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## Updating New Jersey District Factor Groups

**April, 2019**

The New Jersey Department of Education developed a district-level measure of socioeconomic status called [district factors groups](#). The most recent update to this measure was based upon data from the 2000 census. An updated to this measure is much needed. Since 2000, in addition to the decennial census collection in 2010 and upcoming in 2020, the Census Bureau also collects information annually through the [American Community Survey](#). School district level estimates of many measures collected in the decennial census are also available through the ACS, which allows a more up-to-date record of school district information in the U.S. Using the report from the most recent DFG construction from the NJDOE, the Education Law Center replicated and updated the DFGs with ACS data from the most recent release, using data from 2013-2017 data collections.

The included values, pulled from the ACS, are measures that are commonly used in research to determine socioeconomic status based on three key indicators: Educational Level, Income, and Occupational Status. As in the DFG calculations from 2000, these measures include: percent below poverty, unemployment rate, median family income, and percent of adults with no high school diploma. Given the increases since 2000 in the prevalence of 4-year college degree completions, and the increased importance of this as a factor in job availability, ELC used percent of adults with a 4-year college degree or higher instead of the percent of adults with some college education that was used in 2000.

<b>SES Indicator, 2013-2017 data, 560 New Jersey Districts</b>	<b>Mean</b>	<b>SD</b>
<i>Educational level</i>		
-Percent of adults with 4-year college degree or higher	39.75	17.38
-Percent of adults without a high school diploma	8.30	6.04
<i>Income</i>		
- Median household income	\$90,243.38	\$32,298.37
- Percent income \$150,000 or more (~ highest 10-15%)	23.90	14.54
- Percent below poverty (~ lowest 10-15%)	7.89	6.11
<i>Occupational Status</i>		
- Percent households in Management, business, and related occupations	43.07	12.68
- Unemployment rate	6.53	2.73

The measure for “Percent of households in Management, business, and related occupations” is used as an estimate of the proportion of people in the district in prestigious jobs. The ACS school district data categorizes jobs into industry categories. To determine “prestige,” ELC calculated an average of the prestige scores that were calculated for occupations in each industry category by [Hout, Smith, and Marsden](#) using 2010 Census Codes, with prestige scores for occupations that range from 0 to 100 based

on surveyed respondents' perceptions of the status of the job type. Because the occupations in the "Management" category has a much higher average prestige score than the occupations in the other groupings, the percent of households with adults working in these types of occupations was used as a measure of occupational status. Although this measure does not have the nuance of the prestige scores calculated previously using occupational status details in the decennial census, the measure is the best available, and highly correlated with the other SES indicators.

Industry	Ave Prestige Score
Management, Professional and Related Occupations	71.93
Service Occupations	37.40
Construction, Extraction and Maintenance Occupations	36.96
Sales and Office Occupations	34.22
Production, Transportation and Material Moving Occupations	32.64

Pearson Correlations between the measures show strong relationships between the variables, with some, such as median income and percent earning an income of \$150,000 or more, much more highly correlated than others, such as the unemployment rate and the percent with a four-year college degree or more.

Following the NJDOE's procedure for DFG calculations in prior years, ELC ran a Principal Component Analysis starting with three measures, one for each indicator that showed the strongest correlation, then adding in additional variables to the initial model. The first component of the final PCA model explains 75% of the variance when all 7 variables are included in the model for the 2013-2017 data.

This model was then used to assign an SES score to each of 560 New Jersey school districts with complete information, with a mean of 0, standard deviation of 1, and a range from -3.05 to 2.31.

Variable, ACS 2013-2017	Factor Pattern	Contribution to Factor
Percent of adults with 4-year college degree or higher	0.93	16%
Percent of adults without a high school diploma	-0.81	13%
Median household income	0.93	17%
Percent income \$150,000 or more (~ highest 10-15%)	0.93	17%
Percent below poverty (~ lowest 10-15%)	-0.80	12%
Percent households in Management, business, and related occupations	0.93	17%
Unemployment rate	-0.67	9%

Again, following previous DFG calculations, ELC divided the SES scores into 8 groupings with the same range of scores, then combined or split apart the groups based on the number of districts that fell into each grouping.

**District Factors Groups from NJDOE 2000 (Number of Districts), Range -3.70 – 2.21**

A	B	CD	DE	FG	GH	I	J
1,2,3	4	5	5	6	6	7	8
39	67	67	83	89	76	103	25

**District Factors Groups from NJDOE 2017 (Number of Districts), Range -3.05 – 2.31**

A	B	CD	DE	FG	GH	I	J
1,2	3	4	4,5	5,6	6	7	8
29	50	81	113	102	77	83	27

The DFG values should be viewed as contextual information about the wealth and poverty of the community within a school district's boundaries in New Jersey. A district with a high proportion of community members living within its boundaries who do not have children attending the area public schools may lead the calculated DFG to be higher or lower than the actual socioeconomic status of the students who are attending the public schools in that district. In most cases, the DFG of a New Jersey school district did not change notably. Only a handful of districts moved 2 categories up or down – no districts changed more than that in between the 2000 DFG and the 2017 DFG. The following district communities increased or decreased in wealth, changing up or down two DFG categories during that time period.

District Name	DFG 2000	DFG 2017
Bloomsbury Borough	GH	DE
Cliffside Park Borough	B	DE
Clinton Town-Glen Gardner	I	FG
Delanco Township	CD	FG
East Rutherford Borough	CD	FG
East Windsor Regional	GH	DE
Elk Township	B	DE
Hoboken City	FG	I
Lebanon Borough	I	FG
Little Egg Harbor Township	B	DE
Passaic County Manchester Regional	B	DE
Quinton Township	A	CD
Sea Isle City	B	DE
South Bound Brook Borough	B	DE
Swedesboro-Woolwich	DE	GH
Voorhees Township	I	FG
Wallington Borough	B	DE
Weehawken Township	CD	FG