**Table 1. Summary statistics on student characteristics, AY 2013**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Current model** | **Lag:** | **Lag:** |
|  | N= 735,192 | N=598,563 | N=486,421 |
| **Outcomes** |  |  |  |
| Obese (BMI≥95 percentile), % | 19.45 | 19.77 | 19.95 |
| Overweight/obesity (BMI≥85 percentile), % | 37.41 | 38.04 | 38.52 |
| zBMI, mean | 0.57 | 0.59 | 0.60 |
| **Individual characteristics** |  |  |  |
| Grade, mean | 5.75 | 6.20 | 6.63 |
| Age, mean | 11.50 | 11.95 | 12.38 |
| Female, % | 50.09 | 50.15 | 50.29 |
| Poor, % | 84.31 | 85.70 | 86.87 |
| Race and ethnicity, % |  |  |  |
| Asian | 18.1 | 18.2 | 18.7 |
| Hispanic | 40.4 | 40.5 | 40.6 |
| Black | 25.9 | 25.7 | 25.5 |
| White | 15.6 | 15.6 | 15.3 |
| Foreign Born, % | 16.10 | 15.25 | 14.96 |
| Special Ed., % | 12.20 | 12.56 | 12.77 |
| Limited English Proficiency, % | 14.14 | 12.12 | 10.50 |
| **Borough characteristics, %** |  |  |  |
| Manhattan | 11.5 | 11.2 | 11.1 |
| Bronx | 21.5 | 21.1 | 20.6 |
| Brooklyn | 32.4 | 32.6 | 32.6 |
| Queens | 28.7 | 28.9 | 29.6 |
| Staten Island | 5.9 | 6.2 | 6.0 |

How each column is models in tables 2a-2c.

In which, *outcome* is measured by overweight, obese and zBMI in tables 2a-2c, respectively. *FF, BOD, WS* and *SUP* are four categorical variables that each include mutually exclusive distance measures that identifies the nearest food outlet of a particular to a student’s home. Column 2 also has robust clustered standard errors by home census tracts. In columns 4 and 5, we introduce a time lag of 1 and 2 years to examine possibly a delayed effect of the food environment on weight outcomes. *Covariates* is a vector of individual level demographics variables, including age, grade, gender, poverty, race/ethnicity, foreign born, special education and limited English proficiency. *House* measures the type of housing a student lived in. *homeCT* and *year* each present home census tract and year fixed effect. Note that in column 3, *covariates* only include time-variant variables such as age, grade, special education and limited English proficiency since the others should not change over time for a particular student with student fixed effect.

**Table 2a. Outcome: overweight, AY 2009-2013.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Outcome: overweight | | | | |
|  | (1) | (2) | (3) | (4) | (5) |
|  | Current model | Clustered SE: student | Student FE | Lag: | Lag: |
| **Fast food** |  |  |  |  |  |
| 0 - 0.025 miles | - | - | - | - | - |
| 0.025 - 0.05 miles | -0.005\* | -0.005\* | -0.001 | -0.006\* | -0.004 |
|  | (0.001) | (0.002) | (0.001) | (0.002) | (0.003) |
| 0.05 - 0.10 miles | -0.006\* | -0.006\* | -0.001 | -0.006\* | -0.003 |
|  | (0.001) | (0.002) | (0.001) | (0.002) | (0.002) |
| 0.10-0.15 miles | -0.006\* | -0.006\* | -0.001 | -0.006\* | -0.005§ |
|  | (0.001) | (0.002) | (0.002) | (0.002) | (0.003) |
| 0.15-0.20 miles | -0.007\* | -0.007\* | -0.000 | -0.007\* | -0.004 |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) |
| 0.20-0.25 miles | -0.008\* | -0.008\* | -0.002 | -0.008\* | -0.007+ |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) |
| 0.25-0.50 miles | -0.011\* | -0.011\* | -0.000 | -0.011\* | -0.007§ |
|  | (0.002) | (0.003) | (0.002) | (0.003) | (0.004) |
| **Corner store** |  |  |  |  |  |
| 0 - 0.025 miles | - | - | - | - | - |
| 0.025 - 0.05 miles | -0.003+ | -0.003§ | -0.001 | -0.002 | -0.004§ |
|  | (0.001) | (0.002) | (0.001) | (0.002) | (0.002) |
| 0.05 - 0.10 miles | -0.002 | -0.002 | 0.001 | -0.003+ | -0.005+ |
|  | (0.001) | (0.002) | (0.001) | (0.002) | (0.002) |
| 0.10-0.15 miles | -0.004\* | -0.004+ | -0.001 | -0.006\* | -0.006+ |
|  | (0.001) | (0.002) | (0.001) | (0.002) | (0.002) |
| 0.15-0.20 miles | -0.005\* | -0.005+ | 0.000 | -0.008\* | -0.011\* |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) |
| 0.20-0.25 miles | -0.000 | -0.000 | 0.001 | -0.002 | -0.002 |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) |
| >0.25 miles | -0.001 | -0.001 | 0.000 | -0.003 | -0.006§ |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) |
| **Wait service** |  | - |  |  |  |
| 0 - 0.025 miles | - |  | - | - | - |
| 0.025 - 0.05 miles | -0.002 | -0.002 | -0.000 | 0.003 | -0.001 |
|  | (0.002) | (0.002) | (0.002) | (0.003) | (0.004) |
| 0.05 - 0.10 miles | -0.002 | -0.002 | 0.002 | 0.000 | -0.006§ |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) |
| 0.10-0.15 miles | -0.003§ | -0.003 | 0.002 | 0.001 | -0.003 |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) |
| 0.15-0.20 miles | -0.001 | -0.001 | 0.003 | 0.001 | -0.003 |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) |
| 0.20-0.25 miles | -0.002 | -0.002 | 0.003 | -0.001 | -0.004 |
|  | (0.002) | (0.002) | (0.002) | (0.003) | (0.004) |
| >0.25 miles | -0.002 | -0.002 | 0.001 | 0.001 | -0.003 |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) |
| **Supermarket** |  |  |  |  |  |
| 0 - 0.025 miles | - | - | - | - | - |
| 0.025 - 0.05 miles | 0.004 | 0.004 | 0.003 | -0.001 | 0.005 |
|  | (0.003) | (0.004) | (0.003) | (0.005) | (0.006) |
| 0.05 - 0.10 miles | 0.003 | 0.003 | -0.001 | 0.004 | 0.009§ |
|  | (0.003) | (0.003) | (0.003) | (0.004) | (0.005) |
| 0.10-0.15 miles | 0.004 | 0.004 | 0.001 | 0.003 | 0.008 |
|  | (0.003) | (0.003) | (0.003) | (0.004) | (0.005) |
| 0.15-0.20 miles | 0.004 | 0.004 | 0.000 | 0.004 | 0.010+ |
|  | (0.003) | (0.003) | (0.003) | (0.004) | (0.005) |
| 0.20-0.25 miles | 0.003 | 0.003 | 0.001 | 0.003 | 0.009§ |
|  | (0.003) | (0.003) | (0.003) | (0.004) | (0.005) |
| >0.25 miles | 0.004 | 0.004 | 0.000 | 0.004 | 0.011+ |
|  | (0.003) | (0.003) | (0.002) | (0.004) | (0.005) |
| *N* | 3353549 | 3353549 | 3353549 | 2113292 | 1247599 |

Standard errors in parentheses

§ p<0.1, + p<0.05, \* p<0.01

**Table 2b. Outcome: obese, AY 2009-2013.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Outcome: obese | | | | |
|  | (1) | (2) | (3) | (4) | (5) |
|  | Current model | Clustered SE: student | Student FE | Lag: | Lag: |
| **Fast food** |  |  |  |  |  |
| 0 - 0.025 miles | - | - | - | - | - |
| 0.025 - 0.05 miles | -0.006\* | -0.006\* | -0.001 | -0.005\* | -0.007\* |
|  | (0.001) | (0.001) | (0.001) | (0.002) | (0.002) |
| 0.05 - 0.10 miles | -0.005\* | -0.005\* | -0.003+ | -0.004\* | -0.005\* |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.002) |
| 0.10-0.15 miles | -0.005\* | -0.005\* | -0.002 | -0.005\* | -0.006\* |
|  | (0.001) | (0.002) | (0.001) | (0.002) | (0.002) |
| 0.15-0.20 miles | -0.006\* | -0.006\* | -0.001 | -0.007\* | -0.009\* |
|  | (0.001) | (0.002) | (0.001) | (0.002) | (0.003) |
| 0.20-0.25 miles | -0.008\* | -0.008\* | -0.003§ | -0.007\* | -0.010\* |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) |
| 0.25-0.50 miles | -0.008\* | -0.008\* | -0.000 | -0.008\* | -0.008\* |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) |
| **Corner store** |  |  |  |  |  |
| 0 - 0.025 miles | - | - | - | - | - |
| 0.025 - 0.05 miles | -0.001 | -0.001 | 0.000 | -0.002 | -0.003§ |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.002) |
| 0.05 - 0.10 miles | -0.002§ | -0.002 | -0.000 | -0.002 | -0.003§ |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.002) |
| 0.10-0.15 miles | -0.003\* | -0.003+ | 0.000 | -0.004\* | -0.006\* |
|  | (0.001) | (0.001) | (0.001) | (0.001) | (0.002) |
| 0.15-0.20 miles | -0.004\* | -0.004+ | -0.001 | -0.006\* | -0.006\* |
|  | (0.001) | (0.002) | (0.001) | (0.002) | (0.002) |
| 0.20-0.25 miles | -0.001 | -0.001 | -0.000 | -0.002 | 0.001 |
|  | (0.001) | (0.002) | (0.002) | (0.002) | (0.003) |
| >0.25 miles | -0.001 | -0.001 | -0.001 | -0.002 | -0.004 |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) |
| **Wait service** |  |  |  |  |  |
| 0 - 0.025 miles | - | - | - | - | - |
| 0.025 - 0.05 miles | 0.001 | 0.001 | 0.002 | 0.002 | 0.006§ |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) |
| 0.05 - 0.10 miles | 0.001 | 0.001 | 0.002 | 0.001 | 0.002 |
|  | (0.001) | (0.002) | (0.002) | (0.002) | (0.003) |
| 0.10-0.15 miles | 0.001 | 0.001 | 0.002 | 0.002 | 0.006+ |
|  | (0.001) | (0.002) | (0.002) | (0.002) | (0.003) |
| 0.15-0.20 miles | 0.002 | 0.002 | 0.003§ | 0.002 | 0.007+ |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) |
| 0.20-0.25 miles | 0.001 | 0.001 | 0.004+ | 0.001 | 0.007+ |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) |
| >0.25 miles | 0.002 | 0.002 | 0.002 | 0.002 | 0.008\* |
|  | (0.002) | (0.002) | (0.002) | (0.002) | (0.003) |
| **Supermarket** |  |  |  |  |  |
| 0 - 0.025 miles | - | - | - | - | - |
| 0.025 - 0.05 miles | -0.001 | -0.001 | 0.002 | -0.004 | -0.002 |
|  | (0.003) | (0.003) | (0.002) | (0.004) | (0.005) |
| 0.05 - 0.10 miles | -0.002 | -0.002 | 0.000 | -0.004 | 0.004 |
|  | (0.002) | (0.003) | (0.002) | (0.003) | (0.004) |
| 0.10-0.15 miles | -0.002 | -0.002 | -0.000 | -0.003 | 0.004 |
|  | (0.002) | (0.003) | (0.002) | (0.003) | (0.004) |
| 0.15-0.20 miles | -0.002 | -0.002 | -0.000 | -0.003 | 0.002 |
|  | (0.002) | (0.003) | (0.002) | (0.003) | (0.004) |
| 0.20-0.25 miles | -0.003 | -0.003 | -0.001 | -0.002 | 0.001 |
|  | (0.002) | (0.003) | (0.002) | (0.003) | (0.004) |
| >0.25 miles | -0.002 | -0.002 | -0.000 | -0.002 | 0.001 |
|  | (0.002) | (0.003) | (0.002) | (0.003) | (0.004) |
| *N* | 3353549 | 3353549 | 3353549 | 2113292 | 1247599 |

Standard errors in parentheses

§ p<0.1, + p<0.05, \* p<0.01

**Table 2c. Outcome: zBMI, AY 2009-2013.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Outcome: zBMI | | | | |
|  | (1) | (2) | (3) | (4) | (5) |
|  | Current model | Clustered SE: student | Student FE | Lag: | Lag: |
| **Fast food** |  |  |  |  |  |
| 0 - 0.025 miles | - | - | - | - | - |
| 0.025 - 0.05 miles | -0.018\* | -0.018\* | -0.004 | -0.015\* | -0.015\* |
|  | (0.003) | (0.004) | (0.003) | (0.004) | (0.006) |
| 0.05 - 0.10 miles | -0.017\* | -0.017\* | -0.005 | -0.014\* | -0.015\* |
|  | (0.003) | (0.004) | (0.003) | (0.004) | (0.006) |
| 0.10-0.15 miles | -0.014\* | -0.014\* | -0.004 | -0.012\* | -0.014+ |
|  | (0.003) | (0.005) | (0.003) | (0.005) | (0.006) |
| 0.15-0.20 miles | -0.022\* | -0.022\* | -0.008+ | -0.019\* | -0.020\* |
|  | (0.004) | (0.005) | (0.004) | (0.005) | (0.007) |
| 0.20-0.25 miles | -0.025\* | -0.025\* | -0.009+ | -0.017\* | -0.018+ |
|  | (0.004) | (0.006) | (0.004) | (0.006) | (0.008) |
| 0.25-0.50 miles | -0.032\* | -0.032\* | -0.008§ | -0.022\* | -0.024\* |
|  | (0.005) | (0.006) | (0.004) | (0.006) | (0.009) |
| **Corner store** |  |  |  |  |  |
| 0 - 0.025 miles | - | - | - | - | - |
| 0.025 - 0.05 miles | -0.004 | -0.004 | -0.005 | -0.002 | -0.005 |
|  | (0.003) | (0.004) | (0.003) | (0.004) | (0.005) |
| 0.05 - 0.10 miles | -0.006+ | -0.006 | -0.003 | -0.009+ | -0.009§ |
|  | (0.003) | (0.004) | (0.003) | (0.004) | (0.005) |
| 0.10-0.15 miles | -0.014\* | -0.014\* | -0.002 | -0.019\* | -0.023\* |
|  | (0.003) | (0.004) | (0.003) | (0.004) | (0.006) |
| 0.15-0.20 miles | -0.015\* | -0.015\* | -0.002 | -0.021\* | -0.022\* |
|  | (0.004) | (0.005) | (0.003) | (0.005) | (0.007) |
| 0.20-0.25 miles | -0.004 | -0.004 | -0.002 | -0.010§ | -0.006 |
|  | (0.004) | (0.006) | (0.004) | (0.006) | (0.008) |
| >0.25 miles | -0.004 | -0.004 | 0.000 | -0.014+ | -0.017+ |
|  | (0.005) | (0.006) | (0.004) | (0.006) | (0.008) |
| **Wait service** |  |  |  |  |  |
| 0 - 0.025 miles | - | - | - | - | - |
| 0.025 - 0.05 miles | -0.000 | -0.000 | 0.003 | 0.010 | 0.013 |
|  | (0.005) | (0.006) | (0.004) | (0.006) | (0.009) |
| 0.05 - 0.10 miles | -0.002 | -0.002 | 0.009+ | 0.005 | -0.004 |
|  | (0.004) | (0.006) | (0.004) | (0.006) | (0.008) |
| 0.10-0.15 miles | -0.001 | -0.001 | 0.011\* | 0.011+ | 0.011 |
|  | (0.004) | (0.006) | (0.004) | (0.006) | (0.008) |
| 0.15-0.20 miles | 0.005 | 0.005 | 0.015\* | 0.010§ | 0.008 |
|  | (0.004) | (0.006) | (0.004) | (0.006) | (0.008) |
| 0.20-0.25 miles | -0.001 | -0.001 | 0.014\* | 0.004 | 0.005 |
|  | (0.005) | (0.006) | (0.004) | (0.006) | (0.009) |
| >0.25 miles | 0.003 | 0.003 | 0.011\* | 0.009 | 0.013 |
|  | (0.005) | (0.006) | (0.004) | (0.006) | (0.008) |
| **Supermarket** |  |  |  |  |  |
| 0 - 0.025 miles | - | - | - | - | - |
| 0.025 - 0.05 miles | -0.001 | -0.001 | -0.000 | -0.002 | 0.012 |
|  | (0.008) | (0.010) | (0.006) | (0.011) | (0.014) |
| 0.05 - 0.10 miles | -0.005 | -0.005 | -0.006 | -0.005 | 0.023+ |
|  | (0.007) | (0.008) | (0.005) | (0.009) | (0.012) |
| 0.10-0.15 miles | -0.003 | -0.003 | -0.008 | -0.007 | 0.022§ |
|  | (0.007) | (0.008) | (0.005) | (0.009) | (0.012) |
| 0.15-0.20 miles | -0.002 | -0.002 | -0.004 | -0.005 | 0.021§ |
|  | (0.007) | (0.008) | (0.005) | (0.009) | (0.012) |
| 0.20-0.25 miles | -0.004 | -0.004 | -0.005 | -0.006 | 0.019 |
|  | (0.007) | (0.008) | (0.005) | (0.009) | (0.012) |
| >0.25 miles | -0.002 | -0.002 | -0.005 | -0.004 | 0.022§ |
|  | (0.007) | (0.008) | (0.005) | (0.009) | (0.012) |
| *N* | 3353549 | 3353549 | 3353549 | 2113292 | 1247599 |

Standard errors in parentheses

§ p<0.1, + p<0.05, \* p<0.01