|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | OLS | OLS with  Urbanicity | MLM | MLM with  Urbanicity |
|  | Estimate | Estimate | Estimate | Estimate |
|  | (S.E.) | (S.E.) | (S.E.) | (S.E.) |
| Intercept | 0.020 | 0.048 | -0.144 | -0.082 |
|  | (0.433) | (0.476) | (0.426) | (0.460) |
| D Index | 0.862\*\* | 0.959\*\* | 0.758\* | 0.783\* |
|  | (0.281) | (0.301) | (0.315) | (0.343) |
| Percent FRPL | -0.489 | -0.534 | -0.343 | -0.374 |
|  | (0.350) | (0.359) | (0.355) | (0.364) |
| Log-Enrollment | 0.238\*\*\* | 0.228\*\*\* | 0.254\*\*\* | 0.244\*\*\* |
|  | (0.046) | (0.055) | (0.046) | (0.053) |
| Urban |  | -0.003 |  | 0.032 |
|  |  | (0.157) |  | (0.154) |
| Mostly Rural |  | 0.083 |  | 0.043 |
|  |  | (0.141) |  | (0.134) |
| N | 119 | 118 | 119 | 118 |
| RMSE | 0.496 | 0.500 | 0.465 | 0.471 |
| R2 | 0.386 | 0.387 |  |  |
| adj R2 | 0.370 | 0.360 |  |  |
| Random Effects (σ) |  |  |  |  |
| Residual |  |  | 0.465 | 0.471 |
| Division |  |  | 0.183 | 0.181 |
|  | | | | |
| \* p ≤0.05\*\* p ≤0.01\*\*\* p ≤0.001 | | | | |

We developed a metric with 11 core content area courses, defined as courses tested on the state exams. The numerator was the total number of levels offered of all 11 courses in a given district and the denominator was the number of courses,  yielding an average for that district of levels offered per course. The average for this metric was 1.94 levels per course, with an SD of 0.51.

The least-leveled district was Northumberland County, with 0.91 levels per course and the most-leveled was Fairfax County, with 3.82 levels per course on average. We ran a regression of an urbanicity factor, percent free/reduced price lunch, the diversity index of the school district (see Kelly & Price, 2011), and the natural logarithm of total enrollment as an offset variable on this metric of levels per course. Differences in urbanicity were not significant; however, a percent increase in free and reduced price lunch predicted a smaller number of levels available (-0.006 levels, p = .049). T

he diversity of a school also significantly predicted the number of levels-per-course in that district, p = .003 with more diverse schools offering more levels of courses. The strongest predictor of the number of levels is total enrollment, p < .000, with higher-enrollment districts offering many more levels than lower-enrollment districts.

The difference between the highest poverty district and lowest poverty district is 0.74 levels per course on average. Similar findings hold when predicting percent of students earning an advanced studies diploma: when controlling for urbanicity and district population, more diverse districts have a higher proportion of students graduating with advanced diplomas (p = 0.003), and districts with higher proportions of students with free and reduced price lunch have a slightly lower proportion of students earning advanced diplomas (p < .000).