Minnesota's Supplementary TANF Measure: The Self-Support Index

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Background

- **Minnesota Family Investment Program (MFIP) is Minnesota's TANF program.**

- **MFIP Goals:**
  - Increase employment & earnings
  - Reduce welfare dependency

- **State supervised, county administered**
  - Within framework of statute, counties design their own approach to employment services

- **87 counties and 5 tribal providers**

- **The counties and tribes vary greatly**
  - County populations range from 3,558 to 1.2 million.
  - Many county MFIP caseloads have almost no non-white cases.
  - Non-white cases are the majority of the caseload in the largest counties.
  - Wide range of unemployment rates
  - Wide range of child poverty rates
  - And more…

- **The MFIP caseloads vary greatly across counties**

  – High school graduation rates = 45% to 93%
  – Ever married rates = 14% to 69%
  – Needs Interpreter range = 0% to 23%
  – Severe MH diagnosis range = 6% to 35%
  – Percent immigrant range = 0% to 34%
  – Average age of youngest child = 2.1 to 5.7
  – Percent from another state = 7% to 65%
  – And more…

- **Administrative factors vary greatly**
  - Number of eligible MFIP adults per county ranges from 10 to 9,499.
  - Number of caseworkers per county ranges from 1 to over 150.
  - Array of Employment Services chosen by county.
  - And more…

There is great variability across counties, tribes, providers, and cases.

Performance Measurement Requirement in Statute

- In 2001, cognizant of MFIP's goals, the Minnesota Legislature required that DHS develop a method to assess "…county (MFIP) performance using a methodology that controls for demographic, economic, and other variables…"

Performance Measures Workgroup

- State/county/provider workgroup (2001-2002) developed the measure:
  - 2 state departments
  - 9 counties
  - 3 multi-county employment services providers

- County Performance Measurement Workgroup continues to meet and advise as needed

The Definition of "Success"

- **MFIP success = working an average of 30+ hours per week or off cash assistance three years after baseline.**

  – Except a leaver due to time limit or 100% sanction is NOT a success unless…

    - they had 30 hours per week paid income in one of last 3 months before leaving cash   OR

    - they started receiving Supplemental Security Income (SSI).
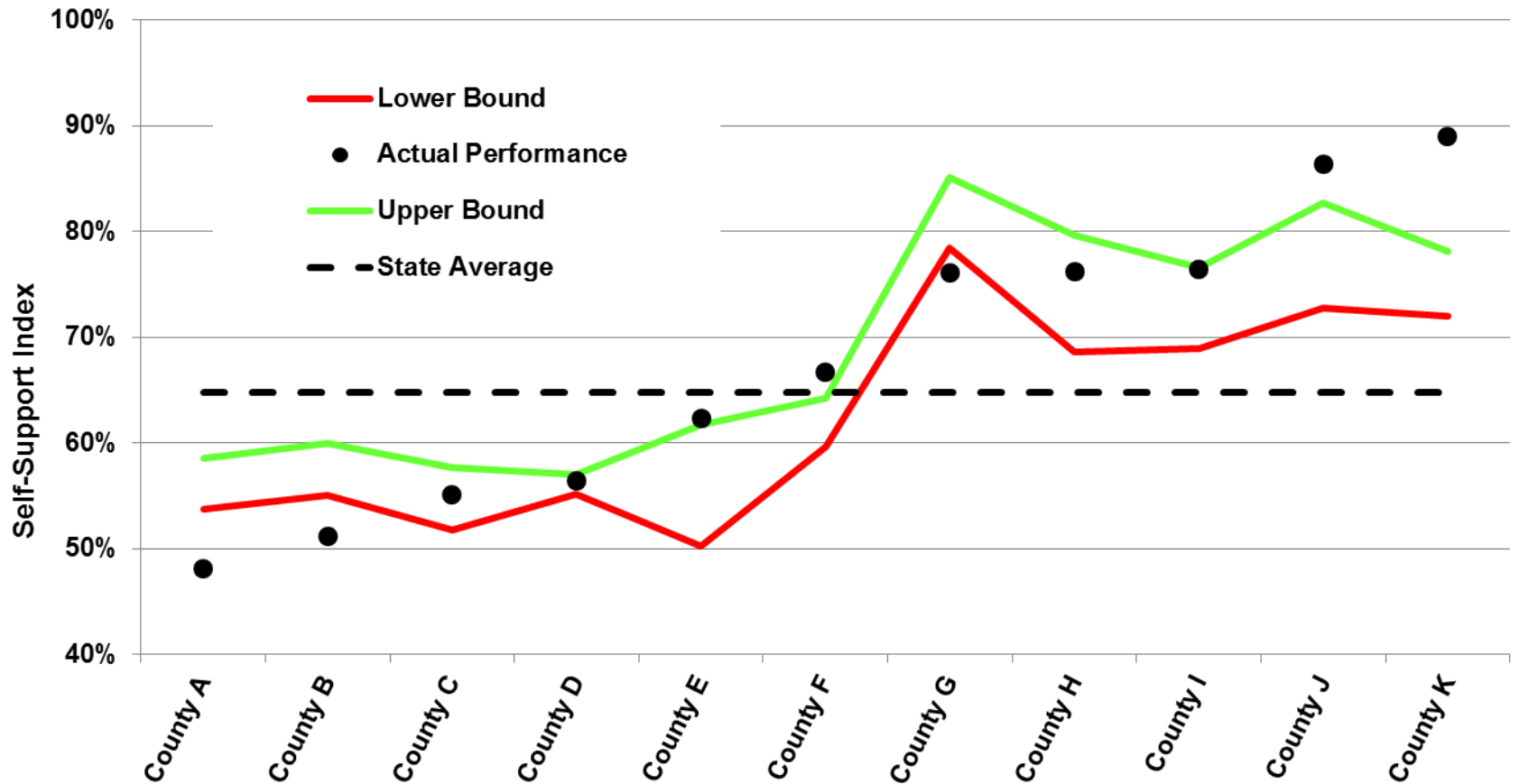
The Self-Support Index (S-SI)

$$\frac{\text{Number successes in measurement quarter}}{\text{Number of adults eligible for MFIP or DWP in baseline quarter}}$$

Actual MFIP Performance by County
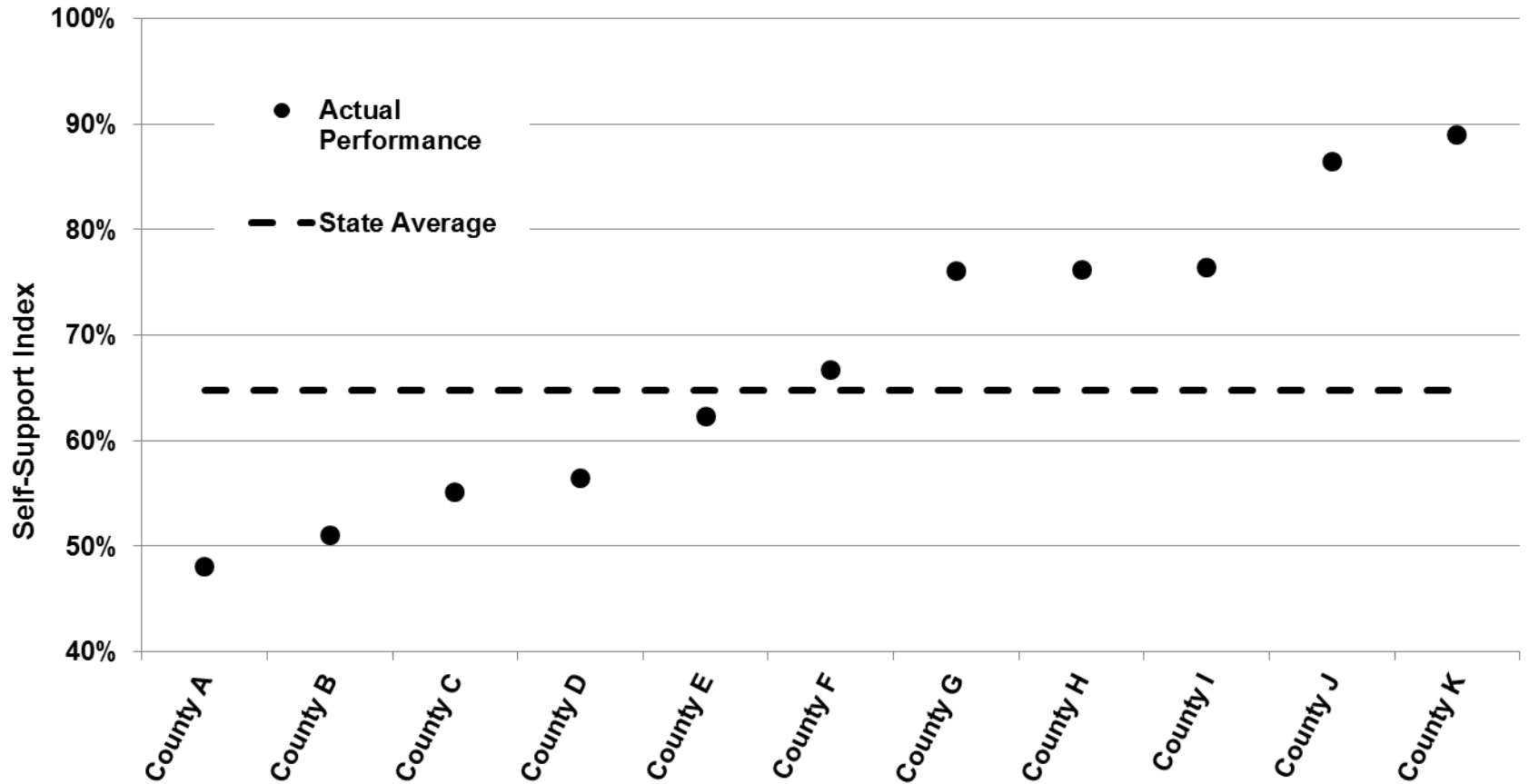
Actual Performance and Range of Expected Performance

Expected Range of Performance

- Based on a logistic regression which "predicts" each adult's success using person and county (but not program) variables
  - Dependent variable = Self-Support Index
  - 33 independent variables entered into a single, statewide regression using all MFIP adults

Variable Identification

- Performance Measures Workgroup brainstormed for all variables, beyond the control of the county, that might affect MFIP performance.

- Approximately 100 variables identified.

- Data availability and other considerations reduced list to 33.

The Predictors

Dichotomous person-level variables:

High school diploma or GED

Ever married

Student

[White]*

African American

Somali

Non-Somali Black Immigrant

American Indian

Hispanic

Hmong

Other Asian Immigrant

Asian American

Two-caregiver case

Moved from another state

Moved across county line

Serious Mental Health Diagnosis

Chemical Dependency Diagnosis

SSI** child in the case

SSI** adult in the case

Needs an Interpreter

Continuous person-level variables:

Age of the youngest child at baseline

Age of the adult at baseline

Age of the adult at birth of 1st child

Number of children

Average child support paid in baseline quarter

Number of months of housing subsidy

Continuous county-level variables:

County unemployment rate

County child poverty rate

Dichotomous county-level variables:

[County in metro area of more than 1 million population
County in metro area of 250,000 to 1 million population

County in metro area of fewer than 250,000 population

Non-metro, urban population of 20,000+, adjacent to metro area

Non-metro, urban population of 20,000+, not adjacent to metro area

Non-metro, urban population of 2,500-19,99920,000+, adjacent to metro area

Non-metro, urban population of 2,500-19,99920,000+, not adjacent to metro area

Non-metro, all rural or less than 2,500 urban population, adjacent to metro

Non-metro, all rural or less than 2,500 urban population, not adjacent to metro

* Contrast variable, not coded

**Supplemental Security Income

The Statistical Challenge

- Regression is person-based but…
- Purpose of analysis is comparative assessment of county performance, so…
- Average the predicted values by county, but…
- Need confidence intervals around the average predicted county values.
- Simple formula at the person level, but…
- No simple formula when aggregated to the county level.
- So what to do?

Empirical Confidence Intervals

- Create the confidence intervals instead of estimating them using a formula.

- Run the regression on a random sample of half of the MFIP adults, getting each person's predicted S-SI value.

- For each county and tribe, average the individual S-SIs to get a predicted S-SI.

- Repeat previous 2 steps many times to get a distribution of predicted S-SIs for each county and tribe.

- The Range of Expected Performance is the middle 95% of that distribution.

County X
MFIP adults = 1998
Minimum: 70.4% Maximum: 74.1%

K_2

Mean = 0.7240489
Std. Dev. = 0.00486948
N = 8,000
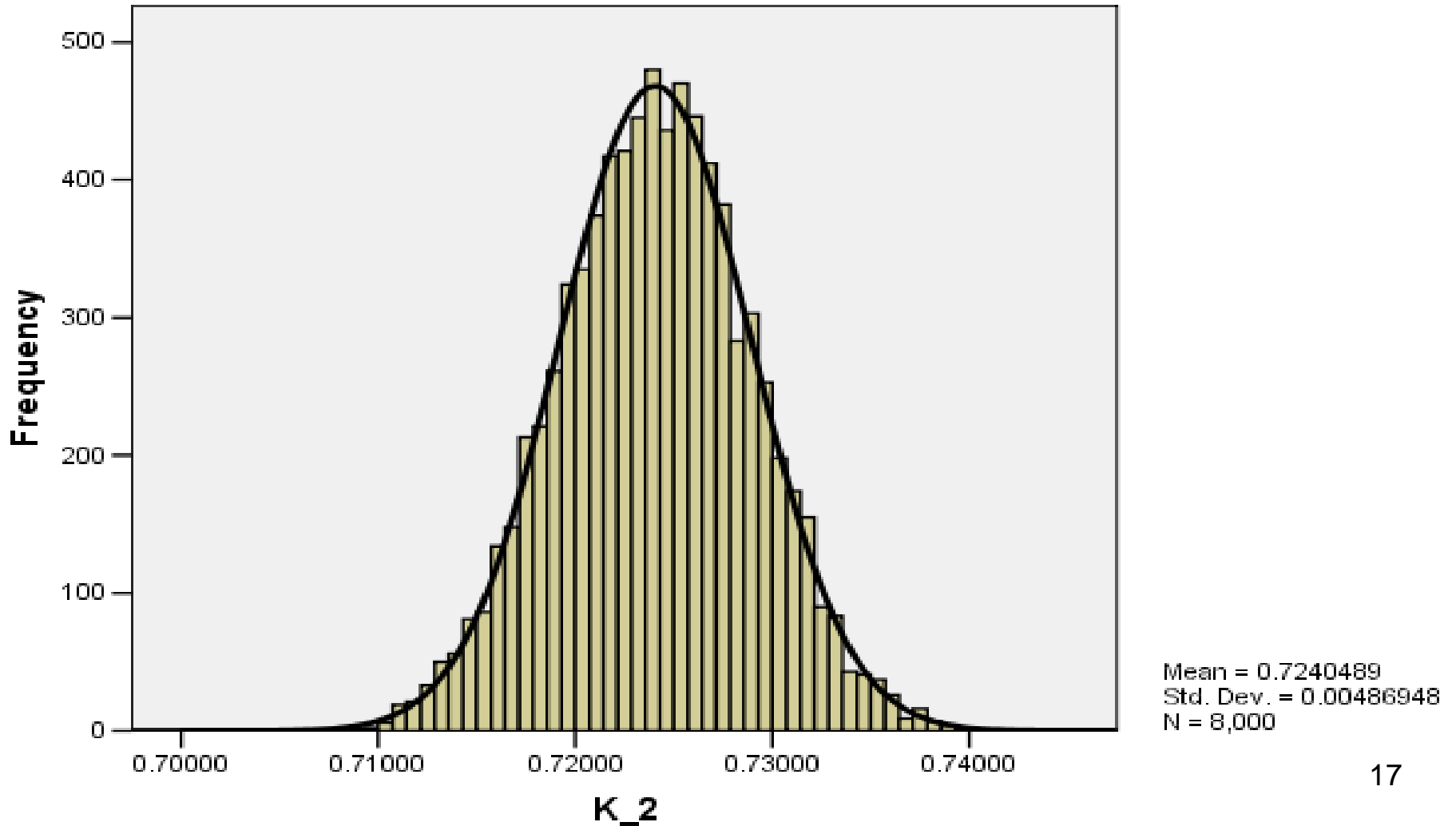
Range of Expected Performance for the Three-Year Self-Support Index

County/Tribe	Lower Bound	Actual Performance	Upper Bound
County A	53.7%	48.1%	58.5%
County B	55.0%	51.1%	59.9%
County C	51.7%	55.1%	57.6%
County D	55.1%	56.4%	57.0%
County E	50.2%	62.3%	61.7%
County F	59.6%	66.7%	64.2%
County G	78.4%	76.1%	85.1%
County H	68.6%	76.2%	79.6%
County I	68.9%	76.4%	76.6%
County J	72.7%	86.4%	82.7%
County K	72.0%	89.0%	78.1%
State Average		64.8%	

Above Range of Expected Performance

Within Range of Expected Performance

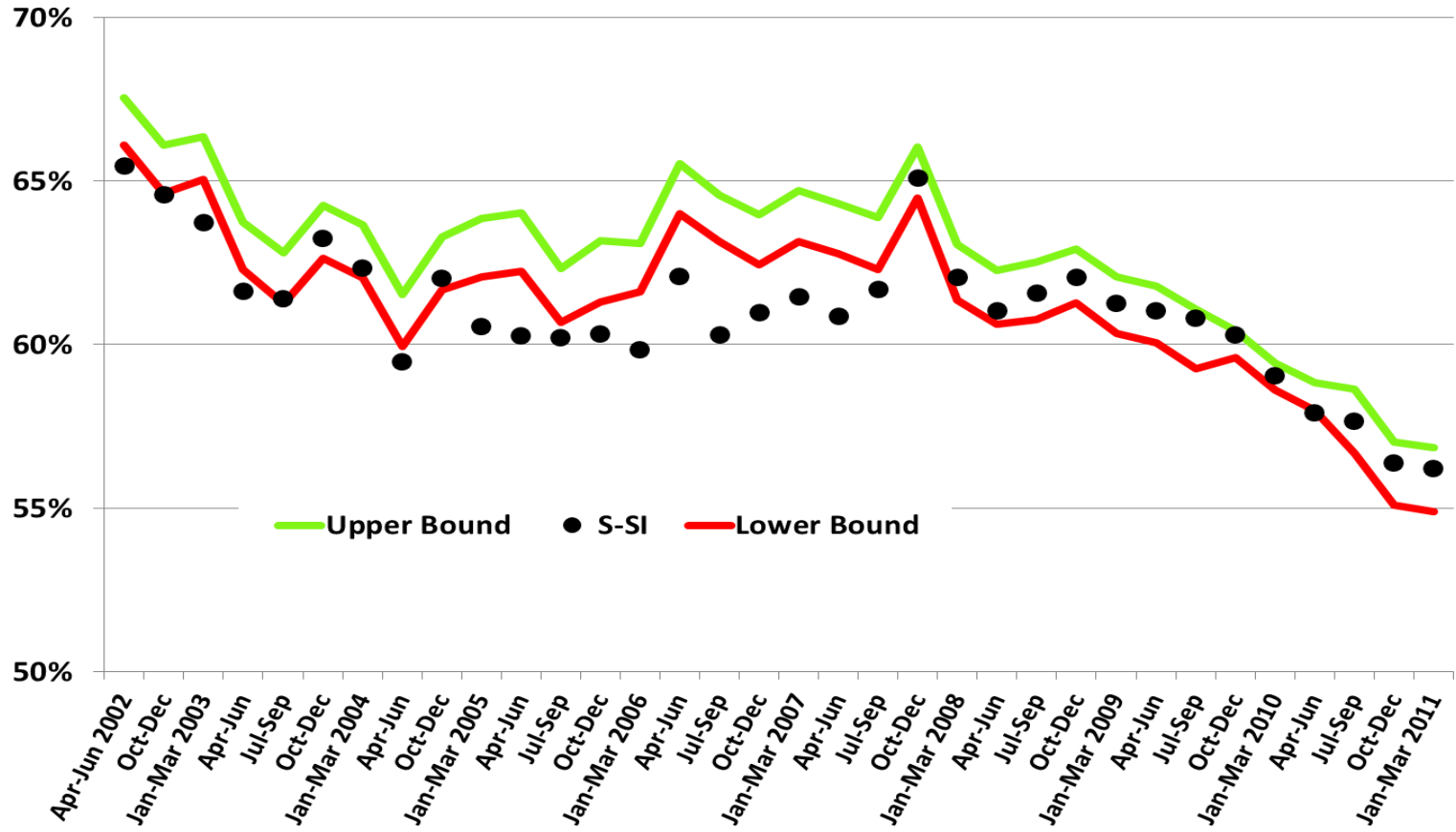Below Range of Expected Performance

Observations

- The results are surprising for some counties but the surprise is not always a happy one.

- Get buy-in before providing results, especially if there is money involved.

- Difficult to keep focus off of variables in the model rather than the employment and earnings.

- Correlation between the S-SI and the WPR is not significantly different from zero.

Uses of the Self-Support Index

- Comparing counties and tribes
- Comparing Employment Services providers
- Comparing outcomes by race
- Documenting progress over time
- Other comparisons are possible:
  - Education
  - Geographical Region
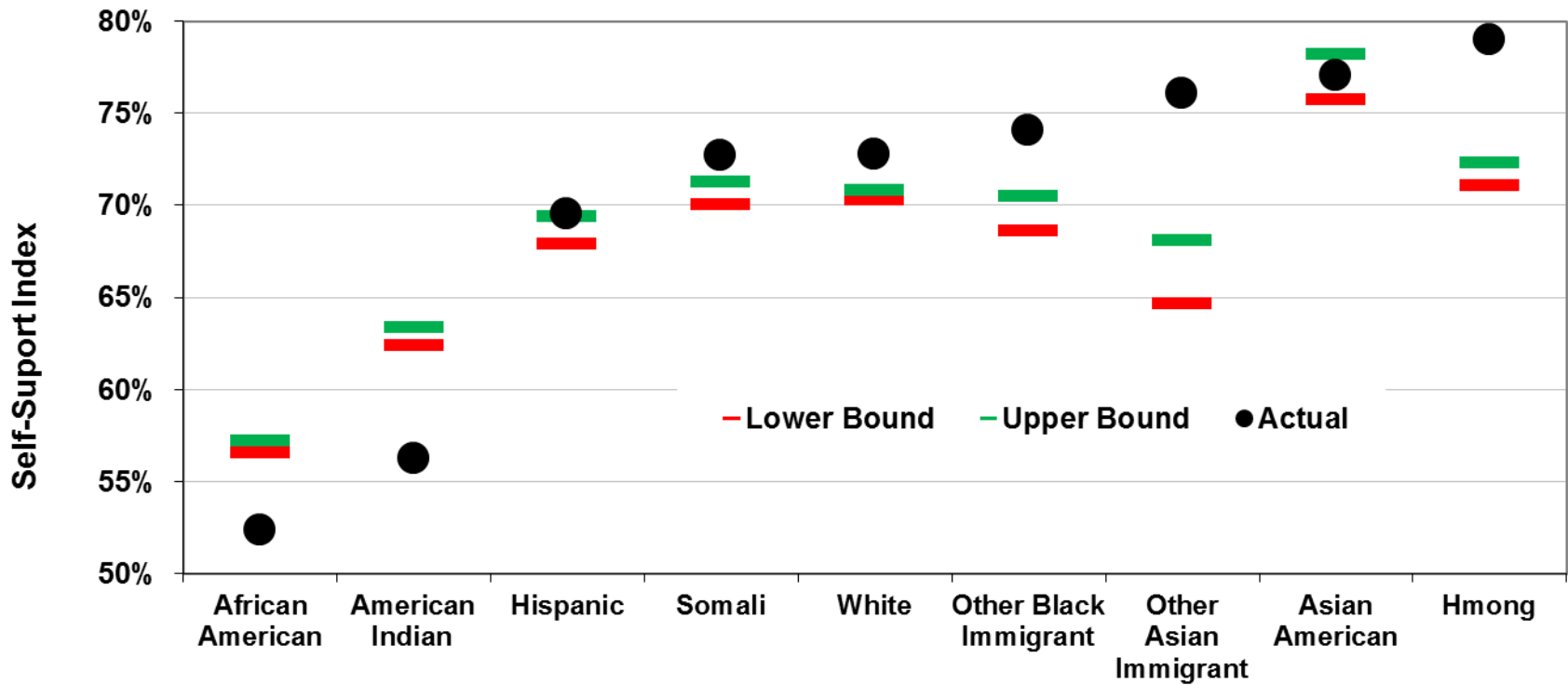 - Marital status
  - Immigrant status
  - Etc.

County X S-SI History

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One-Year Self-Support Index (S-SI) by Race and the Gap between the Average of the American Indian and African American S-SI and the White S-SI
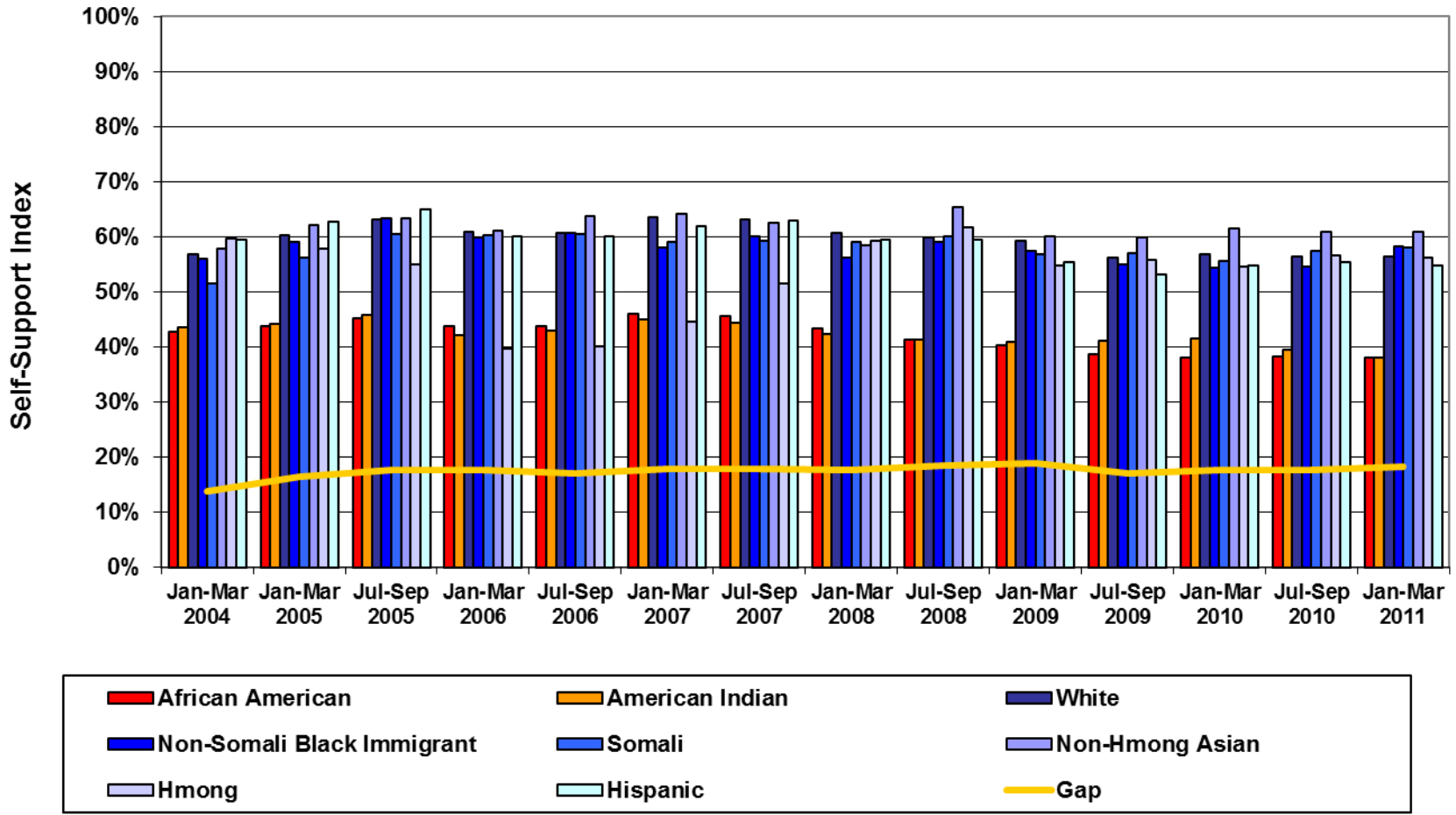
Three Year MFIP/DWP Self-Support Index
Actual Performance and Range of Expected Performance
by Race/Ethnicity

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