## ONLINE APPENDIX:

Table A1: Construction of the Analysis Sample

| Analysis Sample Period-Academic Years | $2005-2006$ to 2010-2011 |
| :--- | :---: |
| Total Number of Students Who Took the HSAP Tests for the First Time | $\mathrm{N}=268,420$ |
| Fraction of Students with Valid HSAP Scores | $95.4 \%(\mathrm{~N}=256,174)$ |
| Fraction of Students with HSAP Scores in Tenth Grade (conditional on valid scores) | $87.5 \%(\mathrm{~N}=224,115)$ |
| Fraction of Students Who Had Never Enrolled in Twelfth Grade (conditional on valid scores in tenth grade) | $18.4 \%(\mathrm{~N}=41,231)$ |

Table A2: Regression Discontinuity Validation Tests-by Race

|  | Female | Free Lunch | Composite <br> Test Score <br> (Middle Sch.) |
| :--- | :---: | :---: | :---: |
|  |  | Coefficients <br> (Standard Errors) |  |
|  | $(1)$ | $(2)$ | $(3)$ |
|  |  |  |  |
| Panel A: Blacks | -0.009 | -0.002 | 0.011 |
| Failing the Exit Exam | $(0.014)$ | $(0.013)$ | $(0.011)$ |
| Sample Size | 68,284 | 68,284 | 62,244 |
| Panel B: Whites |  |  |  |
| Failing the Exit Exam | -0.008 | 0.010 | -0.001 |
|  | $(0.018)$ | $(0.018)$ | $(0.018)$ |
| Sample Size | 71,198 | 71,198 | 60,839 |

NOTES: The sample is restricted to students who scored within 30 points of the exit exam passing cutoff in their first attempt. Standard errors are clustered at the school level. All specifications use a local cubic polynomial with a uniform kernel and control for cohort fixed effects.
Table A3: Regression Discontinuity Estimates of Failing the Initial Exam on Adult Crime and Economic Self-Sufficiency: Local Linear Regression

|  | Adult Crime |  | Food Stamp Receipt <br> Coefficients (Standard Errors) |  | TANF Receipt |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| Panel A: Blacks |  |  |  |  |  |  |
| Failing the Exit Exam | $\begin{gathered} 0.023 * * \\ (0.011) \end{gathered}$ | $\begin{gathered} 0.022^{* *} \\ (0.010) \end{gathered}$ | $\begin{gathered} 0.019 \\ (0.013) \end{gathered}$ | $\begin{gathered} 0.022^{*} * \\ (0.011) \end{gathered}$ | $\begin{gathered} 0.001 \\ (0.008) \end{gathered}$ | $\begin{gathered} 0.002 \\ (0.008) \end{gathered}$ |
| Optimal Bandwidth | 12.05 | 13.00 | 14.21 | 12.26 | 15.33 | 13.94 |
| Sample Size | 36,323 | 36,323 | 41,480 | 36,323 | 43,456 | 39,236 |
| Panel B: Whites |  |  |  |  |  |  |
| Failing the Exit Exam | $\begin{aligned} & -0.005 \\ & (0.011) \end{aligned}$ | $\begin{aligned} & -0.006 \\ & (0.011) \end{aligned}$ | $\begin{aligned} & -0.002 \\ & (0.019) \end{aligned}$ | $\begin{aligned} & -0.007 \\ & (0.015) \end{aligned}$ | $\begin{gathered} 0.004 \\ (0.006) \end{gathered}$ | $\begin{gathered} 0.004 \\ (0.006) \end{gathered}$ |
| Optimal Bandwidth | 13.63 | 14.28 | 15.73 | 14.13 | 18.66 | 17.35 |
| Sample Size | 29,806 | 32,137 | 34,102 | 32,137 | 41,176 | 39,282 |
| p-value-Test of Equal Coefficients ( $\beta_{\mathrm{b}}=\beta_{w}$ ) |  | 0.06 |  | 0.12 |  | 0.84 |
| Controls: |  |  |  |  |  |  |
| Cohort Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes |
| Covariates | No | Yes | No | Yes | No | Yes |

NOTES: Optimal bandwidth selector in all columns is based on one common mean squared error, as described in Calonico et al. (2019), with a triangular kernel. Standard errors are clustered at the school level. Covariates include indicators for gender, free/reduced lunch and age student was first found in public school, and composite test score (missing values set to sample mean and a separate indicator for missing value is added). The dependent variable in Columns 1 and 2 takes the value one if individual was ever arrested as adult at age 22 or younger while, in Columns 3-6, it takes the value one if individual ever enrolled in social programs (food stamps/SNAP and TANF) as an adult.

* significant at $10 \%,{ }^{* *}$ significant at $5 \%,{ }^{* * *}$ significant at $1 \%$.
Table A4: Robustness Checks-Regression Discontinuity Estimates of Failing the Initial Exam on Adult Crime and Food Stamps/SNAP Assistance: $\underline{\text { Alternative Bandwidths and Different Polynomial Orders }}$

|  | Adult Crime |  |  | Food Stamp Receipt |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Local Linear Regression Inde $x=[-10,10]$ | $\begin{gathered} \text { Local Quadratic } \\ \text { Regression } \\ \text { Inde }=[-15,15] \\ \hline \end{gathered}$ | $\begin{gathered} \text { Local Quadratic } \\ \text { Regression } \\ \text { Index }=[-20,20] \\ \hline \end{gathered}$ | Local Linear Regression Inde $x=[-10,10]$ | $\begin{gathered} \text { Local Quadratic } \\ \text { Regression } \\ \text { Inde }=[-15,15] \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { Local Quadratic } \\ \text { Regression } \\ \text { Inde }=[-20,20] \\ \hline \end{gathered}$ |
|  | Coefficients (Standard Errors) |  |  |  |  |  |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| Panel A: Blacks |  |  |  |  |  |  |
| Failing the Exit Exam | $\begin{gathered} 0.028^{* *} * \\ (0.009) \end{gathered}$ | $\begin{gathered} 0.029 * * \\ (0.011) \end{gathered}$ | $\begin{gathered} 0.020^{* *} \\ (0.010) \end{gathered}$ | $\begin{gathered} 0.019^{* *} \\ (0.010) \end{gathered}$ | $\begin{aligned} & 0.024^{*} \\ & (0.013) \end{aligned}$ | $\begin{gathered} 0.022 * * \\ (0.011) \end{gathered}$ |
| Sample Size | 31,497 | 43,456 | 53,973 | 31,497 | 43,456 | 53,973 |
| Panel B: Whites |  |  |  |  |  |  |
| Failing the Exit Exam | $\begin{gathered} 0.001 \\ (0.011) \end{gathered}$ | $\begin{aligned} & -0.006 \\ & (0.015) \end{aligned}$ | $\begin{aligned} & -0.009 \\ & (0.012) \end{aligned}$ | $\begin{aligned} & -0.011 \\ & (0.013) \end{aligned}$ | $\begin{aligned} & -0.008 \\ & (0.017) \end{aligned}$ | $\begin{aligned} & -0.005 \\ & (0.015) \end{aligned}$ |
| Sample Size | 22,788 | 34,102 | 46,809 | 22,788 | 34,102 | 46,809 |

[^0]Table A5: Robustness Checks-Regression Discontinuity Estimates of Failing the Initial Exam on Adult Crime and Food Stamps/SNAP Assistance: Alternative Specifications

|  | Adult Crime |  |  | Food Stamp Receipt |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Add School Fixed Effects | Include SubjectSpecific Running Variables | $\begin{gathered} \hline \text { Donut-RD } \\ \text { Exclude } \\ \text { Index }=[-1,2] \\ \hline \end{gathered}$ | Add School Fixed Effects | Include SubjectSpecific Running Variables | $\begin{gathered} \hline \text { Donut-RD } \\ \text { Exclude } \\ \text { Index=[-1,2] } \\ \hline \end{gathered}$ |
|  | Coefficients (Standard Errors) |  |  |  |  |  |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| Panel A: Blacks |  |  |  |  |  |  |
| Failing the Exit Exam | $\begin{gathered} 0.028 * * \\ (0.011) \end{gathered}$ | $\begin{gathered} 0.030^{* * *} \\ (0.011) \end{gathered}$ | $\begin{gathered} 0.044^{* *} \\ (0.020) \end{gathered}$ | $\begin{aligned} & 0.023^{*} \\ & (0.012) \end{aligned}$ | $\begin{gathered} 0.024^{* *} \\ (0.012) \end{gathered}$ | $\begin{aligned} & 0.035^{*} \\ & (0.020) \end{aligned}$ |
| Sample Size | 68,284 | 68,284 | 62,354 | 68,284 | 68,284 | 62,354 |
| Panel B: Whites |  |  |  |  |  |  |
| Failing the Exit Exam | $\begin{aligned} & -0.009 \\ & (0.014) \end{aligned}$ | $\begin{aligned} & -0.008 \\ & (0.014) \end{aligned}$ | $\begin{aligned} & -0.002 \\ & (0.020) \end{aligned}$ | $\begin{gathered} 0.000 \\ (0.017) \end{gathered}$ | $\begin{aligned} & -0.000 \\ & (0.017) \end{aligned}$ | $\begin{aligned} & -0.003 \\ & (0.024) \end{aligned}$ |
| Sample Size | 71,198 | 71,198 | 67,131 | 71,198 | 71,198 | 67,131 |

NOTES: The sample is restricted to students who scored within 30 points of the exit exam passing cutoff in their first attempt. Standard errors are clustered at the school level. All specifications use a local cubic polynomial with a uniform kernel. Covariates include indicators gender, free/reduced lunch, and age student was first found in public school, composite test score (missing values set to sample mean and a separate indicator for missing value is added) and year fixed effects. Columns (1) and (4) control for school fixed effects in the specifications for adult criminal involvement and enrollment in food stamps/SNAP, respectively. Columns (2) and (5) include subject-specific running variables as additional controls and finally, Columns (3) and (6) present the baseline results using donut-RD models, where we remove observations very close to the passing cutoff.

* significant at $10 \%,{ }^{* *}$ significant at $5 \%,{ }^{* * *}$ significant at $1 \%$.
Table A6: Robustness Checks-Regression Discontinuity Estimates of Failing the Initial Exam on Adult Crime: Different Inference Procedures

|  | Local Cubic Regression |  |  | Local Linear Regression |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SE Clustered at the Index Level | SE Clustered Two Way | Robust SE | Robust SE- <br> Nearest Neighbor <br> Estimator | SE with Coverage Error Opt. Bandwidth | Honest <br> CI |
|  | Coefficients (Standard Errors) |  |  |  |  |  |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| Panel A: Blacks |  |  |  |  |  |  |
| Failing the Exit Exam | $\begin{gathered} 0.031^{* *} \\ (0.013) \end{gathered}$ | $\begin{gathered} 0.031^{* *} \\ (0.012) \end{gathered}$ | $\begin{gathered} 0.031^{* *} \\ (0.012) \end{gathered}$ | $\begin{gathered} 0.023^{* *} \\ (0.010) \end{gathered}$ | $\begin{aligned} & 0.022^{*} \\ & (0.012) \end{aligned}$ | $\begin{gathered} 0.024^{* *} \\ {[0.004,0.043]} \end{gathered}$ |
| Sample Size | 68,284 | 68,284 | 68,284 | 36,323 | 28,298 | 36,323 |
| Panel B: Whites |  |  |  |  |  |  |
| Failing the Exit Exam | $\begin{aligned} & -0.007 \\ & (0.011) \end{aligned}$ | $\begin{aligned} & -0.007 \\ & (0.011) \end{aligned}$ | $\begin{aligned} & -0.007 \\ & (0.014) \end{aligned}$ | $\begin{aligned} & -0.006 \\ & (0.010) \end{aligned}$ | $\begin{aligned} & -0.006 \\ & (0.013) \end{aligned}$ | $\begin{gathered} -0.005 \\ {[-0.025,0.015]} \end{gathered}$ |
| Sample Size | 71,198 | 71,198 | 71,198 | 32,137 | 22,788 | 32,137 |

[^1]Table A7: Robustness Checks-Regression Discontinuity Estimates of Failing the Initial Exam on Food Stamps/SNAP Assistance: Different Inference Procedures

|  | Local Cubic Regression |  |  | Local Linear Regression |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SE Clustered at the Index Level | SE Clustered Two Way | Robust SE | Robust SE- Nearest Neighbor Estimator | SE with Coverage Error Opt. Bandwidth | Honest CI |
|  | Coefficients(Standard Errors) |  |  |  |  |  |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| Panel A: Blacks |  |  |  |  |  |  |
| Failing the Exit Exam | $\begin{gathered} 0.024^{* * *} \\ (0.009) \end{gathered}$ | $\begin{gathered} 0.024^{* * *} \\ (0.009) \end{gathered}$ | $\begin{gathered} 0.024^{* *} \\ (0.012) \end{gathered}$ | $\begin{gathered} 0.023 * * \\ (0.010) \end{gathered}$ | $\begin{aligned} & 0.022^{*} \\ & (0.012) \end{aligned}$ | $\begin{gathered} 0.022 * * \\ {[0.003,0.042]} \end{gathered}$ |
| Sample Size | 68,284 | 68,284 | 68,284 | 34,057 | 28,298 | 36,323 |
| Panel B: Whites |  |  |  |  |  |  |
| Failing the Exit Exam | $\begin{gathered} 0.000 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.017) \end{gathered}$ | $\begin{aligned} & -0.006 \\ & (0.013) \end{aligned}$ | $\begin{aligned} & -0.007 \\ & (0.017) \end{aligned}$ | $\begin{gathered} -0.006 \\ {[-0.031,0.019]} \end{gathered}$ |
| Sample Size | 71,198 | 71,198 | 71,198 | 26,957 | 22,788 | 32,137 |

NOTES: The specifications in Columns (1)-(3) use a local cubic polynomial with a bandwidth of 30 index points and a uniform kernel. Columns (4)-(6) present the results using a local linear specification with a triangular kernel. Column (4) uses the MSE-optimal bandwidth, while Column (5) displays the standard errors using the coverage error (CER) optimal bandwidth. The outcome variable in the last column is residualized food stamps/SNAP receipt which is constructed by partialling out the effects of predetermined characteristics within the MSE-optimal bandwidth.

* significant at $10 \%,{ }^{* *}$ significant at $5 \%, * * *$ significant at $1 \%$.

Table A8: Robustness Checks-Regression Discontinuity Estimates of Failing the Initial Exit Exam on Mediumand Long-Run Outcomes: Add More Recent Tenth Grade Cohorts

|  | Adult Crime |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Food Stamps <br> Receipt | Enrolled <br> in 11th Grade | Coefficients <br> (Standard Errors) | $(3)$ |
| HS in 4 Years |  |  |  |  |
|  | $(1)$ | $(2)$ | $(4)$ |  |
|  |  |  |  |  |
| Panel A: Blacks | $0.025^{* *}$ | $0.020^{* *}$ | -0.013 | $-0.035^{* * *}$ |
| Failing the Exit Exam | $(0.011)$ | $(0.010)$ | $(0.010)$ | $(0.011)$ |
| Sample Size | 95,860 | 95,860 | 95,860 | 95,860 |
| Panel B: Whites |  |  |  |  |
| Failing the Exit Exam | -0.012 | -0.003 | -0.016 | $-0.033^{* *}$ |
|  | $(0.013)$ | $(0.014)$ | $(0.014)$ | $(0.014)$ |
| Sample Size | 100,857 | 100,857 | 100,857 | 100,857 |

NOTES: The sample is restricted to students who scored within 30 points of the exit exam passing cutoff in their first attempt Standard errors are clustered at the school level. All specifications use a local cubic polynomial with a uniform kernel. Covariates include indicators gender, free/reduced lunch, and age student was first found in public school, composite test score (missing values set to sample mean and a separate indicator for missing value is added) and year fixed effects. The research sample includes students enrolled in regular classes in grade 10 between the 2005-2006 and 2012-2013 academic years.
$*$ significant at $10 \%,{ }^{* *}$ significant at $5 \%,{ }^{* * *}$ significant at $1 \%$.

Panel A: Blacks


Panel B: Whites


Figure A1: Probability of Being Arrested as an Adult and Distance to the Exit Exam Passing Cutoff-Local Linear Regression using the MSE-optimal bandwidth
NOTES: The vertical lines denote the exit exam passing cutoff (centered at 0 ). Each circle represents the unconditional mean of adult crime computed using quantile-spaced bins, based on the distance to exit exam passing cutoff. The solid lines are fitted values of probability of adult arrest from a local linear regression using the MSE optimal bandwidth.

Panel A: Blacks-Food Stamps/SNAP


Panel B: Whites-Food Stamps/SNAP


Panel C: Blacks-TANF


Panel D: Whites-TANF


Figure A2: Probability of Participation in Food Stamps/SNAP and TANF as an Adult and Distance to the Exit Exam Passing Cutoff-Local Linear Regression using the MSE-optimal bandwidth
NOTES: The vertical lines denote the exit exam passing cutoff (centered at 0). Each circle represents the unconditional mean of enrollment in social programs (food stamps/SNAP and TANF) computed using quantile-spaced bins, based on the distance to exit exam passing cutoff. The solid lines are fitted values of probability of participation in food stamps/SNAP as an adult from a local linear regression using the MSE optimal bandwidth.

Panel A: Blacks-Adult Crime


Panel B: Whites-Adult Crime


Panel C: Blacks-Food Stamps/SNAP


Panel D: Whites-Food Stamps/SNAP


Figure A3: Adult Outcomes and Distance to the Exit Exam Passing Cutoff-Local Cubic Regression Using Different Bandwidths
NOTES: All estimates are obtained from a local cubic polynomial using alternative bandwidths, over a range from 20 to 50 index points by incrementally adding two index points, with a uniform kernel. The height of the bars from each point represents the bounds of the $95 \%$ confidence interval. Standard errors are clustered at the school level.

Panel A: Blacks-Adult Crime


Panel B: Whites-Adult Crime


Panel C: Blacks-Food Stamps/SNAP


Panel D: Whites-Food Stamps/SNAP


Figure A4: Adult Outcomes and Distance to the Exit Exam Passing Cutoff-Local Linear Regression Using Different Bandwidths
NOTES: All estimates are obtained from a local linear specification using alternative bandwidths, over a range from 10 to 20 index points by incrementally adding two index points, with a triangular kernel. The height of the bars from each point represents the bounds of the $95 \%$ confidence interval. Standard errors are clustered at the school level.


[^0]:    NOTES: All specifications use local polynomials with a uniform kernel. Standard errors are clustered at the school level. Covariates include indicators for gender, free/reduced lunch and age student was first found in public school, composite test score (missing values set to sample mean and a separate indicator for missing value is added) and test year fixed effects. The dependent variable in Columns 1-3 takes the value one if individual was ever arrested as adult at age 22 or younger, while, in Columns $4-6$, it takes the value one if individual ever enrolled in food stamps/SNAP as an adult.

[^1]:    NOTES: The specifications in Columns (1)-(3) use a local cubic polynomial with a bandwidth of 30 index points and a uniform kernel. Columns (4)-(6) present the results using a local linear specification with a triangular kernel. Column (4) uses the MSE-optimal bandwidth, while Column (5) displays the standard errors using the coverage error (CER) optimal bandwidth. The outcome variable in the last column is residualized adult crime which is constructed by partialling out the effects of predetermined characteristics within the MSE-optimal bandwidth.

    * significant at $10 \%,{ }^{* *}$ significant at $5 \%, * * *$ significant at $1 \%$.

