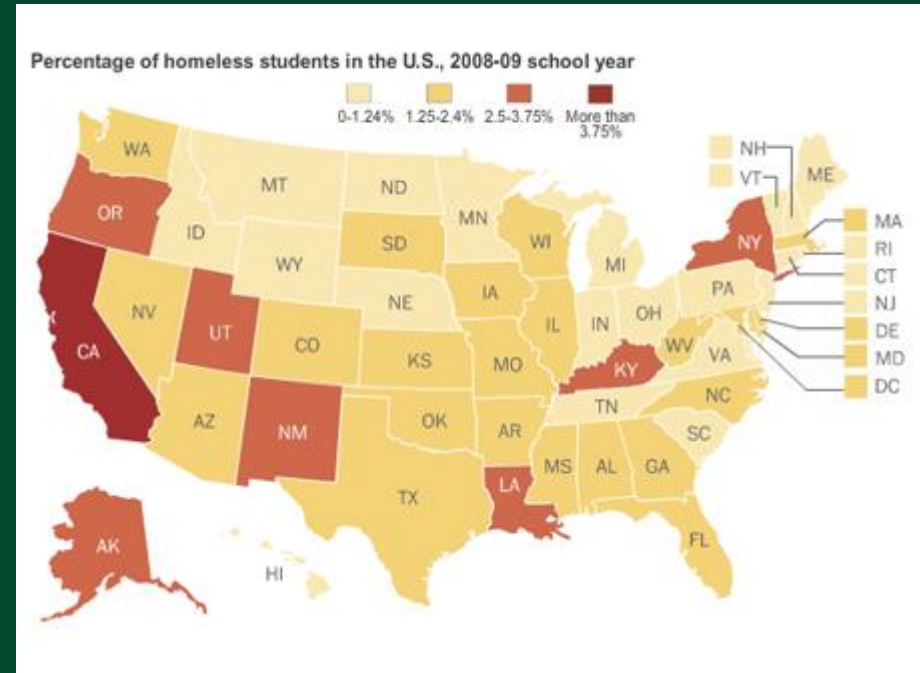
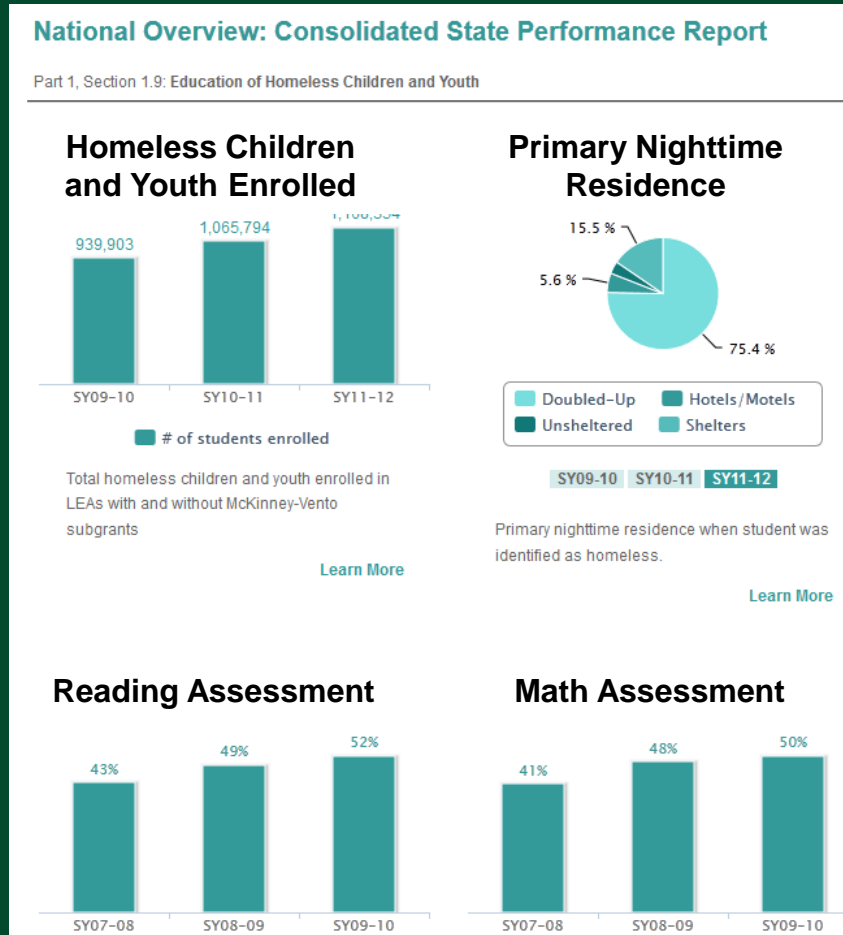


Education of Homeless Students: Towards a Prospective Approach

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Introduction: Retrospective vs. Prospective

The National Center for Homeless Education (NCHE), a federal agency, compiles data and files an annual report.



Out of date the day
it was published

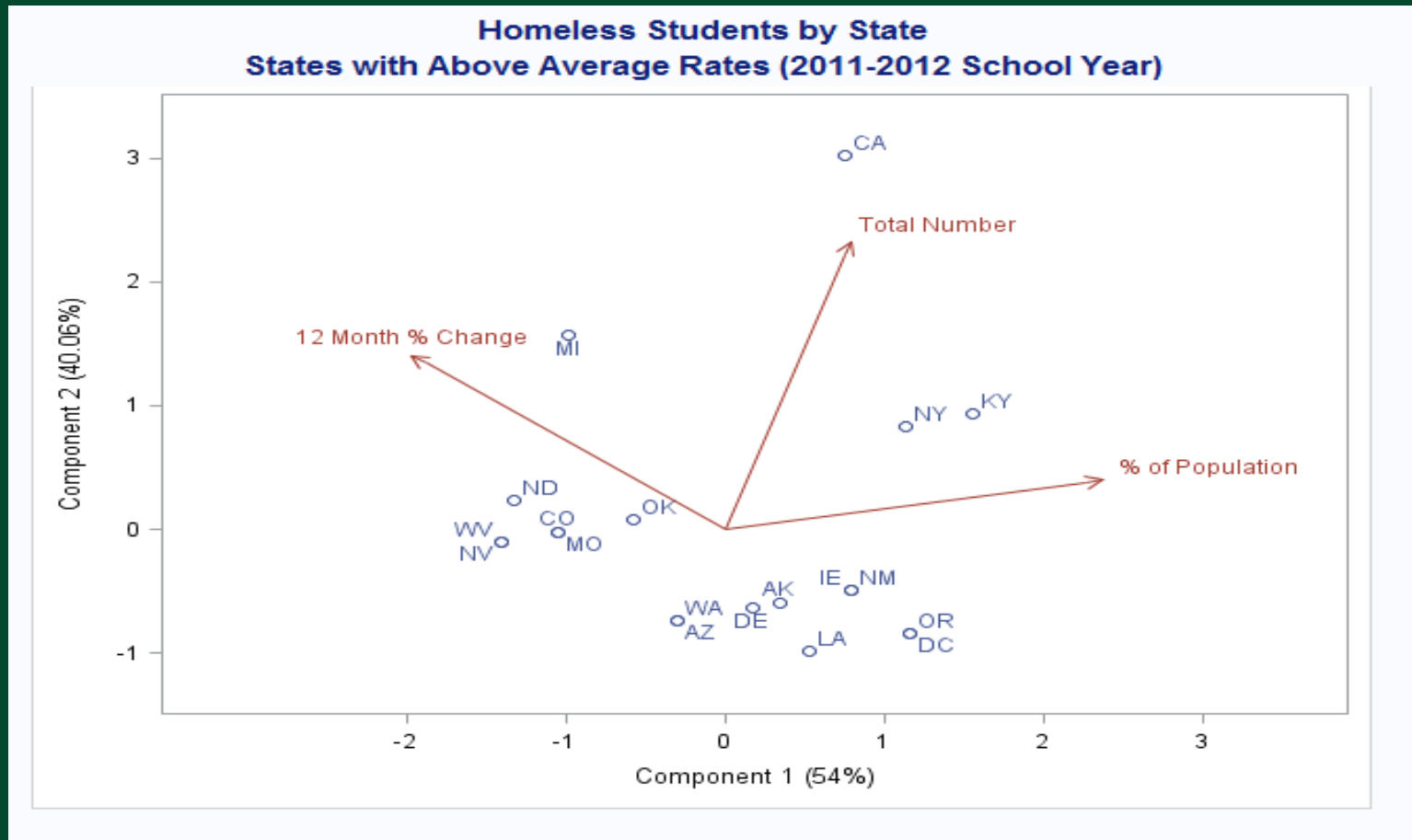
Methodology

- **NCHE data by state for the 2009-2010 and 2010-2011**
- **Socio-economic data – e.g., US Census Bureau**
- **Two forecasts: total number of homeless students and 12 month % change**
- **Modeling methodology: linear regression**
- **Validated by comparison to 2011-2012 actuals**
- **The factors in these models are analyzed as key drivers of homeless student levels and changes in the population.**

Key Findings

- The model forecasts homeless student levels by state for the 2011-2012 school using socio-economic data and NCHE data from previous years
- Key drivers of changes in homeless student levels are income disparity (GINI Index), % of one-parent households, household size, median household income and housing cost
- Total Number forecast: good performance ($r^2=0.652$)
- Rate of Change forecast: moderate performance ($r^2=0.518$), likely reduced by variation in reporting standards from state to state
- The model increases accuracy over “dead reckoning” (simply carrying over the rate of change from the previous year) by 39.7%
- No forecast is possible for Bureau of Indian Education (BIE) due to lack of complete socio-economic data for Indian Reservations; these areas have the second highest homeless student rate in the nation at 4.9%

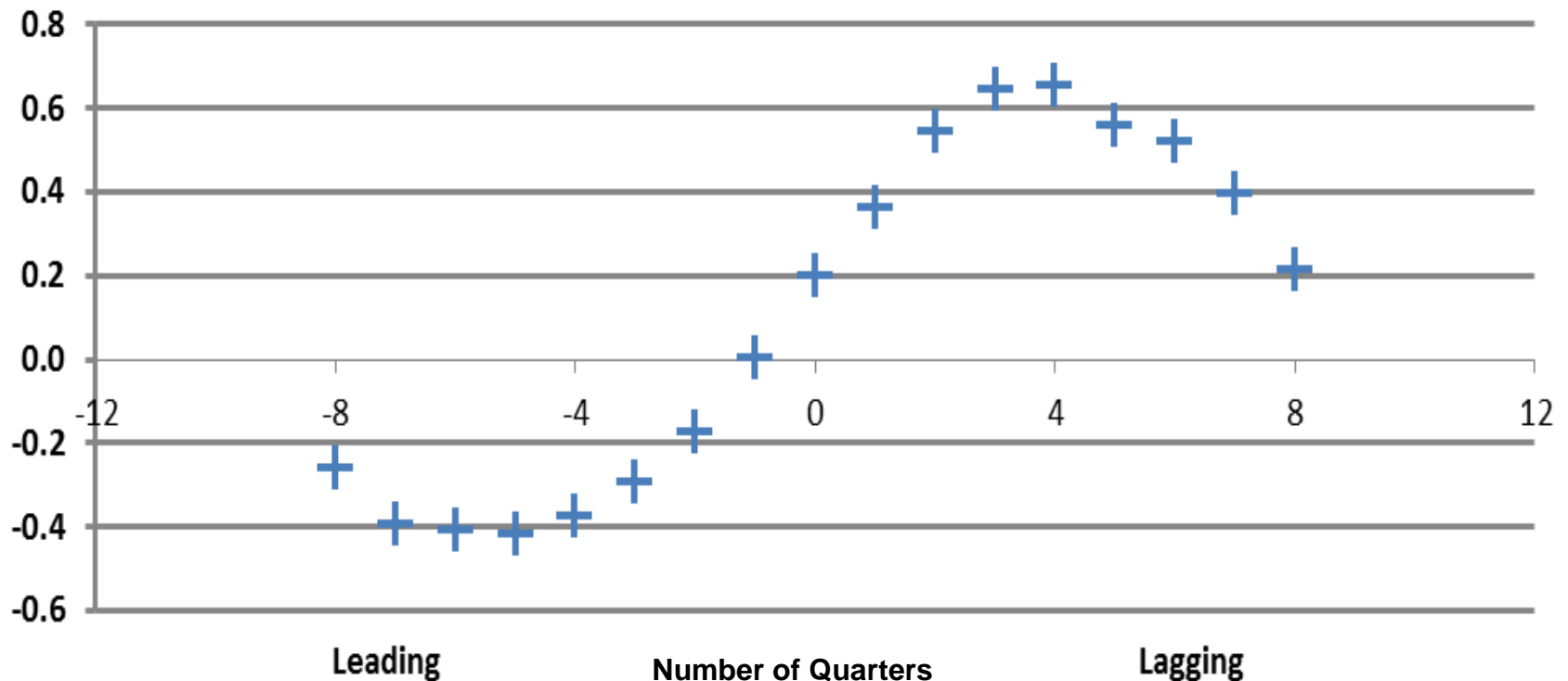
Principal Component Analysis



While some states have many homeless student mostly due a large overall population, a separate group is distinctive for a high percentage of homelessness

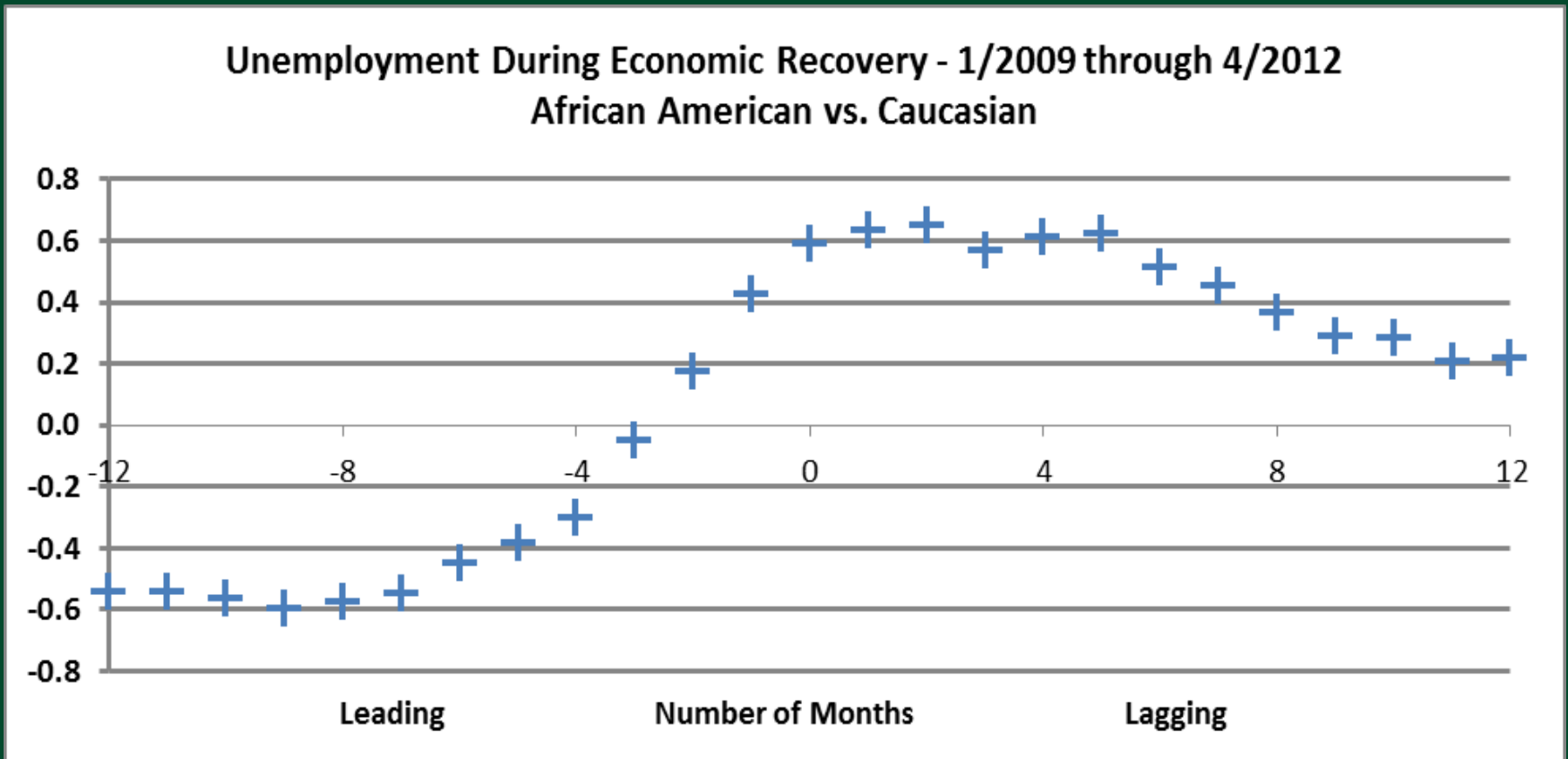
Unemployment as a Lagging Indicator

Unemployment During Economic Recession and Recovery
2007 Q1 through 2012 Q1



Changes in the unemployment rate lagged GDP by 11 months

A Demographic Disparity Impacting Homelessness



During the recovery, African American re-employment lagged even further, with median time to re-employment exceeding the duration of unemployment benefits, resulting in significantly higher economic dislocation for this group.

Source Data

Education for Homeless Children and Youths Program

Data Collection Summary

*From the School Year 2011-12 Federally Required State Data Collection for the
McKinney-Vento Education Assistance Improvements Act of 2001
and
Comparison of the SY 2009-10, SY 2010-11 and SY 2011-12 Data Collections*

National Center for Homeless Education

October 2013

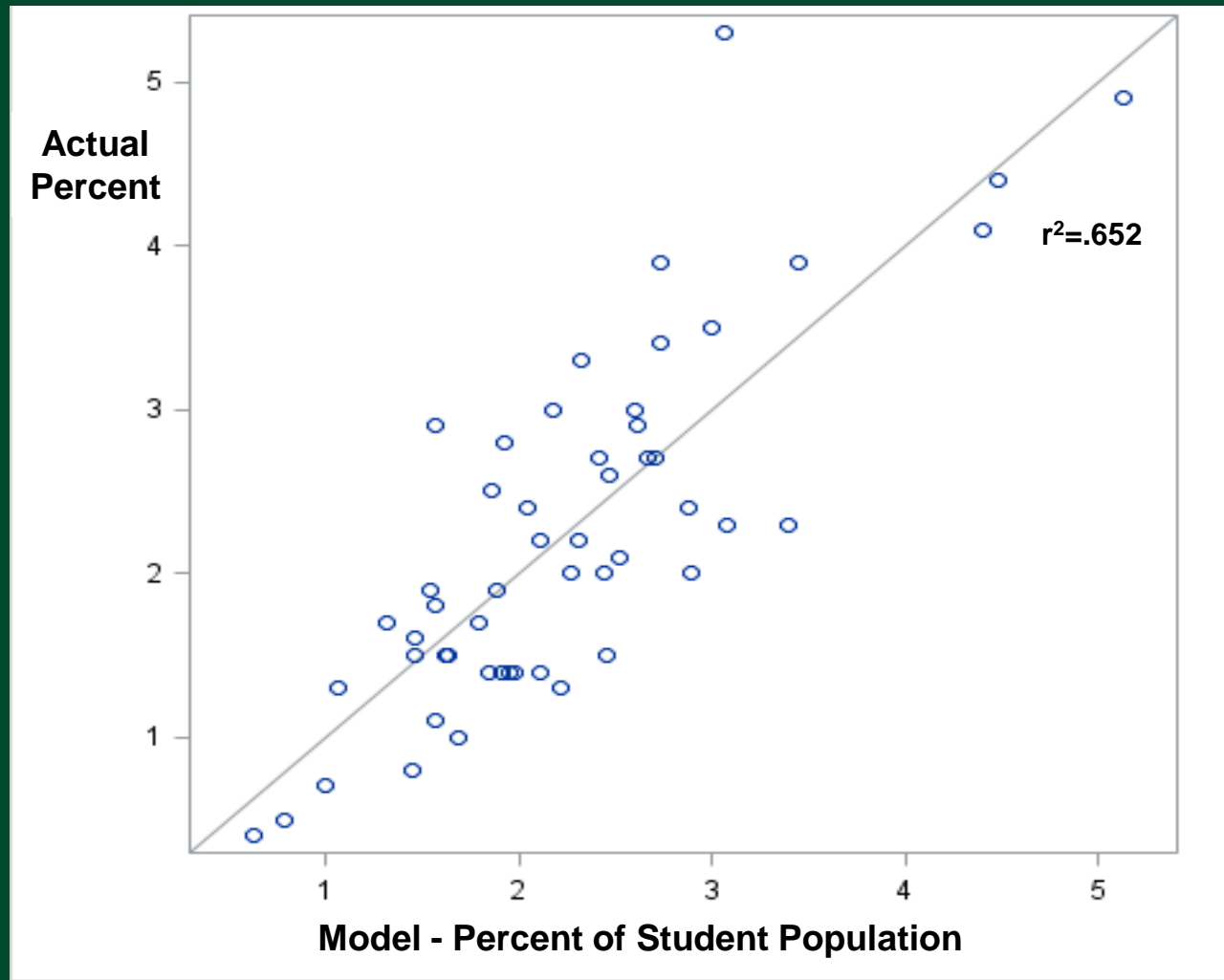
Source Data: Annual NCHE Report by State

Table 3

Total Number of Homeless Students Enrolled in LEAs with and without McKinney-Vento Subgrants (1.9.1.1), SYs 2009-10, 2010-11 and 2011-12 Three-Year Comparison by State

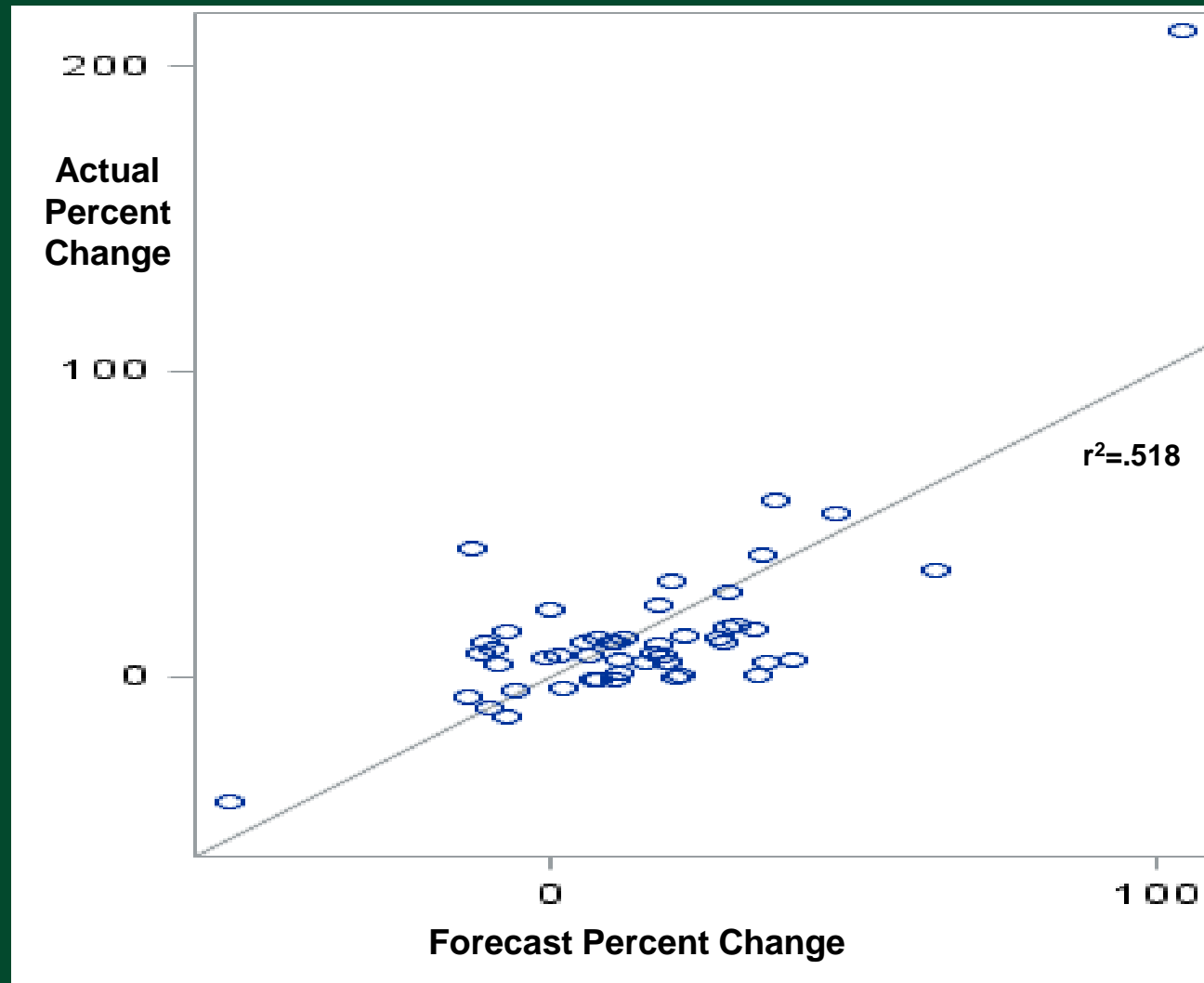
	SY 2009-10		SY 2010-11		SY 2011-12		Percent Change Between		
	Number Homeless Students Enrolled	Percent of Total Students Enrolled	Number Homeless Students Enrolled	Percent of Total Homeless Students Enrolled	Number Homeless Students Enrolled	Percent of Total Homeless Students Enrolled	SY0910 and SY1011	SY1011 and SY1112	SY0910 and SY1112 (3 Year)
National	939,903	100	1,065,794	100	1,168,354	100	13	10	24
Alabama	16,287	1.7	18,910	1.8	17,670	1.5	16	-7	8
Alaska	4,218	0.4	4,451	0.4	4,493	0.4	6	1	7
Arizona	30,815	3.3	31,312	2.9	31,178	2.7	2	0	1
Arkansas	8,107	0.9	9,625	0.9	9,550	0.8	19	-1	18
Bureau Of Indian Education	1,867	0.2	1,857	0.2	2,015	0.2	-1	9	8
California	193,796	20.6	220,738	20.7	248,904	21.3	14	13	28
Colorado	18,408	2.0	20,624	1.9	23,680	2.0	12	15	29
Connecticut	2,716	0.3	2,942	0.3	2,804	0.2	8	-5	3
Delaware	2,843	0.3	3,486	0.3	3,729	0.3	23	7	31
District Of Columbia	2,499	0.3	3,058	0.3	2,947	0.3	22	-4	18

Forecast: Number of Homeless Students by State (Percent of Total Student Population)



Solid performance of the model across the range from low to high homelessness states indicates consistency of factors correlated with the number of homeless students

Forecast: % Change in Homeless Students by State



Moderate performance is seen, with more random variation likely due to geographic differences in standards for data collection

Tractable and Intractable Factors

- *Intractable* factors are those contributing to the number of homeless students, such as poverty levels, that are relatively difficult to change.
- Several tractable factors are associated with recently acquired poverty: foreclosures, bankruptcy and medical care costs, which are often linked to bankruptcy. These economic events need to be addressed as important contributors to new homelessness.
- Students from large and single-parent families are more at risk of educational displacement.
- Income disparity, as measured by the GINI index, may be addressed by programs that develop local businesses in high-poverty areas.

Conclusions

Homelessness among students in the United States is highly dynamic, requiring agile approaches to address rapidly changing situations

Reports filed over time can provide the data needed to develop a forecast that will facilitate decisions based on present, rather than historical, circumstances

In this example, the accuracy of predictive modeling was 39.7% higher than an assessment based on historical reporting

Questions

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