Student Loan Debt Distress Across NYC Neighborhoods

Identifying Indicators of Vulnerability

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Consumer Affairs

Bill de Blasio
Mayor

Lorelei Salas
Commissioner

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Acknowledgments

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Executive Summary

Student loan debt is currently the second largest source of consumer debt in the United States, climbing to $1.5 trillion in 2018. Increases in tuition resulting from cuts in public spending on higher education have driven up the average amount borrowed for a bachelor's degree to $30,000, nearly double what it was 20 years ago. Increased borrowing, stagnating wages, and the expansion of higher education to more financially vulnerable communities without bolstering the requisite support systems have all led to the present-day student loan debt crisis. For example, cumulative default rates for borrowers 12 years after entry are on the rise (Scott-Clayton, 2018), and we are witnessing altered life trajectories as debt-burdened young adults are forced to delay major milestones in life, such as homeownership and starting a family (Alvaro, Ringo, Sherlund & Sommer, 2016; Herron, 2015).

As the Agency charged with protecting and enhancing the economic lives of New Yorkers, the NYC Department of Consumer Affairs (DCA) is interested in the effect that student loan debt has on a borrower's individual financial situation—what we regularly refer to as financial health. When a student loan goes into default, it directly impacts the financial health of a borrower by lowering the borrower's credit score. A low credit score can leave a borrower with higher insurance premiums, less access to affordable housing, and will increase the cost of borrowing for other needs. In addition, the financial burden of student loan payments constrains borrowers' ability to accumulate assets.

In our previous research on student loan debt, a partnership with the Federal Reserve Bank of New York on the report *Student Loan Borrowing Across NYC Neighborhoods*, we found that the distress caused by the student loan debt crisis is not shared evenly across New York City. Delinquency rates varied significantly across boroughs, from a low of 11 percent in Staten Island to a high of 19 percent in the Bronx. Further, the highest median student loan balances are in Manhattan, yet in the Bronx and Brooklyn median balances comprise a far higher share of median income. In this follow-up report, we aim to gain a better understanding of why some New York City neighborhoods have higher rates of student loan distress.

To develop this understanding, we relied on established research and identified the best available data at the New York City level. In the end, we investigated seven factors known to be predictive of student loan default:

1. non-completion;
2. part-time attendance;
3. attendance at a for-profit institution;
4. independent student status;
5. low income;
6. black race/ethnicity; and
7. Hispanic race/ethnicity.

We also focused on non-completion and attendance at a for-profit institution and the relationship between these two indicators and the other five indicators to develop a more nuanced understanding of postsecondary enrollment patterns and struggles with student loan debt in New York City. From this research, we identified four main findings.

Key Findings

1. **All seven of our indicators of vulnerability to default provide us with useful context about student loan distress in New York City and can be used to target services.** We found that for each of the indicators of vulnerability to student loan default, areas with high levels of debt in collections also tended to have high levels of our indicators. Thus, our maps provide a useful means to identify and understand student loan borrowers already struggling and in need of interventions and services.

2. **Student loan debt distress is particularly acute in the Bronx.** The Bronx has the highest rate of student loan debt holders in collections. Further, fewer than half of students who began their studies in the 2010 school year had completed a degree in 2017, seven years later. The Bronx also had a higher rate of students attending for-profit institutions.

3. **Non-completion is one of the strongest drivers of debt in collections in New York City and is found at higher rates among the other six predictors of default.** Research has shown that non-completion is one of the strongest drivers of student loan default (Gross, Cekic, Hossler, & Hillman, 2010). Student loans are a good investment in the future if students realize an earnings premium for their educational pursuits. However, individuals with some college receive only slightly more in median wages than high school degree holders who never took a college course and, thus, may struggle to pay back their student loans. In addition to finding a strong relationship between student loan holders with debt in collections and non-completion, we found strong relationships between non-completion and the other six indicators known to be predictive of student loan default.

4. **Older students, students from neighborhoods with low incomes, and students from neighborhoods with a higher prevalence of black and Hispanic residents attend for-profit schools at a higher rate.** Because of the history of predatory recruitment, high cost of tuition, low graduation rates, and the low amount of money spent on program administration (Cao, 2018), we also investigated the relationship between for-profit school attendance and some of our other indicators. We found the highest rates of attendance at for-profit schools in the Bronx, among older students, among students from neighborhood areas with high rates of black and Hispanic residents, and among students from neighborhoods with low incomes. We also found that for-profit institutions are underserving students over the age of 24 based on the dramatically lower graduation rates for these students at these institutions compared to similarly aged students attending two-year and four-year public institutions.

In this report we gained a preliminary understanding of some of the predictors of student loan debt distress. Our analysis establishes support for using the seven indicators of vulnerability to default in targeting New York City services. However, more research is needed to fully understand what is driving the student loan debt crisis in New York City. Nevertheless, our research does illuminate three key areas in need of policy focus.

Key Areas for Policy Focus

1. There is a strong need to promote community colleges in the Bronx and other parts of New York City as an alternative to for-profit schools.
2. Colleges need to make more of an effort to be accommodating and accountable to the needs of the growing body of independent ("non-traditional") students in New York City who often have competing work and family obligations.
3. Innovative solutions are needed to help more vulnerable students—older students, students of color, and students from low-income backgrounds—complete their degrees, and in fewer years, to reduce debt accumulation and ensure these students receive a positive return on their investment in higher education.

Introduction

Student loan debt is currently the second largest source of consumer debt in the United States, climbing to $1.5 trillion in 2018—two and a half times the total a decade earlier (Board of Governors of the Federal Reserve System (US)). The average amount borrowed at graduation for a bachelor's degree is estimated at $30,000, a twofold increase over the last 20 years (Kantrowitz, 2018). This colossus of debt has grown steadily over the last decade as state and federal funding cuts put upward pressure on the cost of tuition, and student loans slowly replaced grants as the new bridge to achieving the "American Dream" (Mitchell, Leachman & Masterson, 2017). Unfortunately, as the cost of tuition kept rising, wages—even for those with a college degree—have stagnated,[1] turning up the financial pressure on borrowers. At the same time, access to higher education has expanded to include more individuals from traditionally underserved and vulnerable groups without necessarily adapting to the needs of this growing student demographic. Thus, these vulnerable students—including older students, students from families with low incomes, first-generation college students—have come to feel the student loan debt crisis most acutely.

Together, three factors—increased borrowing, increasingly vulnerable students borrowing, and stagnating wages—created a perfect storm. While the full effect of these phenomena is not yet fully known, we are starting to see early indications that a crisis is underway.

First, the 9-percentage point increase in the default rate 12 years after initial enrollment for the cohort of students who began in 2004 compared to the 1996 cohort provides direct evidence of the increase in student loan debt distress (Scott-Clayton, 2018).

Second, we are witnessing the impact of the student loan debt crisis on borrowers' life decisions, with recent research finding a relationship between the financial stress of increased student loan debt holdings and decreases in small business creation (Ambrose, Cordell & Ma, 2015) and delayed homeownership (Alvaro et al., 2016). There is also anecdotal evidence suggesting stress caused by student loan debt can be a contributing factor to divorce (Luthi, 2018) and delayed decisions to marry or have children (Herron, 2015).

1 Increasing less than 1 percent between 2010-2017; see Donovan & Bradley, 2018.

As the Agency charged with protecting and enhancing the economic lives of New Yorkers, the NYC Department of Consumer Affairs (DCA) is interested in the effect that student loan debt has on a borrower's individual financial situation—what we regularly refer to as financial health.

The primary way student loan debt can impact the financial health of borrowers is by negatively impacting their credit score. This can happen if a borrower goes into delinquency and/or collections, a situation 13 percent of New York City borrowers found themselves in 2016 (FRBNY, 2017). Low credit scores matter because an unfavorable score makes it harder and/or costlier to borrow in the future, makes it harder to qualify for rental housing and, in some cases, increases car insurance premiums (The Motley Fool, 2016).

The long-term struggle to repay may also translate into lower asset accumulation. As one research report found, black and Hispanic student loan borrowers who are still paying their debt at age 30 are also found to have a lower net worth on average and lower total value of accumulated non-financial assets, such as a car or equity in real estate, than non-borrowers (Zhan & Xiang, 2018).

To gain a better understanding of who is suffering from student loan debt-induced financial distress in New York City, DCA copublished a first-of-its-kind report with the Federal Reserve Bank of New York examining student loan debt at the city level titled, *Student Loan Borrowing Across NYC Neighborhoods*. Our findings confirmed that the student loan debt struggle is not shared evenly across borrowers. For instance, the highest median student loan balances are in Manhattan, yet in the Bronx and Brooklyn median balances comprise a far higher share of median income (FRBNY, 2017).

In this follow-up report, we aim to gain a better understanding of the factors contributing to student loan debt and default in New York City and to better identify and understand geographies with higher rates of student loan distress. To do so, we employed established research to identify factors indicative of a greater vulnerability to student loan debt distress. Unsurprisingly, we found distinctive trends based on geography indicating a disparity in completion rates and school selectiveness, among our other indicators of vulnerability to loan default, across New York City neighborhood areas. Neighborhood areas ranking highest in student loan debt in collections also tended to rank high on at least one of our indicators of vulnerability, with 11 neighborhoods ranking highly on five or more of the seven indicators. Due to concerns with the predatory behavior of for-profit institutions and the disastrous impact of non-completion, we also look into the relationship between these two indicators and the other five indicators.

The sections of this report will cover:

- Data and Methodology
- Who Owns Student Loan Debt
- Who is Struggling with Student Loan Debt
- Predictors of Student Loan Debt Distress
    - In our analysis, we investigate seven factors, referred to as indicators of vulnerability to default, known to be related to higher levels of student loan debt default—non-completion; part-time attendance; attendance at a for-profit institution; independent student status; low income; black race/ethnicity; and Hispanic race/ethnicity—and explore some relationships between these predictors.
- Conclusion
    - We provide a summary of key findings, as well as key takeaways for future consideration.

Data and Methodology

We compiled our data on enrollment patterns, credit behavior, neighborhood area level education, race/ethnicity, and income characteristics from three different sources.

I. For enrollment patterns, we relied on data from the National Student Clearinghouse (NSC).

The NSC is a nonprofit organization with the mission of relieving the administrative burden of higher education reporting requirements. The NSC research team makes use of submitted enrollment records to provide analytics to their research clients. For our analysis, the NSC provided postsecondary attendance and completion patterns, across key demographics, for students originating from New York City at the time of initial enrollment. For the purposes of anonymity, we received this data aggregated at the ZIP code level. To determine the sample, the NSC limited the data to records with a permanent (initial) address ZIP code matching one of the provided NYC ZIP codes.

According to our specifications, the NSC further limited the analysis to include two cohorts of interest:

1. first-time students entering associate's or bachelor's degree programs in 2010 for a seven-year cohort view of completion; and
2. all students enrolled in a degree program between August 15, 2016 and April 30, 2017 to get a one-year snapshot of higher education enrollment patterns.

The seven-year cohort sample included aggregated data from 57,676 individuals, and the snapshot data included the same for 504,694 individuals.

A major limitation of both cohorts is that they do not include students in certificate and career programs for any of the institutions included in the data set. Also, we are unable to verify whether the students included in the snapshot or seven-year cohort attended or are attending school in New York City or whether they returned or will return after graduation, and we cannot account for the educational patterns of current residents who began their higher education as residents of locations outside of New York City.

II. For data on student loan debt holdings and student loan debt in collections, we received tabulations from the Urban Institute (UI) of data from a major credit bureau.

UI provided us with a snapshot of credit outcomes for New York City residents on December 31, 2016. The data came from a random sample of 2 percent of U.S. consumers with a credit file—in our case, limited to observations collected on New York City residents—and was sourced from one of the three credit bureaus operating in the United States. For the purposes of anonymity, UI provided us with ZIP code and Public Use Microdata Area (PUMA) level—a census designation closely related to the Community District boundaries used in New York City government—aggregations.

III. The third data source was the American Community Survey (ACS), from which we pulled data on median household income and racial and ethnic composition at the PUMA level.

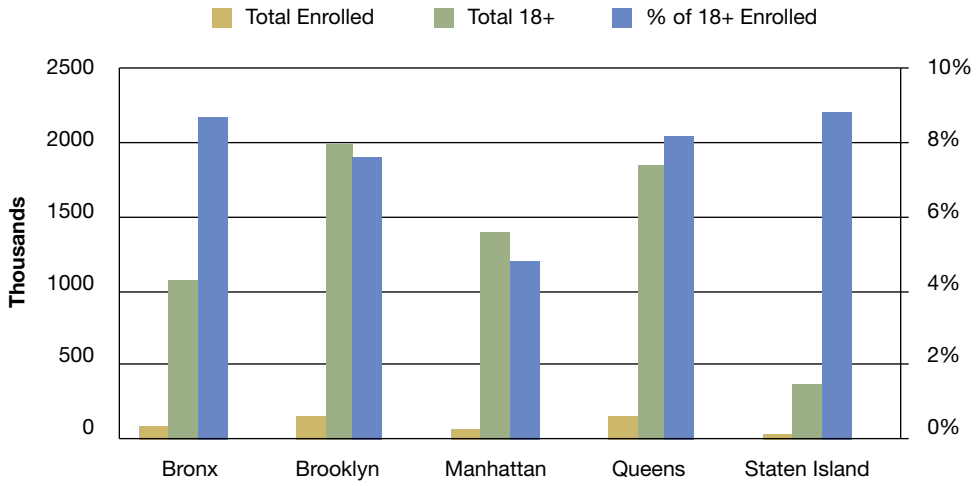
All ACS data comes from the U.S. Census Bureau's 2012-2016 American Community Survey 5-Year Estimates. We received this data at the PUMA level.

Throughout the report we refer to geographic entities that we call "neighborhood areas," which are the 55 PUMAs that comprise New York City. For ease of identification, all of the maps in the report are labeled with the Community Districts that best match the geographic coverage of the neighborhood area.

It should be noted that most of our results were received at the ZIP code level and aggregated to the PUMA level using an assignment strategy compiled from public sources by Baruch College's Geospatial Librarian.[2] Because ZIP codes are not a census designation, the assignment strategy matches ZIP codes to U.S. Census Bureau geographies using ZIP code tabulation areas (ZCTAs)—geographies created by aggregating census blocks to mirror ZIP codes. More importantly, while in our data set ZIP codes are assigned to ZCTAs and then combined to form PUMAs that coincide with Community Districts, in reality ZIP codes do not perfectly nest into ZCTAs, ZCTAs do not perfectly nest into PUMAs, and PUMAs do not necessarily share the exact same boundaries as Community Districts. We do, however, feel that in the absence of a perfect assignation to Community District boundaries, this method provides a reasonable proxy for Community Districts—or what we refer to throughout the report as neighborhood areas. See Appendix A for how each variable is defined and Appendix C for a map and key of the neighborhood areas (PUMAs) and Community District and neighborhoods that comprise them.

To provide context to the higher education landscape, we compared enrollment totals to population totals in Figure 1. Even though we find smaller populations of residents aged 18 and older in both the Bronx and Staten Island, we find a higher than average percentage of the adult population enrolled in higher education.

Figure 1: Enrollment in Higher Education and Population 18+



Source: Enrollment data: National Student Clearinghouse, fall 2016; Population: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Our analysis takes advantage of the copious amount of research focused on predicting and explaining student loan default. We primarily drew from the findings of a literature review published in the *Journal of Student Financial Aid* written by Gross, et al. in 2009. The authors reviewed and summarized 41 different research studies on student loan default, focusing most of their attention on studies that employed more rigorous statistical techniques using multivariate methods.

2 For details, see: https://www.baruch.cuny.edu/confluence/display/geoportal/NYC+Geographies

One limitation of the review is that it focuses on research conducted between 1978 and 2007. Much has changed since this time: the dischargeability of debt has become more difficult; postsecondary education has become costlier, and student loans have played a larger factor in college access; postsecondary education has become a necessity for achieving a middle-class income status; the student population has become more diverse; among other changes. Thus, the circumstances under which the research was conducted were different from what we are experiencing presently. However, we have not encountered research to convince us that the directionality and significance of the relationships discussed in the 2009 paper—and used to support our methodology—have changed. In fact, a 2018 Brookings report by Judith Scott-Clayton found similar patterns using more recent data (Scott-Clayton, 2018b).

From this literature review and with consideration for the data we were able to access, we decided on seven different indicators of vulnerability to default:

1. non-completion;
2. part-time attendance;
3. attendance at a for-profit institution;
4. independent student status;
5. low income;
6. black race/ethnicity; and
7. Hispanic race/ethnicity.

The research we draw from measures the individual effect of these predictors of default. Due to data limitations, we were only able to access this information aggregated at the neighborhood area level in New York City. However, research has shown neighborhood area level spatial differentiation among key behaviors; we also know neighborhoods cluster along socioeconomic and racial lines (Sampson, Morenoff & Gannon-Rowley, 2002). Thus, even though our indicators are not necessarily measuring the same people as those with debt in collections, the research supports the assumption that there are connections between the two aggregates, as residents of the same neighborhood face similar social and economic forces.

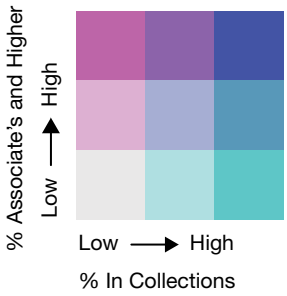
This assumption is strengthened by the strong correlations between neighborhood area levels of student loan debt in collections and indicators of vulnerability to default, as shown in scatterplots and fitted linear regression lines reported for each relationship discussed in the report.

To identify which neighborhood areas were struggling with student loan debt, we assigned the 55 New York City neighborhood areas into three terciles based on the prevalence of student loan holders with debt in collections. We did the same type of assignment for each of the seven indicators of vulnerability. We then combined the collections rankings with the rankings of each of the seven indicators and created bivariate choropleth maps to represent the combinations.[3]

The maps are shaded increasingly darker blue where the collections ranking increases and a given indicator does not; increasingly darker pink where the indicator ranking increases but the rate of debt in collections does not, with one exception being median household income which is darker as the ranking decreases; and increasingly darker purple where both the collections and indicator ranking increase. See Figure 2 for an example of a map key.

3 Map technique based on http://www.joshuastevens.net/cartography/make-a-bivariate-choropleth-map/

Figure 2: Example Bivariate Map Key

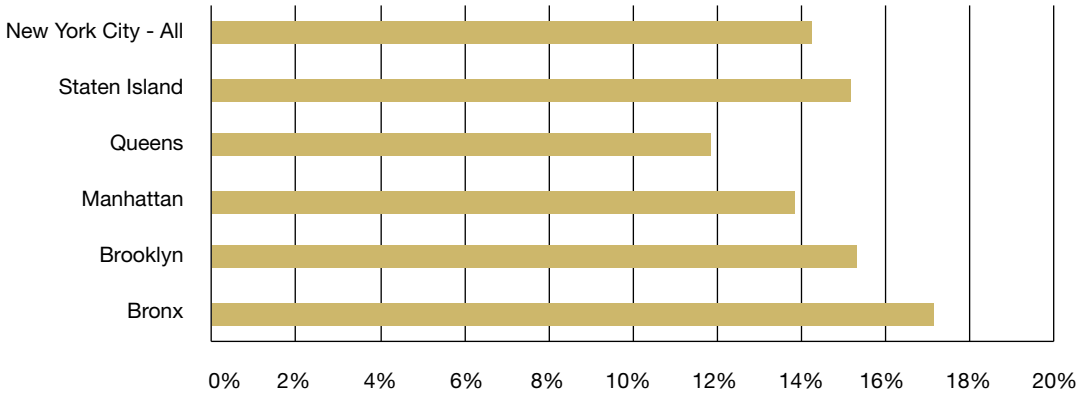


There were 18 neighborhood areas classified into the top tercile based on their collections rates. For each of these neighborhood areas, we tallied whether they were in the most vulnerable tercile, either the highest or lowest depending on the indicator, for each of the seven indicators of vulnerability. This strategy provides us with a blunt, yet indicative, method for identifying the potential drivers of student loan debt distress in New York City neighborhood areas.

Who Owns Student Loan Debt

To understand where in New York City student loan debt is causing the highest rates of financial distress (as measured in this report by debt in collections), we must first understand who holds student loan debt. Figure 3 shows that the student loan debt burden is shared unevenly across New York City, with the lowest student loan borrowing rate found in Queens, around 12 percent of the population, and the highest found in the Bronx, more than 17 percent of the population. A lower borrowing rate does not necessarily indicate lower enrollment rates. Rather, it could indicate a greater ability to finance higher education without student loans.

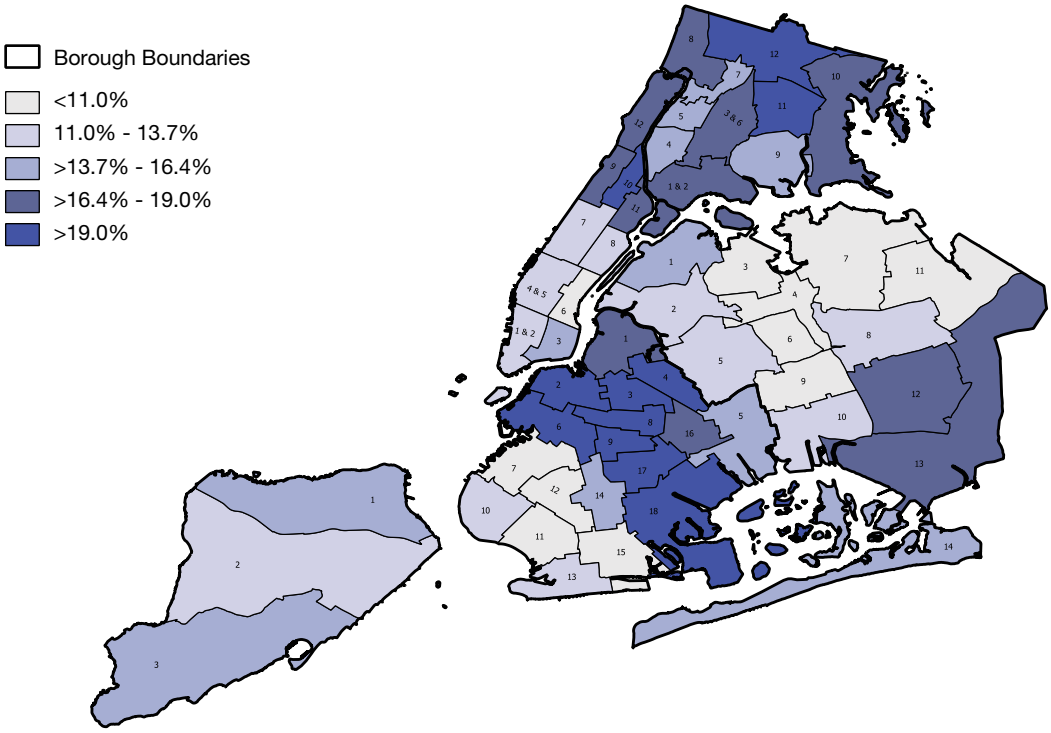
Figure 3: Has Student Loan, by Borough



Source: DCA analysis of Urban Institute Credit Panel Data

Further variations in the borrowing rate are uncovered when we focus on the neighborhood area level. Figure 4 shows a map with neighborhood areas shaded darker where we find higher rates of student loan borrowing. The highest rates of borrowing are found in clusters of neighborhood areas in northern Manhattan, throughout the Bronx, but particularly in the northern section, and in another cluster spanning from northwest to southeast Brooklyn.

Figure 4: Percent of Credit File Holders with Student Loan Debt



Source: DCA analysis of Urban Institute Credit Panel Data

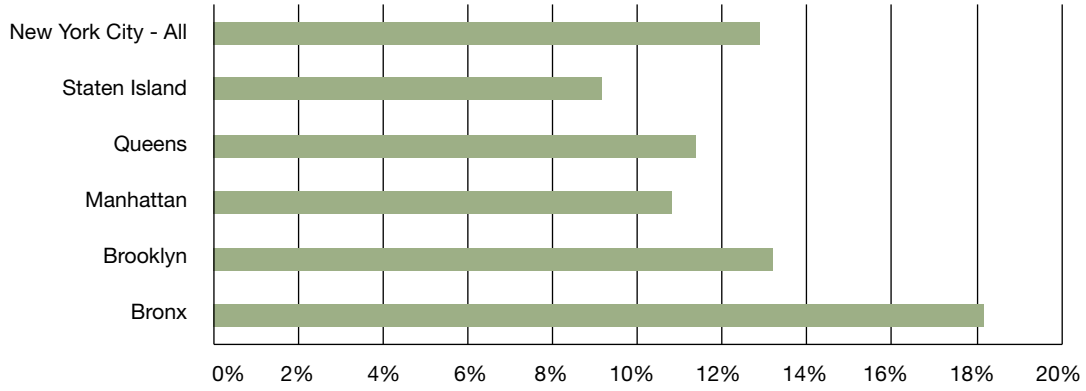
Who is Struggling with Student Loan Debt

High rates of borrowing and large loan size do not immediately equate to student loan distress. For example, a New Yorker who goes to medical school might incur a high loan balance but would likely not have trouble managing loan repayment. To begin to identify those New Yorkers whose student loans are a source of financial distress, we focus on a subset of student loan debt holders—namely, those with student loan debt in collections. To simplify the terminology, throughout the rest of the report we will refer to this group as student loan borrowers with debt in collections, though we are solely focused on student loan debt in collections and not on other forms of debt, such as credit card or auto loan debt.[4]

4 Thus, a student loan borrower with non-student loan debt in collections would not be classified as a student loan debt holder in collection.

For a federal student loan to enter collections, borrowers must be 270 or more days overdue on their loan,[5] which also aligns with how default is typically classified. In Figure 5, we show the percentage of student loan holders with debt in collections. Approximately 13 percent of New York City residents holding student loans are in collections for some of that debt. These percentages range from a low of 9 percent in Staten Island to a high of 18 percent in the Bronx. Surprisingly, while Staten Island has an above-city-average rate of student loan borrowing, the borough has a below-average rate of student loan holders with debt in collections.

Figure 5: Student Loan in Collections, Student Loan Holders Only



Source: DCA analysis of Urban Institute Credit Panel Data

In Figure 6, we present a map of New York City in which neighborhood areas with higher rates of student loan debt in collections are shaded darker. From this map it is clear that neighborhood areas with higher levels of student loan debt in distress tend to cluster.

In the South Bronx, we find six contiguous neighborhood areas with high rates of student loan debt in collections, with the rest of the borough faring not much better. The six neighborhood areas include:

- Belmont, Crotona Park East, and East Tremont
- Bedford Park, Fordham North, and Norwood
- Morris Heights, Fordham South, and Mount Hope
- Concourse, Highbridge, and Mount Eden
- Castle Hill, Clason Point, and Parkchester
- Hunts Point, Longwood, and Melrose

Across Bronx neighborhood areas, rates of student loan borrowers with debt in collections range from slightly below the citywide average at 12 percent to the highest rate of student loan holders with debt in collections of any New York City neighborhood area, at 23 percent.

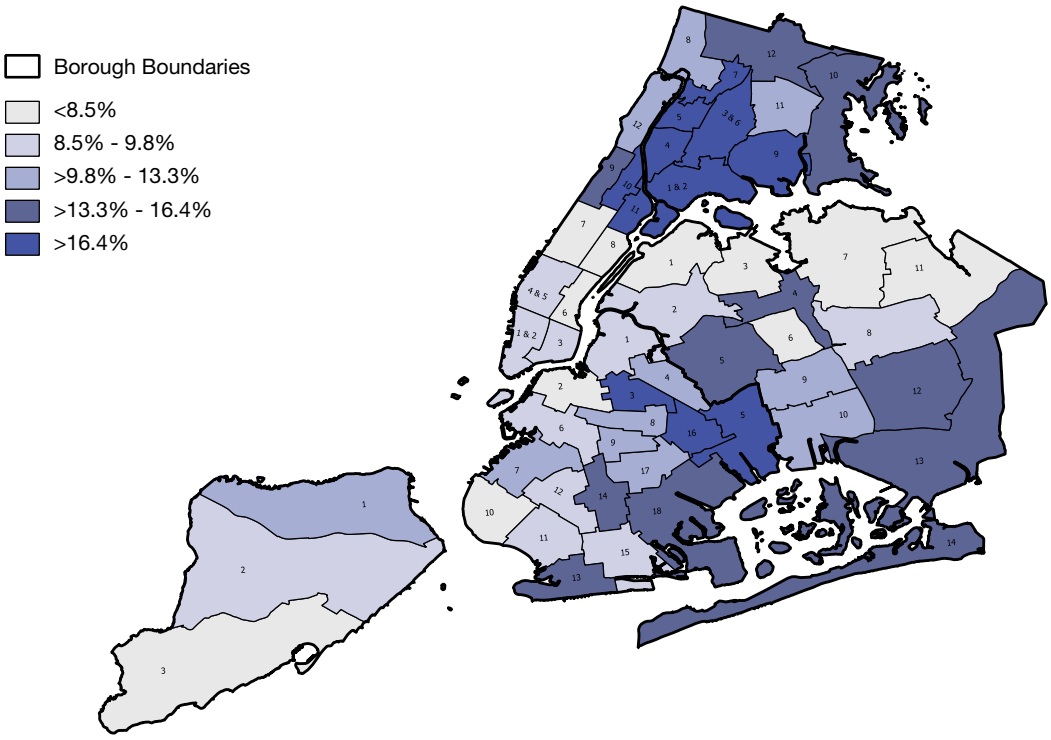
5 Private student loans operate differently and can go into default status after 120 days of nonpayment and can be sent to collections after that (Kirkham, 2017). However, private student loans make up less than 8 percent of outstanding student loan debt (McGurran, B., 2018).

In Brooklyn, we find higher rates of distress in the east, particularly in the three neighborhood areas that include:

- Bedford-Stuyvesant
- East New York and Starrett City
- Brownsville and Ocean Hill

Other notable neighborhood clusters above the citywide average are found in the two neighborhood areas that encompass East and Central Harlem in Manhattan.

Figure 6: Percent of Student Loan Borrowers in Collections, by Community District



Source: DCA analysis of Urban Institute Credit Panel Data

Predictors of Student Loan Debt Distress

To complement our research into the New York City neighborhood areas with high rates of student loan debt in collections, we needed to understand the reasons for student loan default. We mainly relied on a 2010 literature review published in the *Journal of Student Financial Aid* to develop our understanding of the key characteristics and behaviors indicating a higher likelihood of defaulting on student loan debt. The review found that characteristics of students and institution, for example non-completion and attendance at a less selective institution, are strongly related to default (Gross et al., 2010). Informed

by these findings, and given the data available, we focused our analysis in this report on the following predictors of student loan default, what we call indicators of vulnerability to default:

1. non-completion;
2. part-time attendance;
3. attendance at a for-profit institution;
4. independent student status;
5. low income;
6. black race/ethnicity; and
7. Hispanic race/ethnicity.

These predictors and our review of patterns of student enrollment and their relationship to troubling repayment outcomes across New York City boroughs and neighborhood areas are covered in the following sections:

- Non-Completion
- Average Time to Completion and Enrollment Intensity
- Institution Type
- Independent Status – Age as a Proxy
- Income
- Race and Ethnicity

Non-Completion

The main justification for taking out a student loan is that the wage premium realized from attaining a higher education level will more than compensate for the debt incurred. In Figure 7, we present national median usual weekly earnings by degree using Bureau of Labor Statistics data.

Using the median weekly earnings for a person with a high school diploma only as the benchmark, the wage premium[6] for a person who has attended some college—but has not earned a degree—is $62, which doubles to $124 for those who receive an associate's degree, and reaches $461 for a bachelor's degree, nearly 7.5 times higher than those who start college but do not complete their degree.

The benefit of degree attainment does not stop at higher earnings. Having a postsecondary degree also provides some protection against unemployment. Figure 8 shows the national unemployment rates by highest degree attained. In 2017, working age adults experienced a low unemployment rate, approximately 3.6 percent. Much like the earnings data presented in Figure 7, those with some college but no degree experienced a small advantage over high school diploma holders. Associate's degree holders fared slightly better, while bachelor's, graduate, and professional degree earners were unemployed at the lowest rates. With the benefit of higher earnings and lower unemployment rates, it comes as no surprise that higher levels of degree attainment are associated with a decreased likelihood of student loan default (Gross et al., 2010).

6 The wage premium is defined as the difference in median usual weekly earnings received by workers with a high school diploma only and the median usual weekly earnings of workers with a higher level of postsecondary education. For example, the median earnings for a bachelor's degree holder is $461 more dollars than the median earnings for someone with a high school diploma only. Thus, the wage premium for a worker with a bachelor's degree is $461.

Figure 7: Median Usual Weekly Earnings, by Educational Attainment (2017)

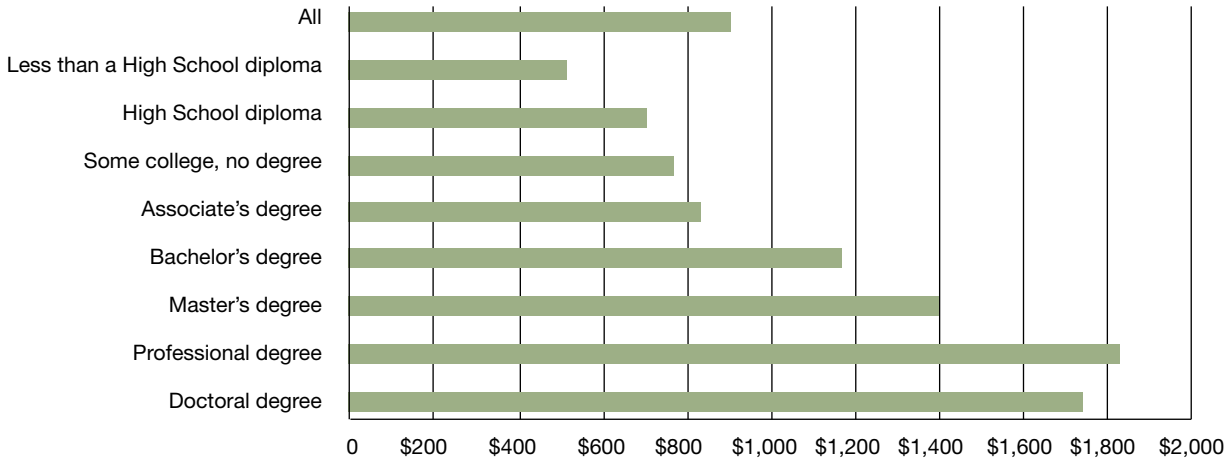
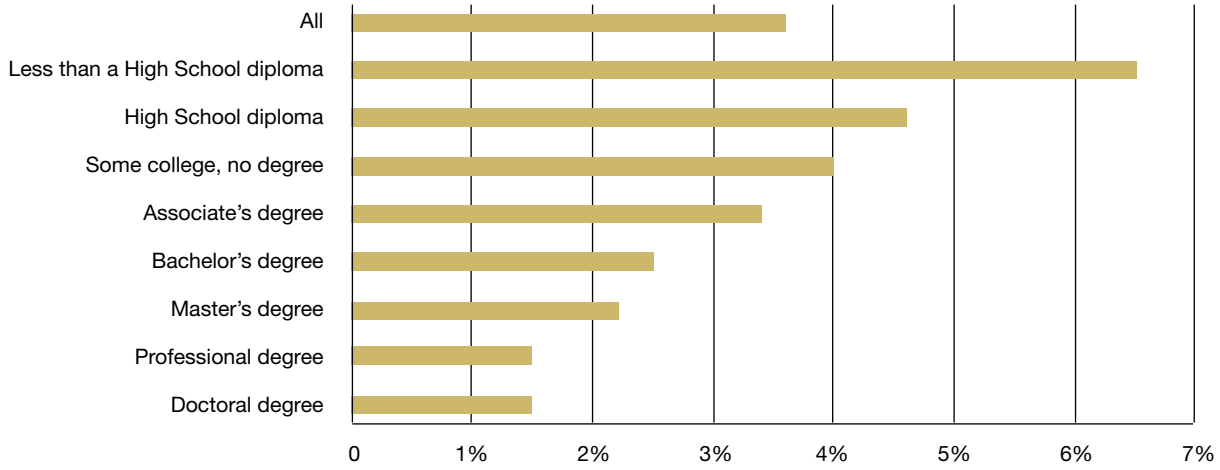


Figure 8: Unemployment Rates, by Educational Attainment (2017)

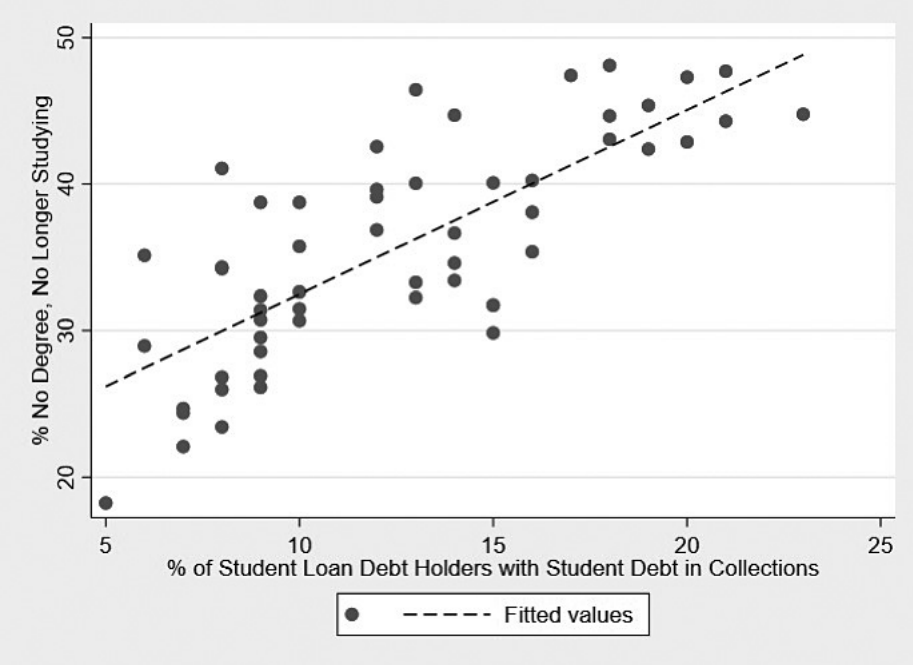


Note: Data are for persons aged 25 and older. Earnings are for full-time wage and salary workers.
Source: Current Population Survey, U.S. Department of Labor, U.S. Bureau of Labor Statistics, see: https://www.bls.gov/emp/tables/unemployment-earnings-education.htm

While non-completers who borrow may owe less than completers, they also earn less and are more likely to suffer bouts of unemployment, all while still obligated to repay their student loans (Gladieux & Perna, 2005). The ramifications of not graduating are becoming more severe as the cost of tuition rises. Exacerbating the situation is the fact that well-paying jobs increasingly require postsecondary education and training.[7]

For these reasons, the research shows that degree non-completion is one of the strongest predictors of student loan default (Gross et al., 2010). The scatterplot of New York City neighborhood areas in Figure 9 shows this phenomena at work, indicating a positive linear relationship between New York City neighborhood areas' student loan collections rate in 2016 and neighborhood area residents' non-completion rates after seven years for a cohort of students who entered college in the 2010 school year. The steep upward slope implies a strong positive correlation: neighborhood areas with high rates of non-completion also have high rates of collections.

Figure 9: Non-completion vs. Debt in Collections, at the Neighborhood Area Level

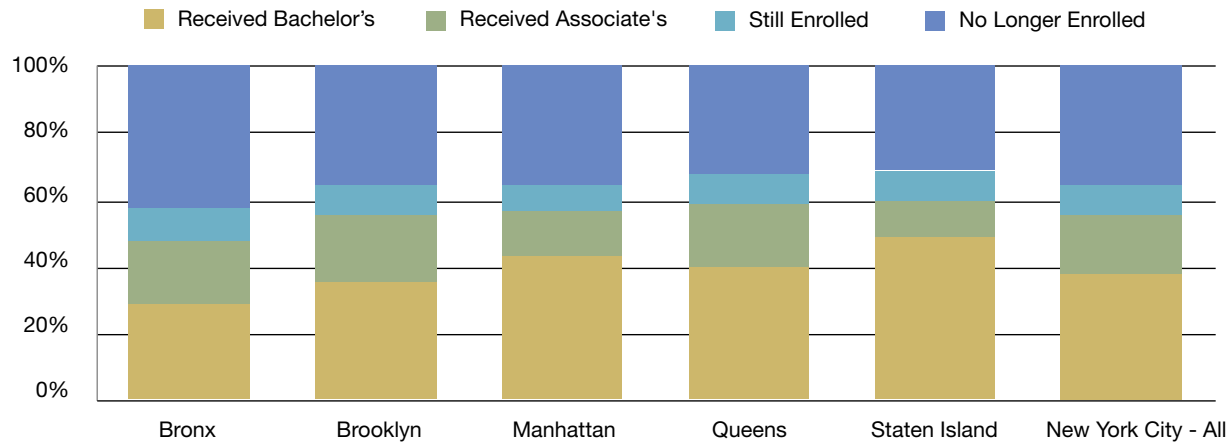


Source: DCA analysis of National Student Clearinghouse Enrollment Data and Urban Institute Credit Panel Data

7 Up to 65 percent of jobs by 2020 will require some level of postsecondary education or training; see Carnevale, Smith & Strohl, 2013.

Using the NSC data, in Figure 10, we present the degree completion statistics for first-time New York City college students after seven years who first entered college during the fall 2010 semester. Citywide, after seven years, 44 percent of students had not completed a degree; 35 percent stopped attending college completely; and 9 percent were still enrolled. The Bronx persists in having the worst outcomes, with more students still studying or having stopped attending after seven years than those who had received a degree.

Figure 10: Highest Degree Attained 7 Years after First Semester, by Borough



Source: DCA analysis of National Student Clearinghouse Enrollment Data

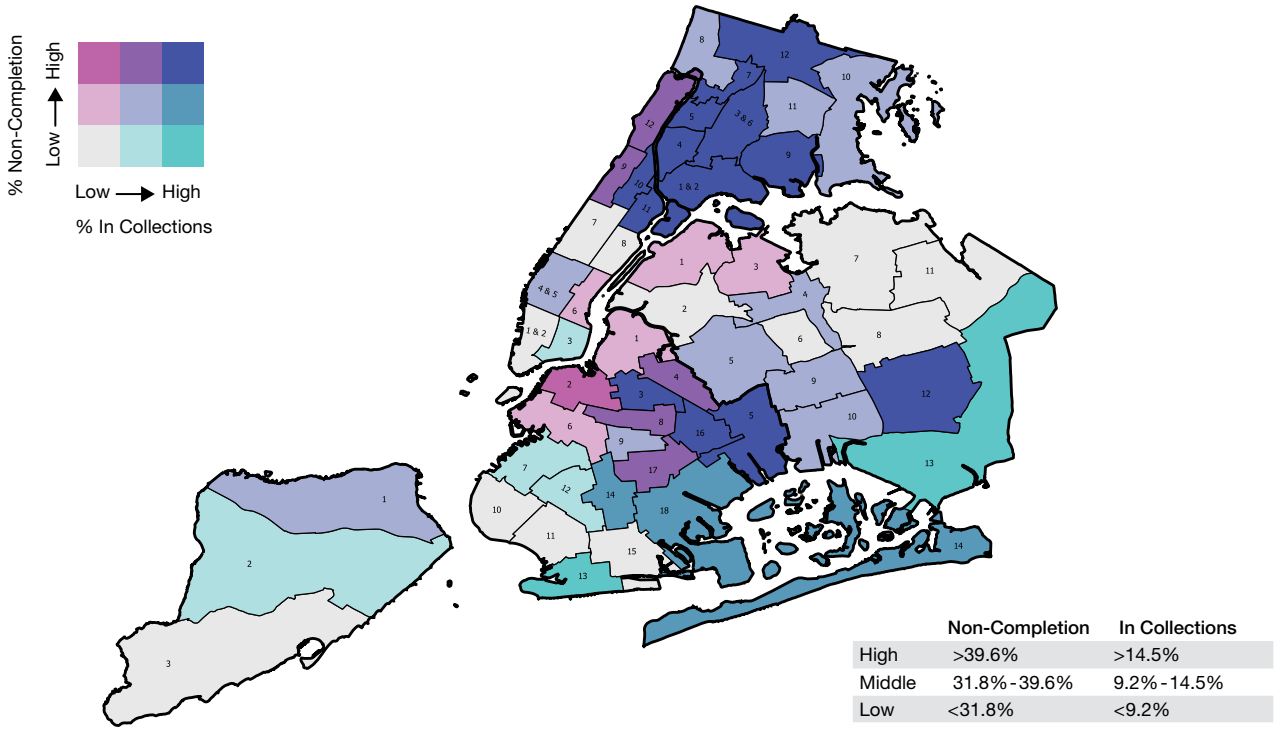
Through bivariate mapping, Figure 11 shows the relationship between non-completion and student loan debt in collections.[8] In this map, we are interested in identifying neighborhood areas with the highest rate of debt in collections and the highest rate of non-completion, indicated by the dark purple color located in the top right of the map key.

Across New York City neighborhood areas, we see some patterns emerge. Thirteen out of 18 of the neighborhood areas with the highest percent of student debt in collections were also among the neighborhood areas with the highest rates of non-completion:

- In the Bronx, we find the strongest associations between rates of non-completion and rates of student loan debt in collections, without any Bronx neighborhood area in the low non-completion or low debt in collections group. Neighborhood areas include:
    - Wakefield, Williamsbridge, and Woodlawn
    - Belmont, Crotona Park East, and East Tremont
    - Bedford Park, Fordham North, and Norwood
    - Morris Heights, Fordham South, and Mount Hope
    - Concourse, Highbridge, and Mount Eden
    - Castle Hill, Clason Point, and Parkchester
    - Hunts Point, Longwood, and Melrose

8 See Data and Methodology section for a full explanation of bivariate mapping.

Figure 11: Non-Completion and Student Loan Debt Holders in Collections, by Community District



	Non-Completion	In Collections
High	>39.6%	>14.5%
Middle	31.8%-39.6%	9.2%-14.5%
Low	<31.8%	<9.2%

Source: DCA analysis of National Student Clearinghouse Enrollment Data and Urban Institute Credit Panel Data

- In Brooklyn, we find high rates of both collections and non-completion in the three neighborhood areas that include:
  - Bedford-Stuyvesant
  - Brownsville and Ocean Hill
  - East New York and Starrett City
- In Manhattan, we see this same pattern in the two neighborhood areas that include East Harlem and Central Harlem.
- In Queens, only one neighborhood area matches this pattern—the neighborhood area that includes Jamaica, Hollis, and St. Albans.

While our data will not allow us to explain what is causing non-completion, we know from other research that students who are of color, attend school part time, attend for-profit institutions, work full time while studying, take time off after high school before pursuing higher education goals, have lower levels of academic preparedness, come from a low-income background, have parents with lower levels of education, are older, and/or have children of their own have higher rates of non-completion (Gladieux & Perna, 2005; Itzkowitz, 2018).

The Brooklyn Heights and Fort Greene neighborhood area has an opposite relationship than we would expect, with a high rate of non-completion and a low level of debt in collections. While we are unable

to explain this phenomena with certainty, we do know that the neighborhood area falls into the second highest quintile for household median income.[9] It is possible that neighborhood areas with higher income are more insulated against the negative financial consequences of non-completion.

Average Time to Completion and Enrollment Intensity

The average time to completion of a college degree has increased in recent years. College was once thought to be a two-year endeavor for an associate's degree and four years for a bachelor's degree. This assumption no longer holds as college access expands to students with a greater need for remedial education and those with diverse work and family responsibilities that lead to part-time studies or gaps in attendance, among other factors (Shapiro, Dundar & Wakhungu, 2016). In fact, it is now an industry standard across higher education to measure college completion at 150 percent of time. Therefore, completing an associate's degree is now measured at three years and a bachelor's degree at six years (ibid).

This extra time to graduate translates into higher student costs and, if the student is covering the extra tuition and room and board expenses with student loans, this translates into increasing levels of debt. Thus, as students exceed the standard two-year and four-year time frame, the likelihood of default has been shown to increase (Gross et al., 2010). In addition, the longer time to completion may also be related to academic challenges or non-continuous enrollments, both of which are also associated with higher rates of student loan default (ibid).

For New York City residents, the problem is exacerbated by the fact that the most generous New York State tuition assistance programs are geared toward full-time attendance and four-year degree completion (Higher Education Services Corporation). The Tuition Assistance Program (TAP) and the Excelsior Scholarship require full-time enrollment (with the exception of students with disabilities, who can use the Excelsior Scholarship for part-time attendance), and the part-time state-level tuition assistance options either offer lower tuition benefits or, as in the case of part-time TAP, require the student to have previously been a full-time student. Moreover, TAP grant funds are available for six semesters for those pursuing an associate's degree and eight semesters for those pursuing a bachelor's degree. This means that New Yorkers who take longer to complete their degrees are in danger of running out of needed funds (TAP Questions).

Figure 12 shows the average time it takes to earn a degree, by borough. The range is from 3.5 to 3.75 years across the boroughs for an associate's degree and 4.25 to 4.67 years for a bachelor's degree. If we translate this difference into semesters, that means that students in the borough with the longest average time to completion, the Bronx, are taking over half a semester longer to graduate with an associate's degree than the borough with the fastest time to completion, Brooklyn. The Bronx also has the longest time to completion for bachelor's degree earners, with residents taking slightly more than one semester longer than completers in Manhattan, the borough with the shortest time to completion for bachelor's degrees.

9 See section on median household income.

Figure 12: Average Time to Degree Completion, by Borough

Source: DCA analysis of National Student Clearinghouse Enrollment Data

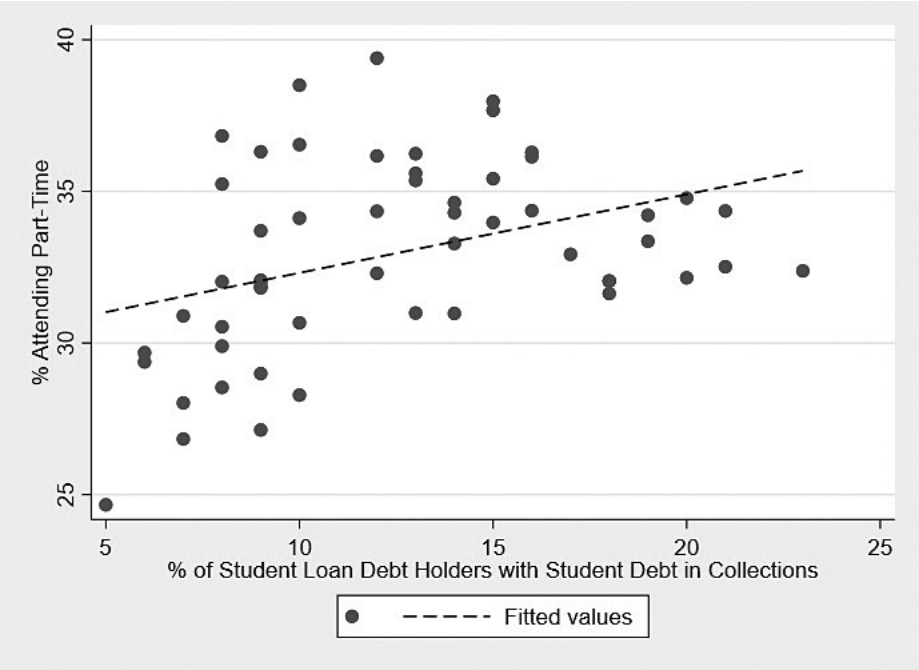
Perhaps more troubling is the difference in experience between those pursuing an associate's degree and those seeking a bachelor's degree. In New York City, students pursuing a bachelor's degree take, on average, nearly a year longer to complete their degree than their counterparts pursuing an associate's degree, even though an associate's degree can be completed in two years of full-time enrollment and bachelor's degrees typically require four years of full-time enrollment. The difference in credit hours required, typically 60 for an associate's degree versus 120 for a bachelor's degree, indicates this discrepancy should be closer to two years, when in reality it is taking almost as long to earn an associate's degree, on average, than it is to earn a bachelor's degree.

While identifying what is driving associate's degree students' disproportionately long completion times is beyond the scope of this paper, we wanted to draw notice to the results in Figure 12. The extended time taken by associate's degree earners for a less lucrative degree is troubling and indicates that the group of people who pursue associate's degrees have more obstacles than those who pursue bachelor's degrees.

Enrollment intensity (whether a student attends school full time or part time) is a factor that is highly related to longer completion times and increased risk of default, with students who attend part time taking more semesters to graduate and accumulating more debt in the process (Gross et al., 2010).

In Figure 13, we provide support for this relationship at the neighborhood area level. The scatterplot shows a positive relationship between the rate of students attending part time in the 2016/2017 school year against the rate of student loan debt in collections in 2016, which provides support for our including part-time attendance as an indicator of vulnerability to default.

Figure 13: Part-Time Status and Student Loan Debt in Collections



Source: DCA analysis of National Student Clearinghouse Enrollment Data and Urban Institute Credit Panel Data

Figure 14 shows the composition of enrollment intensity for postsecondary students at the borough level. The data shows that a majority of students, 67 percent, in the 2016/2017 school year were registered full time, with a third registered as part-time students. The variation across boroughs was not dramatic. The Bronx, Brooklyn, and Queens had a slightly higher rate of students attending part time than did Manhattan and Staten Island.

However, in Figure 15, we see a dramatic difference across boroughs when we consider how enrollment intensity relates to non-completion for our seven-year undergraduate cohort. Citywide, only one-third of first-time undergraduate students in 2010 who enrolled in a full-time course load for the majority of the semesters attended had not finished and were no longer enrolled seven years later compared to 43 percent for students who attended as part-time students the majority of the time.

In the Bronx, 50 percent of the majority part-time students had not completed their degree and were no longer enrolled compared to 39 percent for students who spent most semesters enrolled in a full-time course load. Thus, not only are part-time students taking longer to finish, they are also completing their degrees at a lower rate than their full-time counterparts.

Figure 14: Enrollment Intensity, by Borough – 2016/2017 Snapshot (All Enrolled)

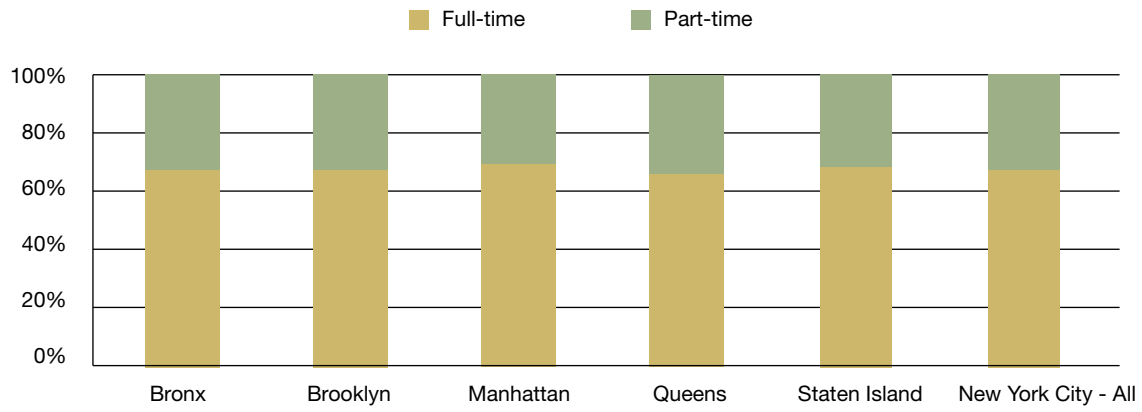
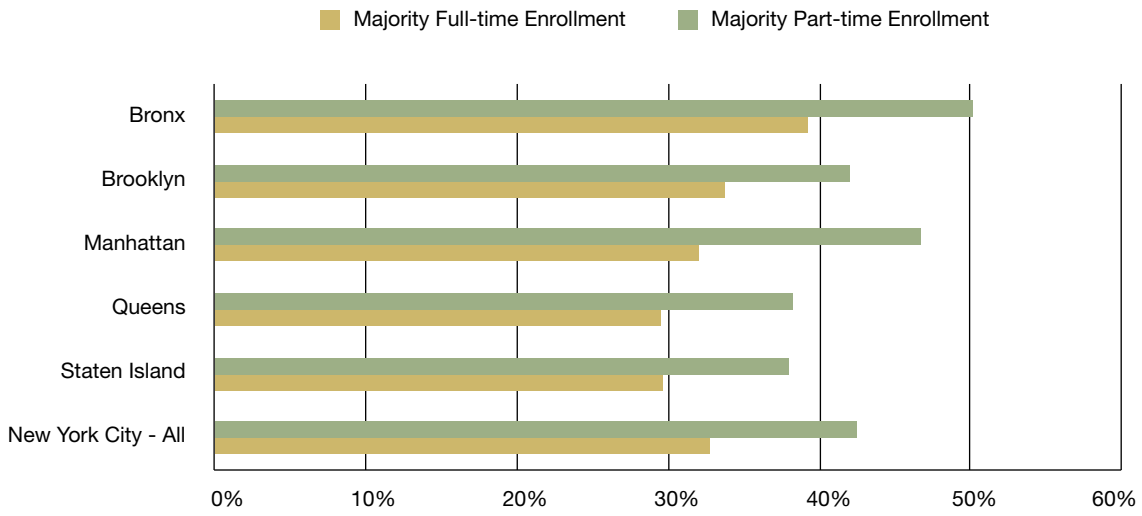


Figure 15: No Degree, No Longer Enrolled 7 Years after Initial Entry, by Majority Enrollment Intensity (First-time Undergraduates Only)



Source: DCA analysis of National Student Clearinghouse Enrollment Data

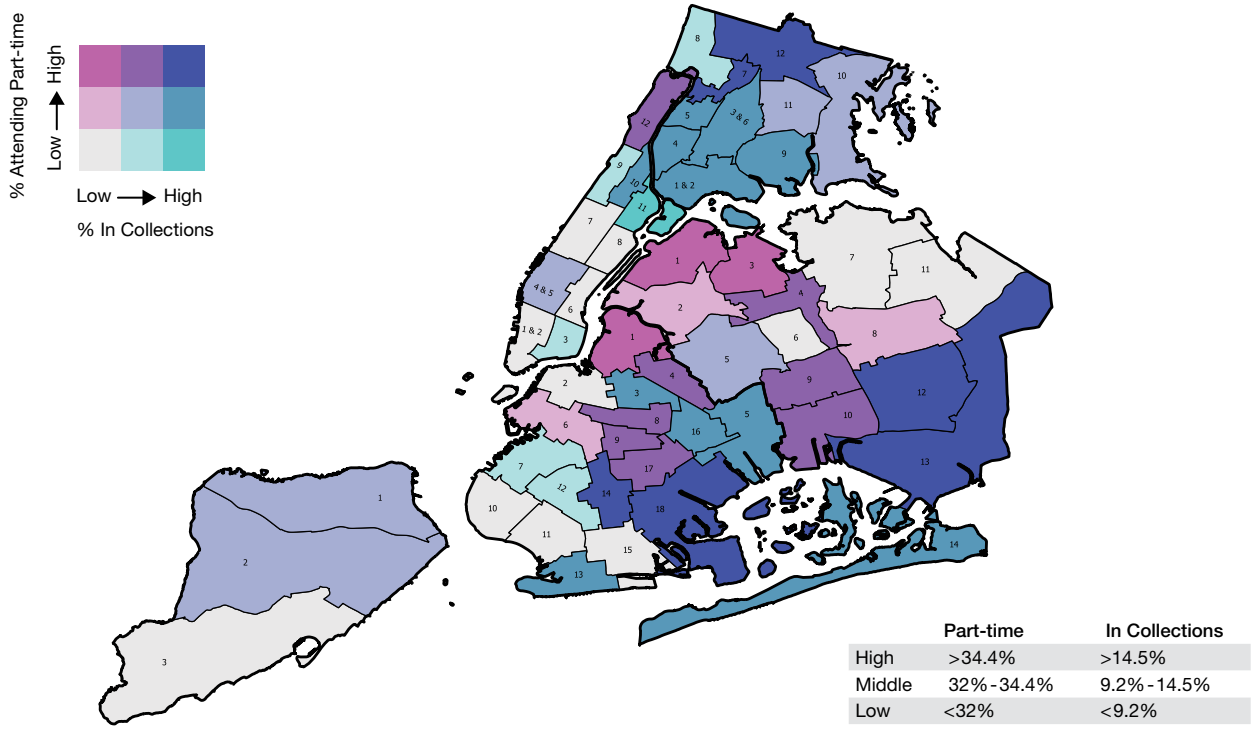
We found more variation once we drilled down to the neighborhood area level and matched collections rates with enrollment intensity. Figure 16 maps the relationship between the share of students attending part time and the rate of student loan debt in collections. In this map, we are interested in whether neighborhood areas with high rates of debt in collections also have a high rate of students attending part time, indicated by the dark purple color.

Our results show that six out of the 18 neighborhood areas with high rates of student loan debt in collections also had high rates of students attending part time during the 2016/2017 school year:

- Wakefield, Williamsbridge, and Woodlawn in the Bronx
- Bedford Park, Fordham North, and Norwood in the Bronx
- Flatbush and Midwood in Brooklyn
- Canarsie and Flatlands in Brooklyn
- Jamaica, Hollis, and St. Albans in Queens
- Queens Village, Cambria Heights, and Rosedale in Queens

We do find one neighborhood area in Brooklyn and two in Queens with both high rates of part-time attendance and a low rate of debt in collections, but these are neighborhood areas with high rates of higher educational attainment, thus the higher rate of part-time students may be driven up by a higher rate of graduate students studying part time.

Figure 16: Part-time Students and Debt in Collections, at the Neighborhood Area Level



	Part-time	In Collections
High	>34.4%	>14.5%
Middle	32%-34.4%	9.2%-14.5%
Low	<32%	<9.2%

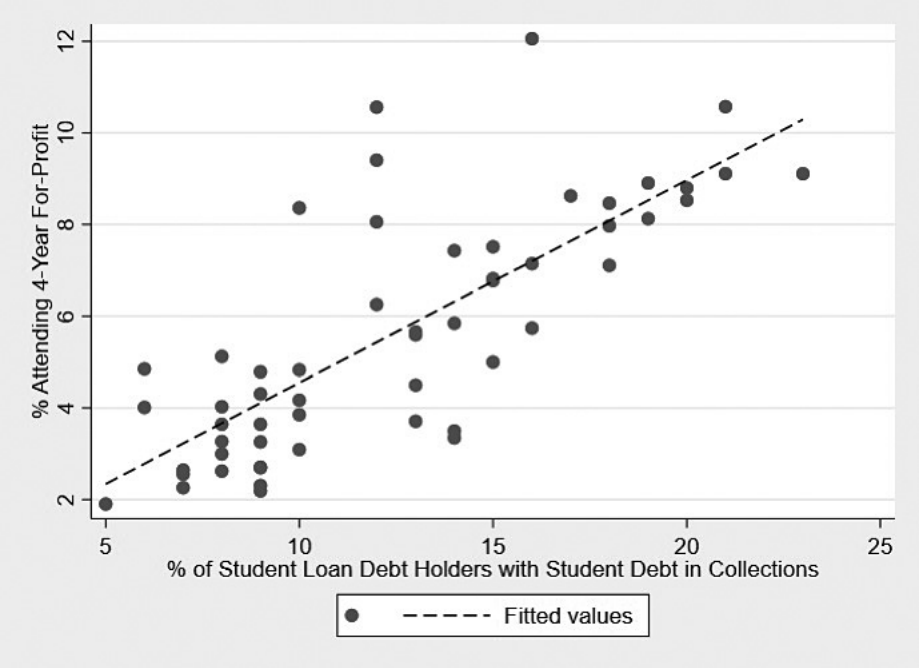
Source: DCA analysis of National Student Clearinghouse Enrollment Data and Urban Institute Credit Panel Data

Institution Type

The institution type attended—defined in this report as Nonprofit, Four-year Public, Two-year Public, and For-profit[10]—has been shown to be related to student loan default rates, with for-profit and two-year public institutions showing higher rates of default among borrowers than four-year public and nonprofit institutions.

Figure 17 shows that as the percentage of postsecondary students in the neighborhood area attending for-profit school types in 2016/2017 school year increases, so does the neighborhood area rate of student loan borrowers with debt in collections in 2016.

Figure 17: For-Profit Attendance by Student Loan Holders in Collections, at the Neighborhood Area Level

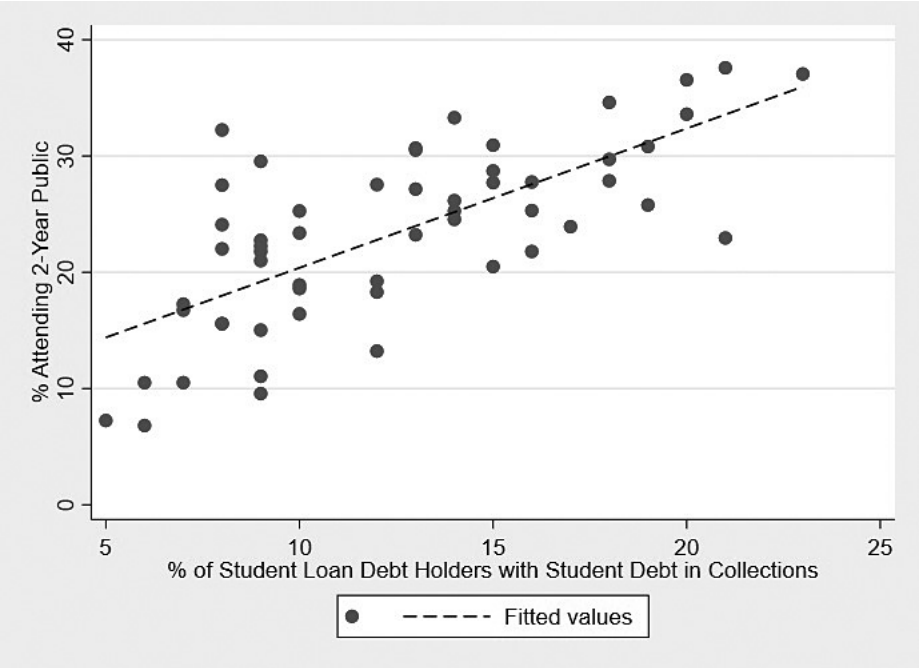


Source: DCA analysis of National Student Clearinghouse Enrollment Data and Urban Institute Credit Panel Data

Figure 18 shows a similar, yet weaker relationship between the neighborhood area rate of students who attended a two-year public institution in the 2016/2017 school year and the rate of student loan debt holders in collections. It should be noted that two-year public institutions tend to be among the most affordable higher education options available. For this reason, borrowing rates among students of two-year public institutions tend to be lower than at other school types (Fain, 2015), implying that students who do borrow to support their studies at a two-year public institution are likely among the most financially disadvantaged.

10 See data descriptions in Appendix A.

Figure 18: 2-Year Public Attendance by Student Loan Holders in Collections, at the Neighborhood Area Level



Source: DCA analysis of National Student Clearinghouse Enrollment Data and Urban Institute Credit Panel Data

While this pattern is persistent in descriptive studies, the relationship between institution type and default weakens once more sophisticated statistical methods that control for student characteristics, borrowing patterns, and the resources of the institutions are used (Gross et al., 2010). These school types (For-profit and Two-year Public Institutions) are less selective and accept students who are less academically prepared—both factors related to a higher likelihood of default.

For students attending two-year public schools, non-selectivity provides an affordable means of narrowing the education gap of students who stumbled during their primary and secondary education experience or for those who seek to save money on their first two years of college. Access to affordable two-year public institutions is a necessary ingredient for social mobility.

For students who attend costlier for-profit institutions, the same cannot be said.

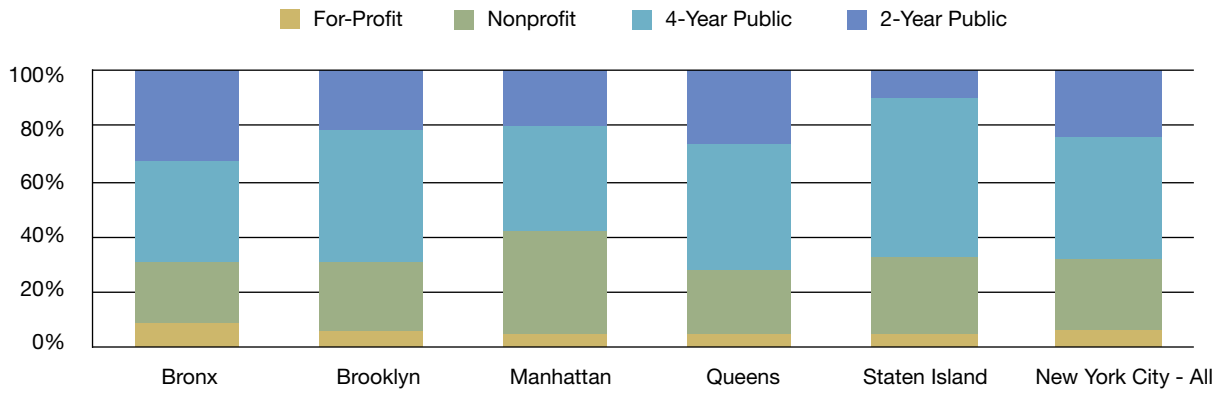
For-profit institutions are profit-making entities; thus, tuition dollars are diverted to shareholders, marketing and recruitment efforts, among other non-instruction-related costs. For-profit institutions have drawn considerable negative attention recently, with reports highlighting their high tuition costs (Mattes, 2017) and low levels of spending on instruction.[11] High-profile losses of accreditation and subsequent closures have also left many students holding debt for a degree that they are no longer able to complete or that is not recognized by employers or other higher education institutions (CFPB, 2014; Lewin, 2015; Brickley, 2018). For these reasons, we have included attendance at a for-profit institution as one of our indicators of vulnerability to default.

11 A 2018 Century Foundation report found that in 2015 for-profit schools in New York State were only spending $0.41 on instruction for every $1 they were collecting in tuition. For comparison, nonprofit schools spend more than double that amount on instruction costs. (See Cao, 2018)

Across New York City boroughs, we saw divergent enrollment patterns among postsecondary students. In the 2016-2017 school year, approximately 43 percent of New York City residents enrolled in postsecondary education attended a four-year public institution, followed by 26 percent at a nonprofit, 24 percent at a two-year public institution, and 7 percent at a for-profit institution, as shown in Figure 19.

We found higher rates of postsecondary students enrolled in for-profit and two-year institutions in the Bronx and the lowest rates of both enrollment patterns in Staten Island. In fact, Staten Island has the highest rate of postsecondary students enrolled in public four-year institutions, and Manhattan has the highest rate of nonprofit institution attendance, both enrollment types indicative of lower default rates. Indeed, these two boroughs have the lowest rates of collections among student loan borrowers.

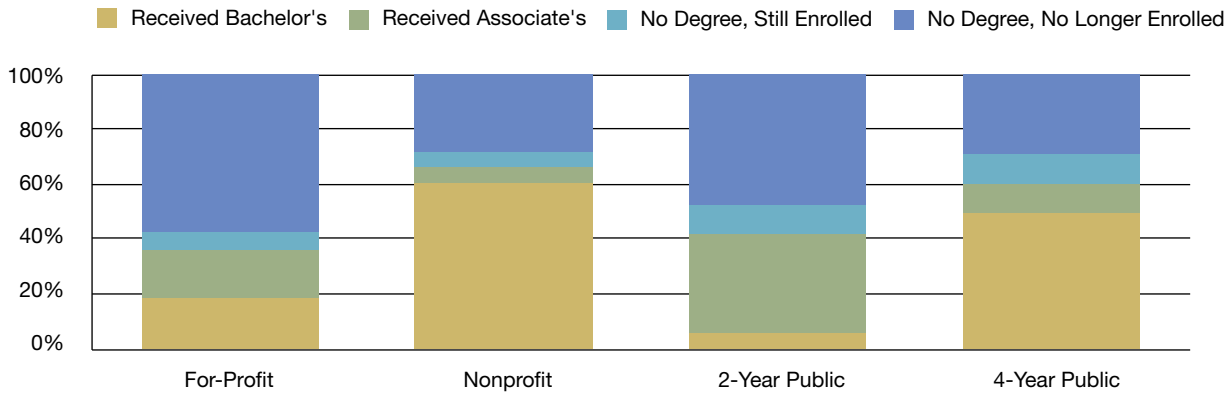
Figure 19: Enrollment Institution Type, by Borough



Source: DCA analysis of National Student Clearinghouse Enrollment Data

One of the greatest causes for concern regarding schools with less selective admissions standards is that these schools have lower graduation rates than their more selective counterparts. For New York City students starting in the 2010 school year, of those who started at a nonprofit or four-year public institution, 61 and 66 percent, respectively, had received a degree within seven years. See Figure 20. Of those who started at a two-year public institution, 42 percent had earned at least a bachelor's or associate's degree within seven years' time. However, for those who started at a for-profit institution in 2010, only 36 percent attained a degree after seven years. That is to say, not only are for-profit schools more expensive, students who attend them have significantly lower completion rates.

Figure 20: Highest Degree Attained 7 Years after First Semester, by Institution Type Attended



Source: DCA analysis of National Student Clearinghouse Enrollment Data

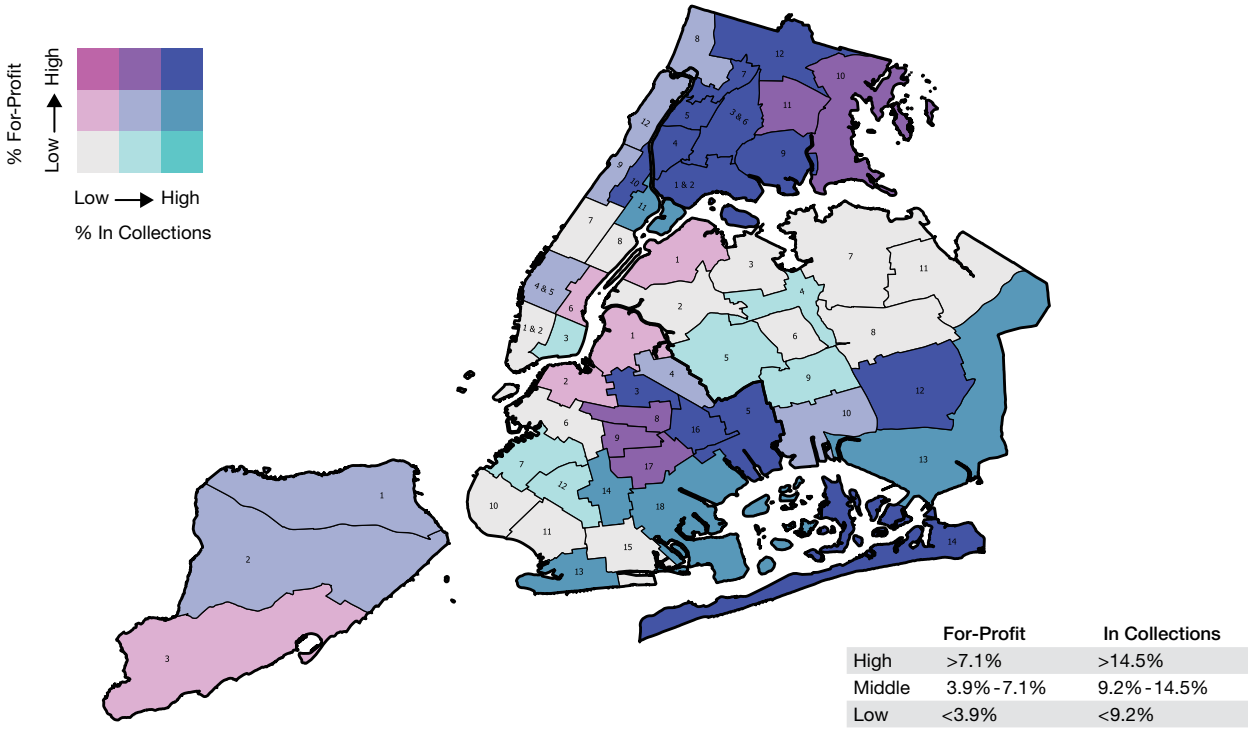
In Figure 21, we show a bivariate map relating the concentration of students attending for-profit institutions and the percentage of student loan borrowers with debt in collections.[12] For this map, the darkest shade of purple indicates a neighborhood area that is both in the highest tercile for debt in collections and the highest tercile for attendance at for-profit institutions.

Thirteen out of the 18 New York City neighborhood areas with high rates of collections also had high rates of students attending for-profit institutions.

- In the Bronx, seven out of 10 neighborhood areas had both high rates of postsecondary students attending a for-profit institution, as well as the highest levels of student loan borrowers with debt in collections; they include:
  - Belmont, Crotona Park East, and East Tremont
  - Bedford Park, Fordham North, and Norwood
  - Morris Heights, Fordham South, and Mount Hope
  - Concourse, Highbridge, and Mount Eden
  - Castle Hill, Clason Point, and Parkchester
  - Hunts Point, Longwood, and Melrose
  - Wakefield, Williamsbridge, and Woodlawn
- In Brooklyn, we find three neighborhood areas with both high levels of for-profit attendance and high levels of student loan debt in collections; they include:
  - Bedford-Stuyvesant
  - Brownsville and Ocean Hill
  - East New York and Starrett City
- In Queens, we find two neighborhood areas with high levels of both for-profit attendance and student loan debt in collections; they include:
  - Jamaica, Hollis, and St. Albans
  - Far Rockaway, Breezy Point, and Broad Channel

12 Refer to Data and Methodology section for full description of maps.

Figure 21: Percent of Postsecondary Students Attending 4-year For-Profit Institution, by Neighborhood Area



	For-Profit	In Collections
High	>7.1%	>14.5%
Middle	3.9%-7.1%	9.2%-14.5%
Low	<3.9%	<9.2%

Source: DCA analysis of National Student Clearinghouse Enrollment Data and Urban Institute Credit Panel Data

- In Manhattan, Central Harlem was the only neighborhood area exhibiting both high student loan debt in collections and high for-profit attendance.

A 2018 report by the research institute Third Way showed that even students who completed a degree at a for-profit degree-granting institution had a lower five-year repayment rate than students who started but did not complete a degree at a public or nonprofit institution (Itzkowitz, 2018). While the authors noted that this may be attributable to the difference in typical degree granted from these institutions—for-profit institutions primarily focus on certificate programs versus nonprofit and public institutions which award more bachelor's degrees—it is nevertheless alarming that even five years after their loans went into repayment, more than half, 58 percent, of students who completed a program at a for-profit institution in 2008-2009 were unable to reduce their student loan (ibid).

Independent Students – Age as a Proxy

The composition of postsecondary students has changed over time, with over half of college students now considered to be independent students. Formerly called "non-traditional" students, independent students are defined in the Free Application for Federal Student Aid (FAFSA) as satisfying one or more of the following criteria (IWPR 2018):

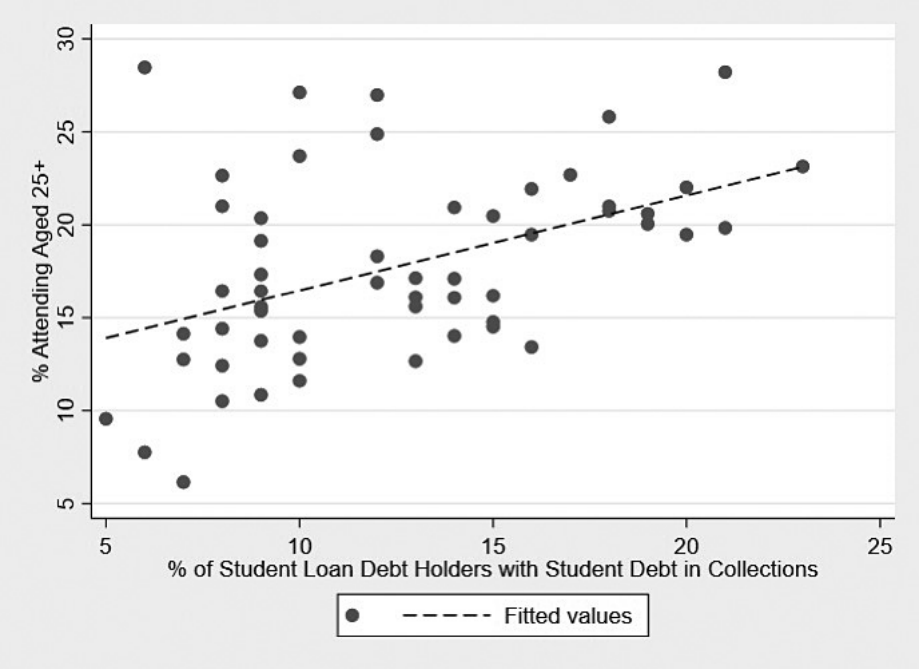
- graduate or professional student;
- have legal dependents;
- married;

- aged 24 or older;
- veteran;
- active duty military;
- foster child or ward of the court;
- emancipated, homeless, or at risk of homelessness.

Research has indicated the increase in "non-traditional" students, referred to in this report as independent students, along with the change in quality of the institutions they attend, and the relative lack of wage growth in the labor market are three factors that have combined to contribute to the overall rise in student loan default (Looney & Yannelis, 2015). Approximately 86 percent of independent students are over the age of 23 (IWPR 2018), so in this section we will use age as a proxy for independent students.[13]

Adding to the body of evidence around the vulnerability to student loan distress of independent students, in Figure 22, we show the relationship between the share of undergraduate students 25 years old and older in New York City at the neighborhood area level and the rate of student loan holders in collections. We found that as the share of students aged 25 and older increased, so did the neighborhood area rate of student loan borrowers with debt in collections. We included age, as a proxy for independent student status, as one of our indicators of vulnerability to default.

Figure 22: Students Aged 25 Years and Older by Student Loan Debt in Collections, at the Neighborhood Area Level



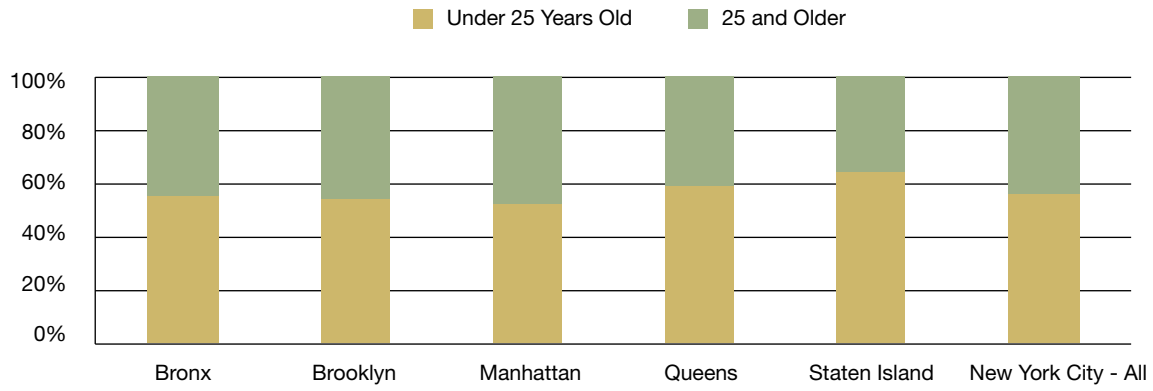
Source: DCA analysis of National Student Clearinghouse Enrollment Data and Urban Institute Credit Panel Data

13 Due to data limitations, we will use postsecondary students who start college aged 25 or older as a proxy for independent status.

What separates independent students from dependent students is that they are older on average, are more likely to be female, more likely to be persons of color, and live in poverty at higher rates (IWPR 2018). Independent students are also 70 percent less likely to have finished a degree or certificate program six years after initial enrollment (ibid). Some of the potential reasons independent students have a harder time achieving on-time completion are that they often have family or work obligations competing with their studies, and they are less likely to have the financial resources to support them on their path to graduation (ibid). Older independent students may also have experienced a significant gap between graduating high school and pursuing higher education, potentially leaving them less prepared than their dependent counterparts.

While the majority of New York City college and graduate students in the 2016/2017 school year were under 25 years old, about 43 percent of higher education students were aged 25 and older. As seen in Figure 23, some divergent patterns exist across the boroughs, with a higher rate of students below the age of 25 in Staten Island (about 64 percent) and a higher-than-average rate of students aged 25 and older in Manhattan (about 48 percent).

Figure 23: Age Composition of Postsecondary Students – 2016/2017 Snapshot (All Enrolled)



Source: DCA analysis of National Student Clearinghouse Enrollment Data

When considering the cohort of first-time undergraduate students beginning in the 2010/2011 academic year, referred to as the seven-year cohort throughout the report, we see that older students make up a smaller share of the student body. See Figure 24. In New York City, 17 percent of the seven-year cohort was over the age of 25 in 2010 when they began their studies. The composition ranged quite a bit across boroughs, with a low of 11 percent in Staten Island and a high of 20 percent in the Bronx.

Figure 24: Age Composition of Postsecondary Students – Seven-Year Cohort (First-time Undergraduates Only)

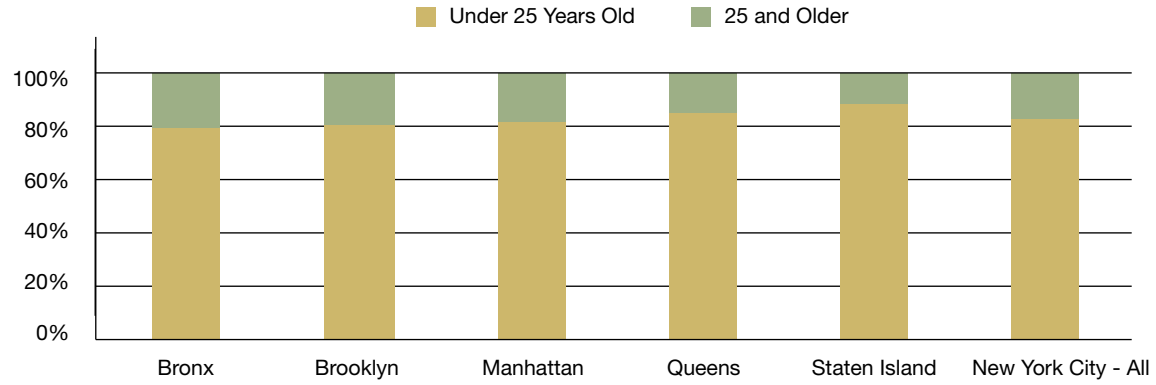


Figure 25: Degree Non-Completion, by Borough and Age – Seven-Year Cohort (First-time Undergraduates Only)

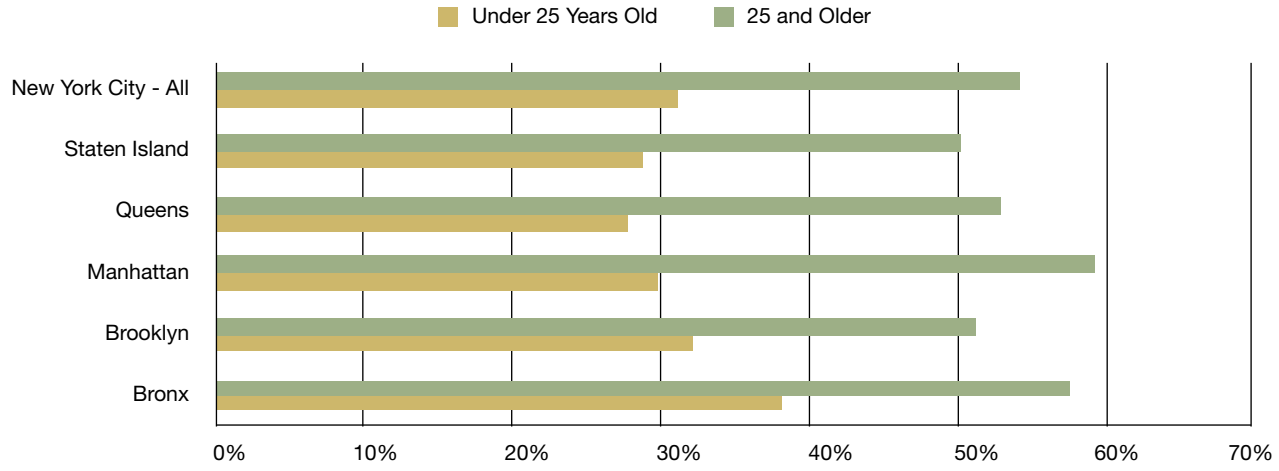
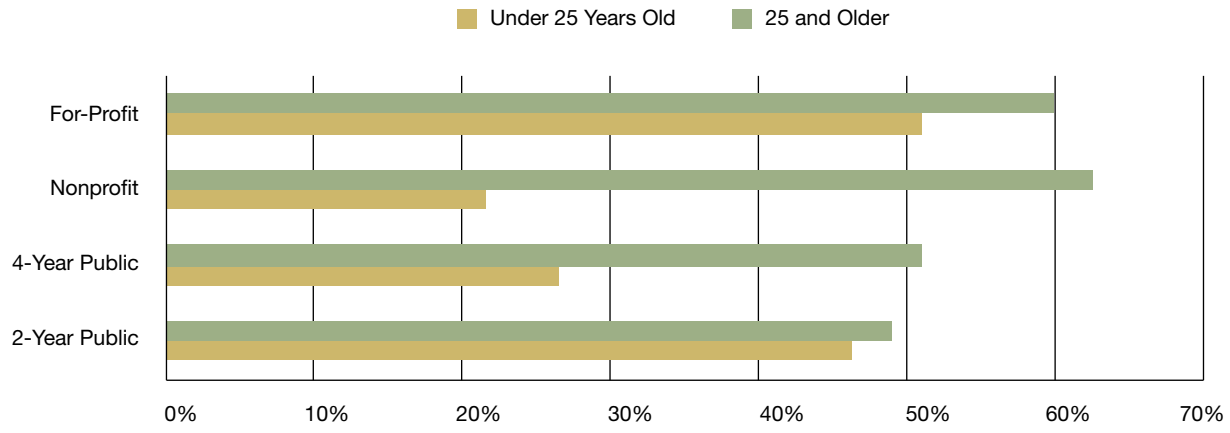


Figure 26: Degree Non-Completion, by Sector and Age – Seven-Year Cohort (First-time Undergraduates Only)



Source: DCA analysis of National Student Clearinghouse Enrollment Data

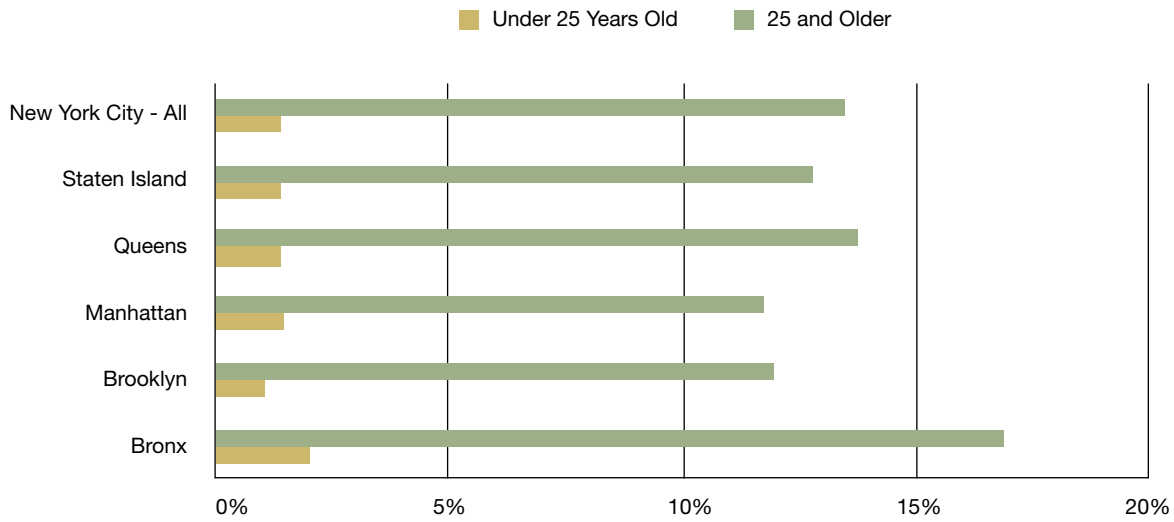
As previously mentioned, non-completion is one of the strongest predictors of student loan default. Research has shown that independent students have a harder time completing their degrees (IWPR 2018). To delve further into the problem of non-completion, in Figure 25, we present the non-completion rates for the boroughs, by age group. The gap between non-completion rates for dependent versus independent students is dramatic. Just over 31 percent of students under the age of 25 when they began coursework in 2010 had no degree and were no longer enrolled seven years later compared to 54 percent for students 25 and older. The Bronx and Manhattan had higher-than-average non-completion rates for the older age group, 58 and 59 percent, respectively.

In Figure 26, we compared the non-completion rates by institution for our two age groups. Unsurprisingly, we found students at four-year public and nonprofit institutions had lower levels of non-completion for the under 25 age group (26 and 22 percent, respectively) compared to 51 and 46 percent, respectively, for for-profit and two-year public institutions. Surprisingly, for the oldest age group, we found the highest non-completion rates at nonprofit institutions (63 percent), followed, less surprisingly, by for-profit institutions (60 percent). For both two-year and four-year public institutions, non-completion rates were 49 and 51 percent, respectively.

Our results provide some indication that four-year nonprofit schools are less adapted to the needs of the older independent student and that for-profit institutions are underserving the demographic they target: older and independent students.

For-profit schools are an option for students in need of a more flexible alternative to traditional four-year programs. However, these schools come at a higher price and with lower average completion rates, as shown in Figure 26 for older students. Figure 27 shows the percentage of students attending a for-profit school by age group. While citywide only 6 percent of students attend a for-profit institution, 13 percent of first-time undergraduate students aged 25 and older attended a for-profit school in 2010, compared to only 1 percent for students under 25 years old. In the Bronx, the rate of students 25 and older attending a for-profit school jumps to 17 percent.

Figure 27: Students Enrolled in 4-Year For-Profit, by Age Group – Seven-Year Cohort (First-time Undergraduates Only)



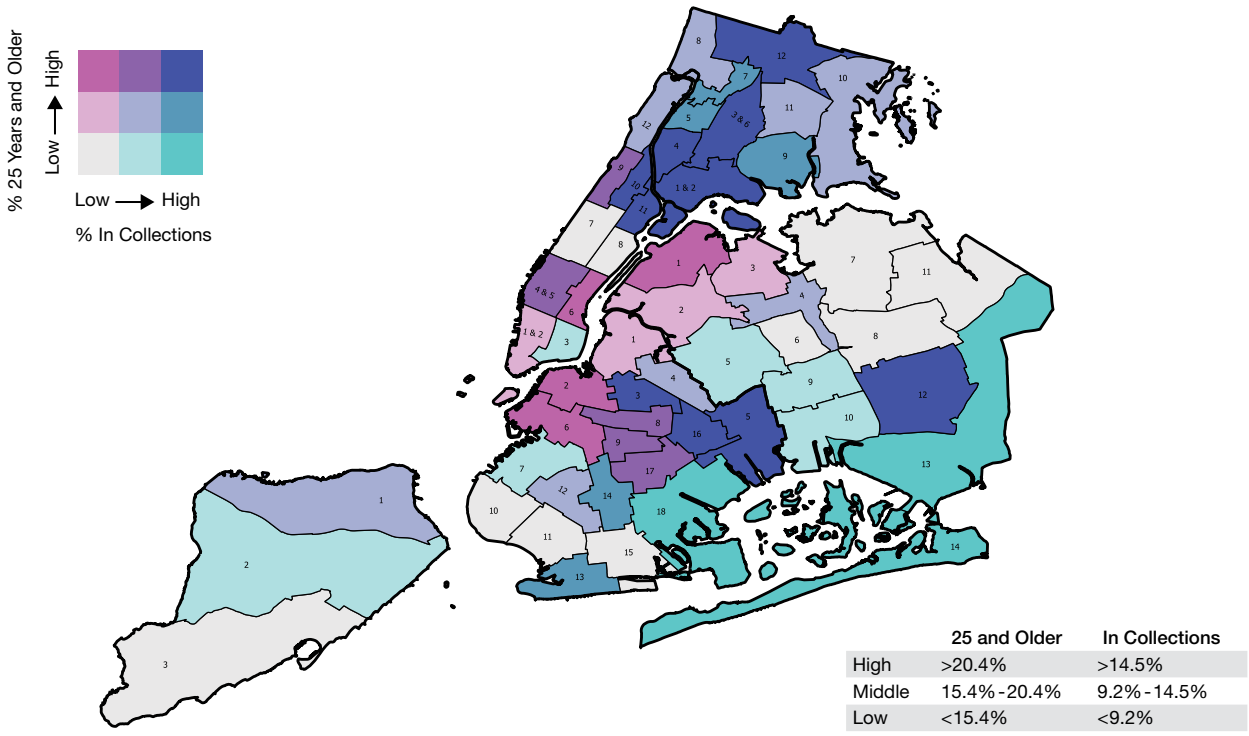
Source: DCA analysis of National Student Clearinghouse Enrollment Data

The pattern may prove even more complicated if we were able to dig deeper and disaggregate the independent student category. A recent report by the Institute for Women's Policy Research found that, nationally, students with child dependents are more likely than their independent counterparts without children to attend a for-profit institution, about 25 percent compared to 15 percent (IWPR 2018).

To show the relationship between independent students and debt in collections at the neighborhood area level, we created a bivariate map of New York City neighborhood areas, shown in Figure 28. Neighborhood areas with both high rates of student loan debt holders in collections and high rates of independent students are indicated by the dark purple color; 10 out of the 18 high collections neighborhoods met this condition:

- The Bronx showed the strongest relationship between share of older students and student loan debt in collections, in particular the four neighborhood areas that include:
  - Wakefield, Williamsbridge, and Woodlawn
  - Belmont, Crotona Park East, and East Tremont
  - Concourse, Highbridge, and Mount Eden
  - Hunts Point, Longwood, and Melrose
- We also found high rates of older students and high rates of student loan debt holders in collections in the two Manhattan neighborhood areas that comprise East Harlem and Central Harlem.

Figure 28: Independent Students and Debt in Collections, by Neighborhood Area



	25 and Older	In Collections
High	>20.4%	>14.5%
Middle	15.4% - 20.4%	9.2% - 14.5%
Low	<15.4%	<9.2%

Source: DCA analysis of National Student Clearinghouse Enrollment Data and Urban Institute Credit Panel Data

- The same three neighborhood areas in Brooklyn are experiencing high rates of independent students and high rates of student loan debt in collections; they include:
    - Bedford-Stuyvesant
    - Brownsville and Ocean Hill
    - East New York and Starrett City
- The Queens neighborhood area consisting of the Jamaica, Hollis, and St. Albans neighborhoods once again appeared to exhibit a problematic pattern.

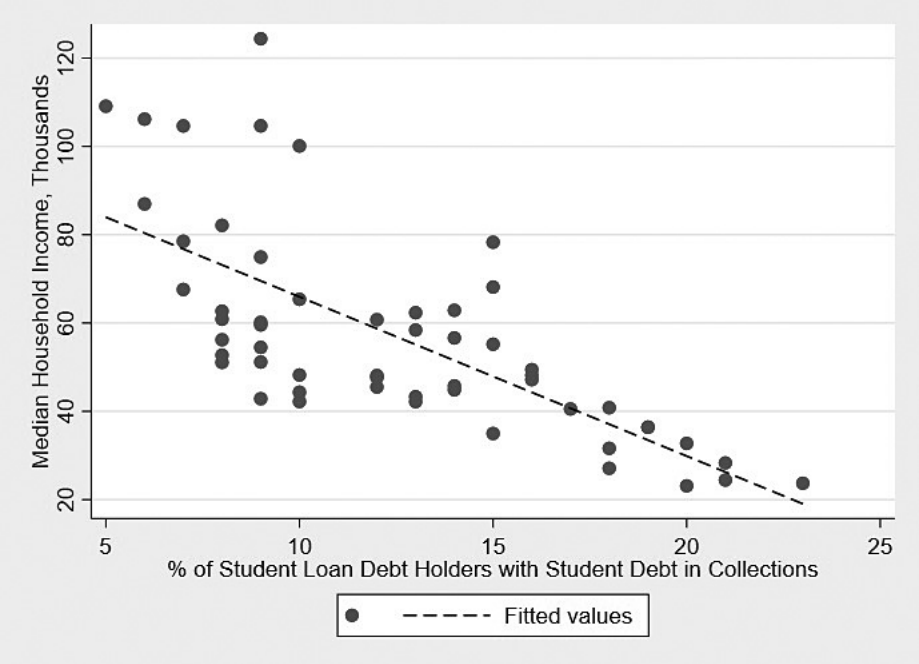
Four neighborhood areas—one in Manhattan, two in Brooklyn, and one in Queens—had high rates of independent students and low rates of student loan debt in collections. All these neighborhood areas fall in the middle- to high-income range perhaps indicating how higher income can protect against the vulnerabilities of being an independent student.

Income

Parental income is also a predictor of student loan default (Gross et al., 2010). Students who come from families with low incomes borrow more (ibid) and do not receive as much of a wage premium for higher education as their peers from high-income families (Hershbein, 2016).

At the New York City neighborhood area level, we find support for this relationship, as seen in Figure 29. Plotting median neighborhood area income—our proxy for family income—against the rate of student loan borrowers with debt in collections, we find a negative relationship. As neighborhood area median income increases, the rate of student loan borrowers with debt in collections decreases. Thus, we added low income as one of our predictors of vulnerability to student loan default.

Figure 29: Median Income by Student Loan Debt in Collections, at Neighborhood Area Level



Source: DCA analysis of American Community Survey 5-Year Estimates and Urban Institute Credit Panel Data

As described, non-completion is one of the biggest drivers of student loan default, and research has shown that students with lower incomes have a harder time completing their degrees (Pell Institute for the Study of Opportunity in Higher Education of the Council for Opportunity in Education (COE) and the Alliance for Higher Education and Democracy at the University of Pennsylvania (PennAHEAD), 2018). Thus, we decided to look at our data to see if this pattern persists in New York City.

The data shows that students who live in neighborhood areas with lower incomes have lower rates of completion than students who live in neighborhood areas with higher incomes. In fact, Figure 30 shows a higher percentage of students living in neighborhood areas in the highest median income quintile in the seven-year cohort had received a bachelor's degree within seven years of initial attendance than students in the lowest quintile had received bachelor's and associate's degrees combined, 58 percent compared to 48 percent. This pattern indicates an inequality in student loan debt distress along class lines, as non-completion is one of the strongest predictors of default.

Figure 30: Highest Degree Attained 7 Years after First Semester, by Income Quintile

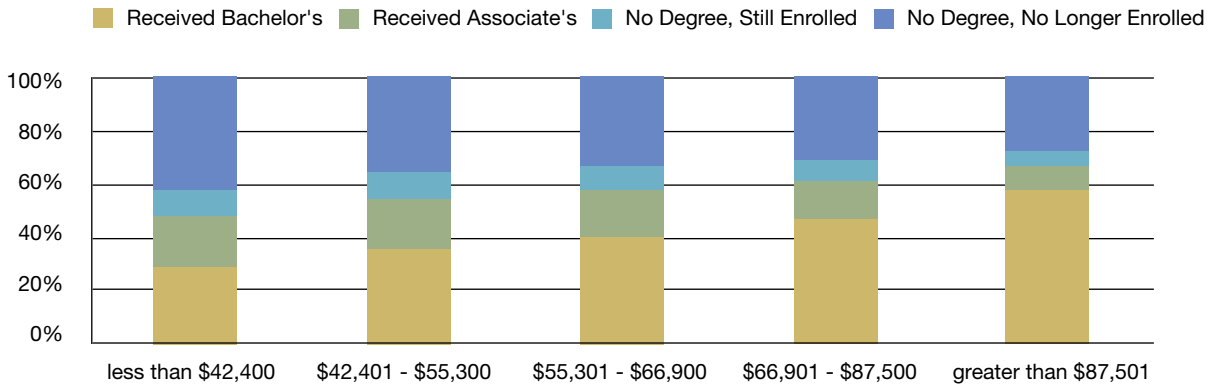
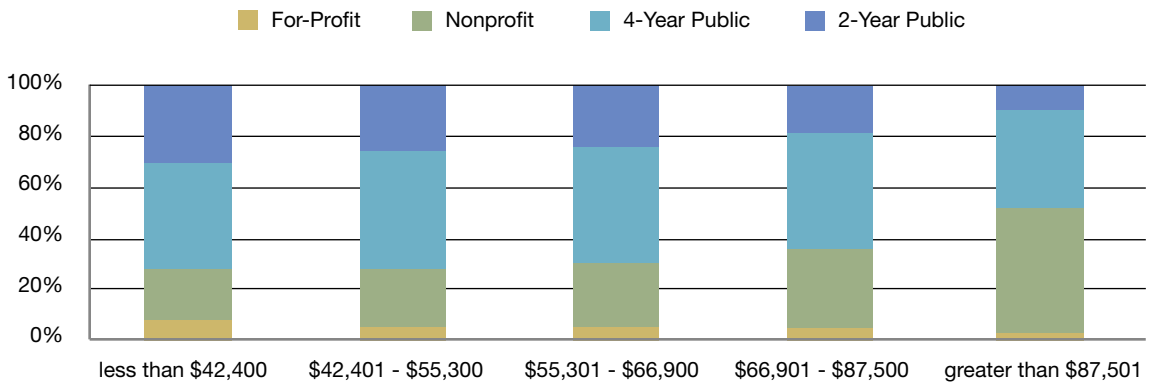


Figure 31: Sector Composition, by Income Quintiles



Source: DCA analysis of National Student Clearinghouse Enrollment Data and American Community Survey 5-Year Estimates

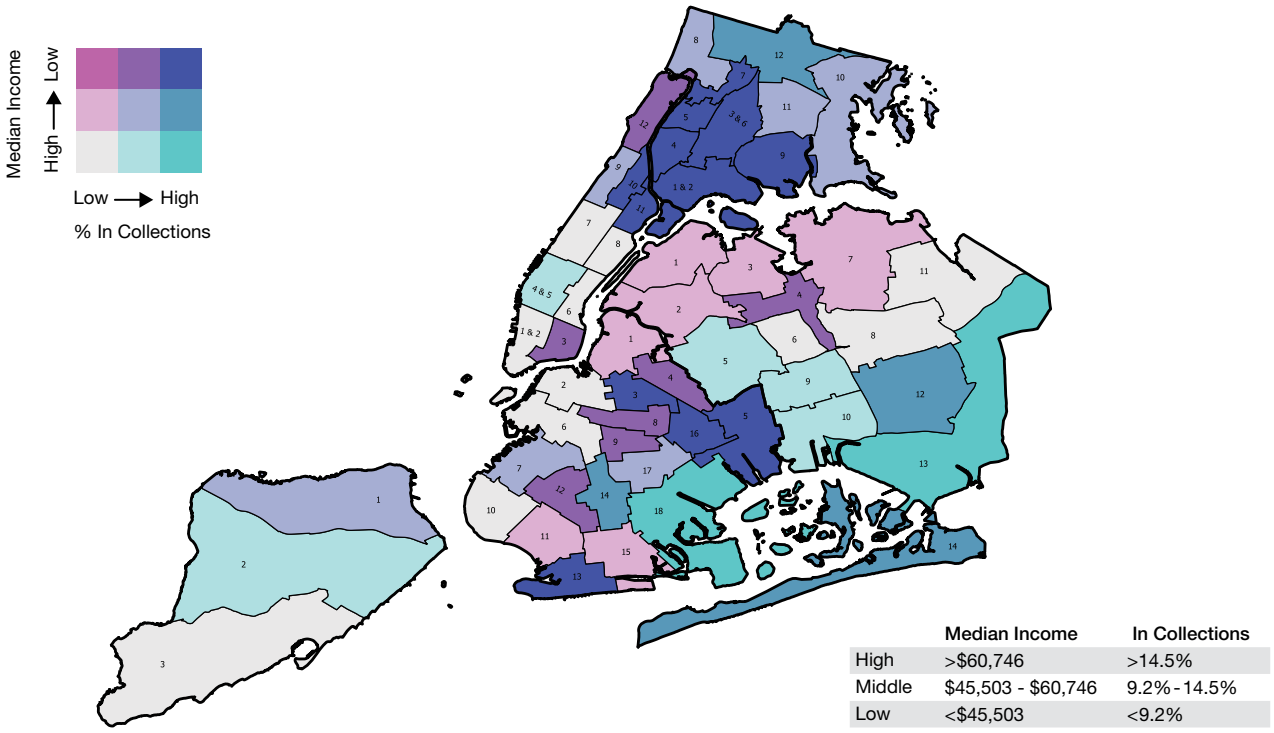
We were also interested in equality of access to institution types. As we showed when we discussed less selective schools, students who attend both for-profit and two-year public schools have a harder time when it comes to paying back their loans. We were not surprised to learn that the pattern of institutions attended varied by income level, as well. Figure 31 shows that students in neighborhood areas with lower incomes were more likely to attend less selective schools than their upper quintile counterparts. Approximately 38 percent of students in the lowest-income quintile neighborhood areas attended a two-year public school or for-profit institution, compared to just 13 percent of students living in the highest-income quintile neighborhood area—a threefold difference. Our results speak to an inequality in school access along class lines, as less selective schools are associated with lower completion rates and higher rates of default.

To show the relationship between median neighborhood area income and debt in collections at the neighborhood area level, we created a bivariate map of New York City neighborhood areas, as shown in Figure 32. The problematic combination in Figure 32 of low neighborhood area median income and high debt in collections is shaded dark purple with 12 out of the 18 high collections neighborhood areas meeting these criteria. Once again, the map repeats patterns seen previously.

- In the Bronx, we find six out of 10 neighborhood areas matching this pattern; they include:
    - Belmont, Crotona Park East, and East Tremont
    - Bedford Park, Fordham North, and Norwood
    - Morris Heights, Fordham South, and Mount Hope
    - Concourse, Highbridge, and Mount Eden
    - Castle Hill, Clason Point, and Parkchester
    - Hunts Point, Longwood, and Melrose
- In Manhattan, we find problems with student loan debt in collections in the neighborhood areas of East and Central Harlem.
- In the same three neighborhood areas in Brooklyn, we find both low incomes and high debt in collections; they include:
    - Bedford-Stuyvesant
    - Brownsville and Ocean Hill
    - East New York and Starrett City
- We also found the issue of low median income and high debt in collections in the neighborhood area that includes Brighton Beach and Coney Island.

Surprisingly, we found two neighborhood areas in the top tercile of income also in the top tercile of debt in collections: Canarsie and Flatlands in Brooklyn; and Queens Village, Cambria Heights, and Rosedale in Queens. These two neighborhood areas only scored in the top tercile for two other indicators discussed in this report—they were both in the top tercile for black residents' composition of the neighborhood area and for rate of students attending school part time. See Appendix B.

Figure 32: Median Income, by Debt in Collections



	Median Income	In Collections
High	>$60,746	>14.5%
Middle	$45,503 - $60,746	9.2% - 14.5%
Low	<$45,503	<9.2%

Source: DCA analysis of American Community Survey 5-Year Estimates and Urban Institute Credit Panel Data

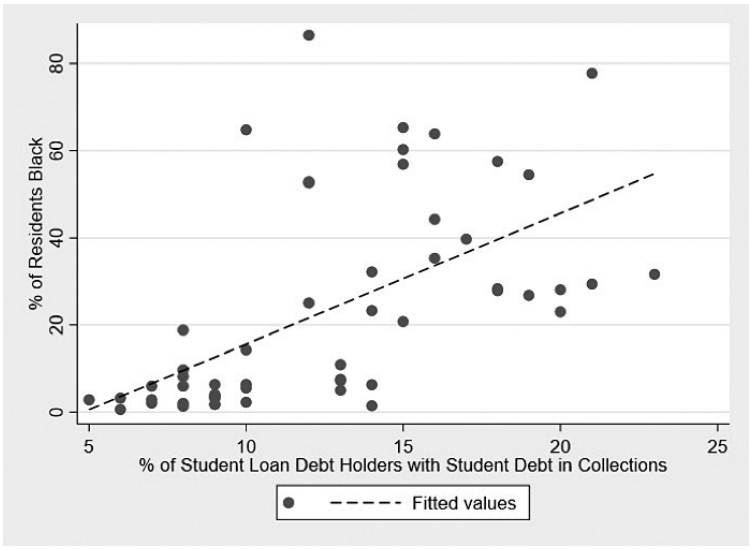
Race and Ethnicity

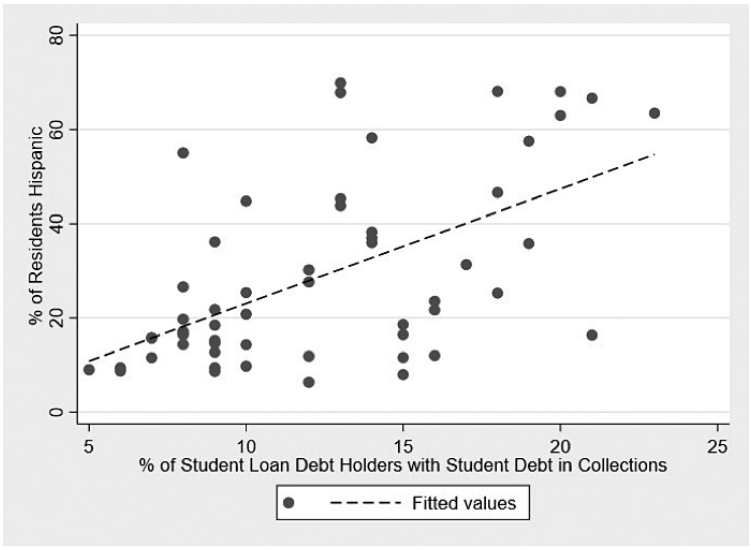
Distress among student loan borrowers is particularly acute among black and Hispanic borrowers. Hispanic borrowers have a four-year default rate that is twice as high as white borrowers, and for black borrowers the default rate is over three times as high as for white borrowers (Scott-Clayton and Li, 2016). Even controlling for student background and institutional characteristics, black students default on their student loans at a higher rate than their white counterparts (Gross et al., 2010), and borrow at a higher rate (Addo, Houle & Simon, 2016).

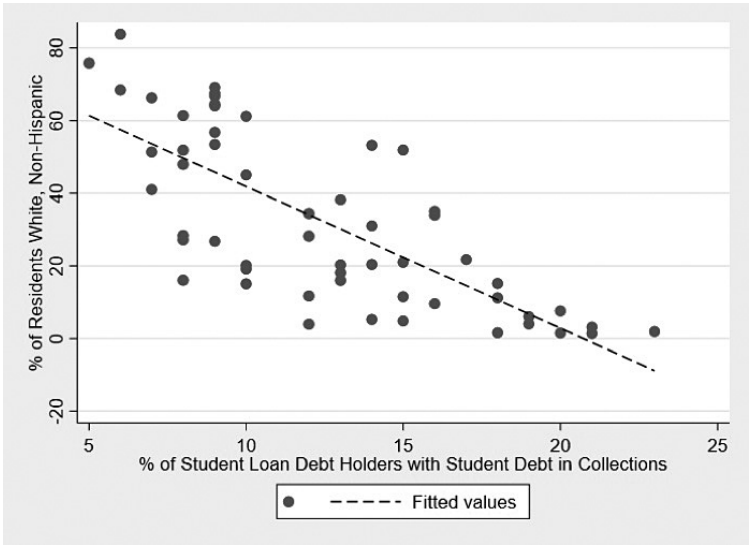
Using the percent of the neighborhood area that is black, white, or Hispanic as a proxy for race of students, we see some disturbing patterns when we plot it against student loan debt in collections, as shown in Figure 33. As a neighborhood area's composition of black residents increases, so does the percent of student loan holders in collections. The same can be said of Hispanic residents. The opposite pattern emerges when we plot percent of white residents against percent of student loan debt holders in collections, suggesting a negative relationship. Thus, we included having high rates of black and Hispanic residents in students' neighborhood area of residence—a proxy for students' black or Hispanic race/ethnicity—as an indicator of vulnerability to student loan default.

A recent Brookings report focusing on national data found that the default rate after 12 years of initial enrollment was an astonishing 48 percent for black, non-Hispanic borrowers, compared to 20 percent for their white, non-Hispanic counterparts (Scott-Clayton, 2018a).

Figure 33: Race and Ethnicity and Student Loan Debt in Collections, at the Neighborhood Area Level







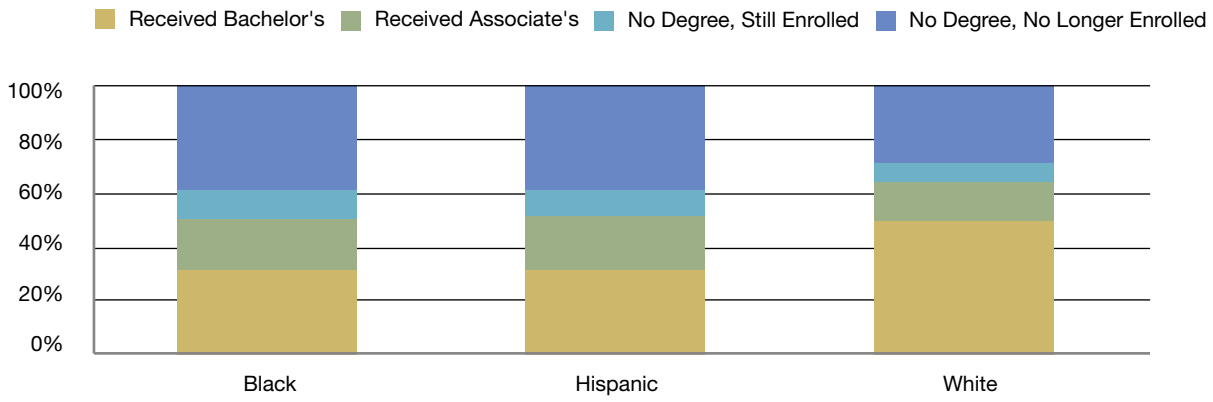
Source: DCA analysis of American Community Survey 5-Year Estimates and Urban Institute Credit Panel Data

The outcomes for black borrowers stand out as particularly severe. Black students take out more in loans than white and Hispanic students, default at a higher rate, and are more likely to owe more than they borrowed four years after graduation (Scott-Clayton & Li, 2016). Black college students are not only more likely to be independent students, have child dependents (IWPR 2018), come from families with lower levels of wealth accumulation and receive lower financial contributions from family for school, but they are also more likely to be from families with lower levels of educational attainment (Addo et al, 2016). So, not only do black students' parents have less wealth to draw from to provide monetary assistance, they may also have less experience to draw from when providing academic and financial aid guidance.

In addition to disparities in student loan debt burden, there are disparities in educational patterns among black, Hispanic, and white students. Black and Hispanic students are less likely to complete their degrees than white students (Dundar, Huie, Wakhugu, Yuan, Nathan, Hwang, 2017), potentially leaving these students worse off, as they become indebted without realizing the gains from enrolling in postsecondary education programs.

Figure 34 shows the composition of degree completion outcomes for neighborhood areas that are dominant Hispanic, black, and white. Completion is about the same for both the black and Hispanic neighborhood areas, with around half completing an associate's or bachelor's degree within seven years of initial attendance. For neighborhood areas with majority white residents, this number jumps nearly 13 percentage points, indicating a troubling disparity in educational outcomes between predominantly white neighborhood areas and black and Hispanic neighborhood areas in New York City.

Figure 34: Degree Completion, by Dominant Racial/Ethnic Group

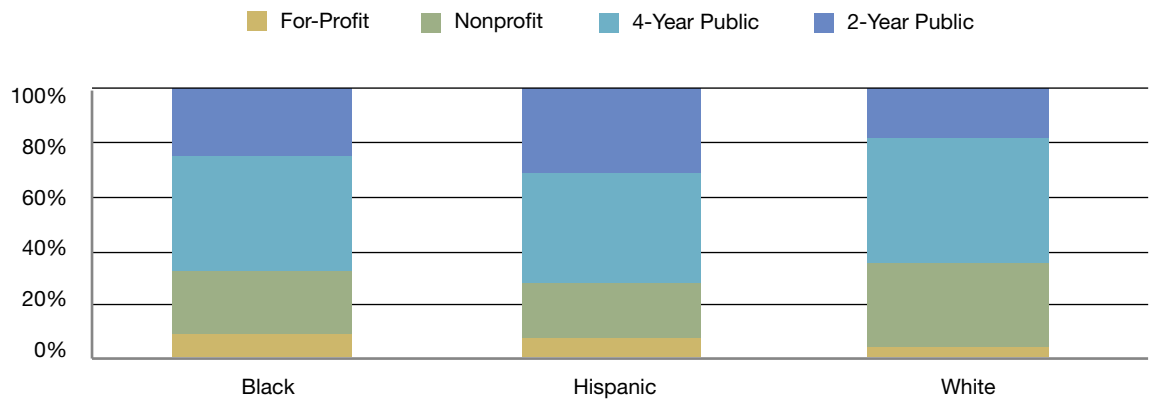


Source: DCA analysis of National Student Clearinghouse Enrollment Data and American Community Survey 5-Year Estimates

In Figure 35, we look at the racial and ethnic disparities in institution type attended. As discussed, less selective schools—two-year public and for-profit institutions—lead to worse outcomes as they have lower graduation rates and, in the case of for-profit schools, cost more.

The data in Figure 35 also shows that students from majority black and Hispanic neighborhood areas attend less selective schools at a higher rate. Students from both black and Hispanic neighborhood areas attend for-profit institutions at twice the rate as their white peers. Less selective school attendance rates range from 34 and 39 percent, respectively, for black and Hispanic neighborhood areas, compared to 22 percent for majority white neighborhood areas. Thus, we see some indication of an inequality in access to more selective schools for students of color.

Figure 35: Sector, by Dominant Racial/Ethnic Group

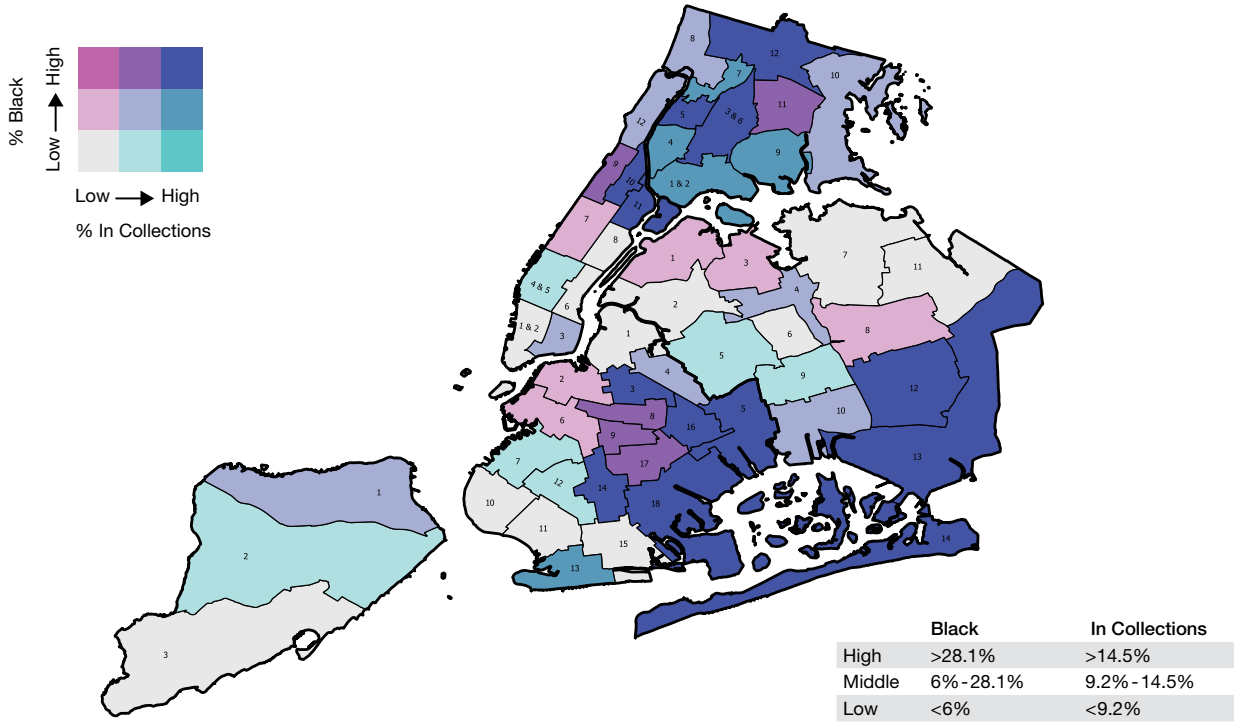


Source: DCA analysis of National Student Clearinghouse Enrollment Data and American Community Survey 5-Year Estimates

To further illustrate the spatial patterns between race/ethnicity and student loan debt distress, we created the maps in Figure 36 and Figure 37. Neighborhood areas with both a high rate of student loan debt holders in collections and high rates of residents who are black or Hispanic are respectively indicated by the dark purple color. The map in Figure 36 shows the relationship between the share of black residents in the neighborhood area and the rate of student loan debt holders in collections. Where we find a high concentration of black residents, we also find a high percentage of student loan debt holders in collections, with 13 out of 18 of the neighborhood areas ranked highest for student loan debt in collections also ranking highest for their percentage of black residents. Neighborhood areas with the strongest relationship between these two variables include:

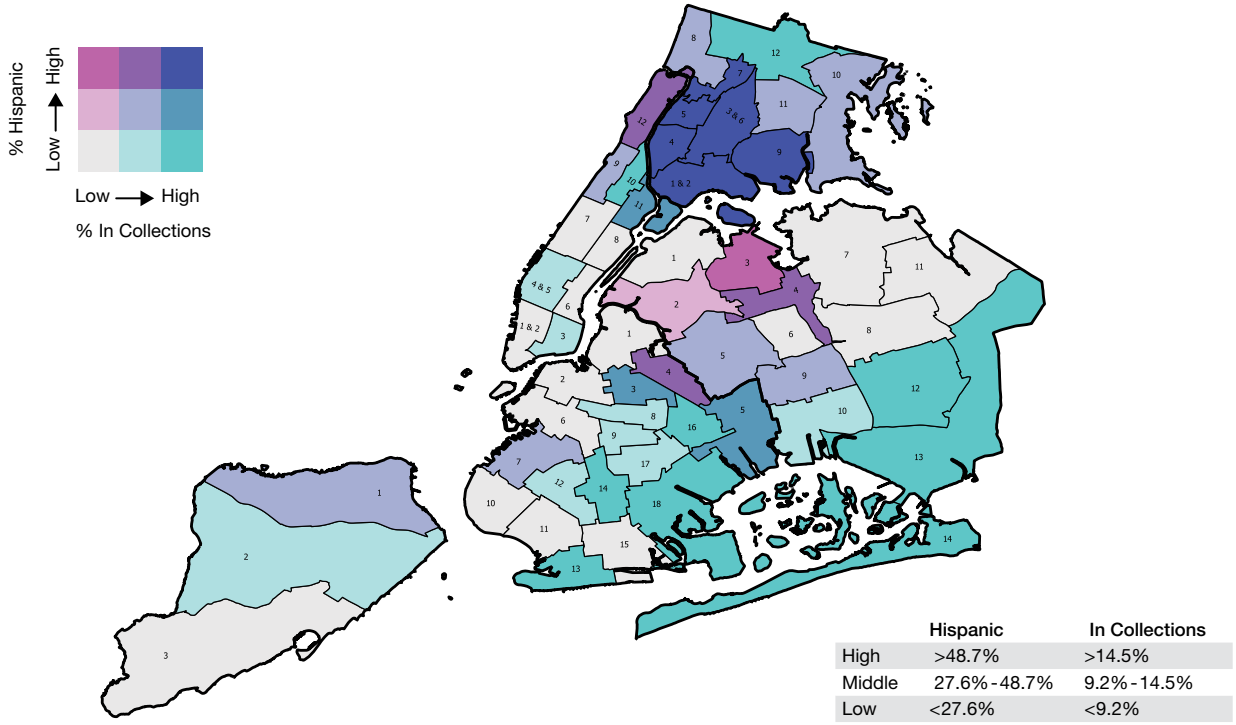
- Two northern Manhattan neighborhood areas, including East and Central Harlem
- Three north and north central Bronx neighborhood areas, including:
    - Wakefield, Williamsbridge, and Woodlawn
    - Belmont, Crotona Park East, and East Tremont
    - Morris Heights, Fordham South, and Mount Hope
- Five eastern Brooklyn neighborhood areas, including:
    - Bedford-Stuyvesant
    - Brownsville and Ocean Hill
    - East New York and Starrett City
    - Canarsie and Flatlands
    - Flatbush and Midwood
- Three eastern Queens neighborhood areas, including:
    - Queens Village, Cambria Heights, and Rosedale
    - Jamaica, Hollis, and St. Albans
    - Far Rockaway, Breezy Point, and Broad Channel

Figure 36: Share of Black Residents by Debt in Collections



	Black	In Collections
High	>28.1%	>14.5%
Middle	6%-28.1%	9.2%-14.5%
Low	<6%	<9.2%

Figure 37: Share of Hispanic Residents by Debt in Collections



	Hispanic	In Collections
High	>48.7%	>14.5%
Middle	27.6%-48.7%	9.2%-14.5%
Low	<27.6%	<9.2%

Source: DCA analysis of American Community Survey 5-Year Estimates and Urban Institute Credit Panel Data

The map in Figure 37 shows the relationship between the share of Hispanic residents in the neighborhood area and the rate of student loan borrowers with debt in collections. The relationship between the concentration of Hispanic residents and student loan debt in collections does not hold as strongly for Hispanic neighborhood areas. This is not surprising, as research has indicated that Hispanic students take out student loans at a lower rate than their black counterparts, and they default at a lower rate (Scott-Clayton, 2018a). However, we do find a problem in six out of 18 of the neighborhood areas ranked highest for student loan debt in collections also ranking highest for the percentage of Hispanic residents. All six of these neighborhood areas are in the Bronx and include the following neighborhoods:

- Belmont, Crotona Park East, and East Tremont
- Bedford Park, Fordham North, and Norwood
- Morris Heights, Fordham South, and Mount Hope
- Concourse, Highbridge, and Mount Eden
- Castle Hill, Clason Point, and Parkchester
- Hunts Point, Longwood, and Melrose

Conclusion

Research has shown that students' backgrounds and institutional factors contribute to a borrower's vulnerability to default. From this research and using the available data for New York City neighborhood areas, we were able to focus on seven of these factors for this report:

- non-completion;
- part-time attendance;
- attendance at a for-profit institution;
- independent student status;
- low income;
- black race/ethnicity; and
- Hispanic race/ethnicity.

To get a better understanding of the student loan debt crisis in New York City, we employed this blunt method to identify which of the predictors, which we termed indicators of vulnerability to default, were most prevalent in the 18 neighborhood areas with the highest rate of debt in collections. In exploring the indicators of vulnerability, we learned more about the state of student loan borrowers in New York City.

Key Findings

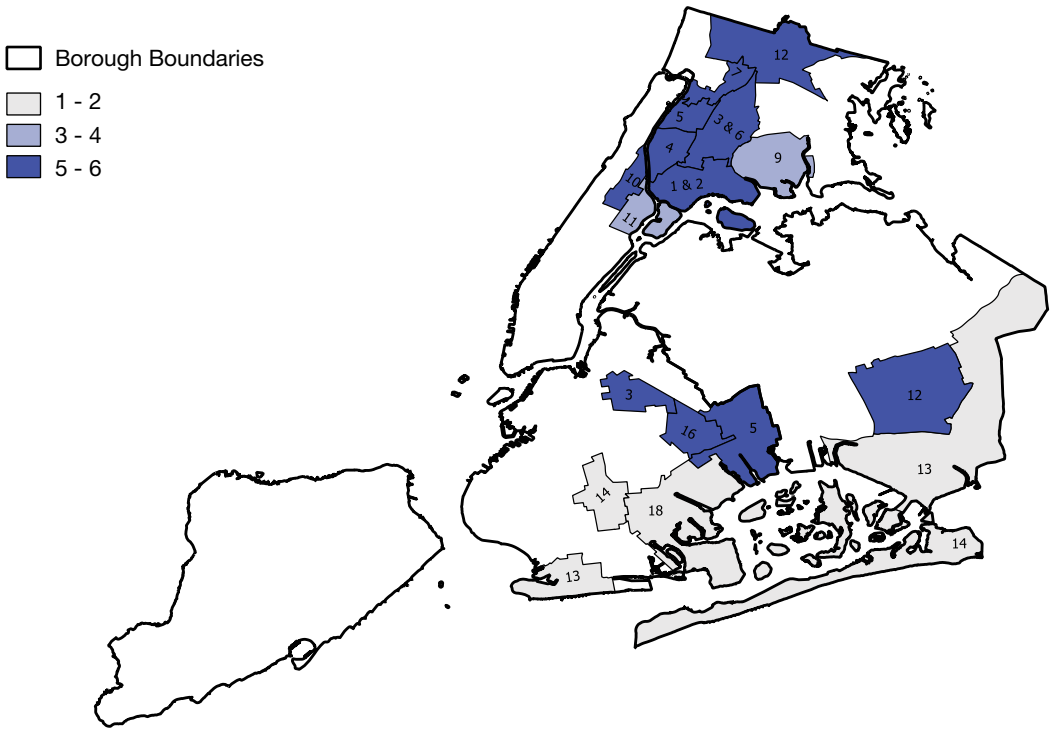
1. All seven of our indicators of vulnerability to default provide us with useful context about student loan distress in New York City and can be used to target services.[14]

For all of the indicators, we found that at least six high collections neighborhood areas also ranked high (or low in the case of median income) for the indicator. For four of the indicators—non-completion; for-profit school attendance; prevalence of black residents (black race/ethnicity); and

14 See Appendix B for a full list of the 18 high collections neighborhood areas and their outcomes for each indicator.

lowest median income (low income)—two-thirds or more of the high collections neighborhood areas ranked in the top tercile (or bottom in the case of median income). Further, we found that 11 out of 18 neighborhood areas with debt in collections were also neighborhood areas with high levels of five or more of the indicators. See Figure 38.

Figure 38: Neighborhood Areas with Highest Debt in Collections and Number of Indicators of Vulnerability with High Values



Source: DCA analysis using results from Appendix B.

2. Student loan debt distress is particularly acute in the Bronx.

The Bronx has the highest rate of student loan debt in collections, and fewer than half of students who began their studies in the 2010 school year had completed a degree seven years later. The Bronx also had a higher rate of students attending for-profit institutions, likely indicating the need for more flexible and accommodating higher education options.

3. Non-completion is one of the strongest drivers of debt in collections in New York City and is found at higher rates among the other six predictors of default.

Research has shown that non-completion is one of the strongest drivers of student loan default. Student loan debt is a good investment in the future if students realize an earnings premium for their educational pursuits. However, non-completers receive only slightly more in median wages than high school degree holders who never took a college course. Thus, those who borrowed to fund their higher education and did not finish may struggle to pay back their loans.

Our research shows that independent students and students of color in New York are abandoning their higher education pursuits at higher rates than students aged 24 or younger and white students, and they are attending less selective institutions, known to have lower completion rates, at a higher rate.

We found high rates of non-completion in East and Central Harlem in Manhattan, most of the Bronx, eastern Brooklyn, and Jamaica, Hollis, and St. Albans in Queens.

4. **Older students, students from neighborhoods with low incomes, and students from neighborhoods with a prevalence of black and Hispanic residents attend for-profit schools at a higher rate.**

We investigated the outcomes of for-profit school attendees, a particularly vulnerable group given the history of predatory practices of these schools and the low amount of money spent on program administration. We found the most problematic patterns of higher attendance at for-profit schools in the Bronx, among older students, among students from neighborhood areas with a plurality of residents of color, and among students from neighborhood areas with low incomes.

We also found some indication that for-profit and nonprofit institutions are underserving students aged 25 and older based on the lower graduation rates for students at these institutions compared to students who attended two-year public and four-year public institutions.

Taken in sum, these results indicate that current models of higher education and higher education funding, designed for younger students with higher-income households, are not serving the needs of the majority of students today. Today's student is much more like the growing group of independent students and persons of color who may come from lower-income backgrounds, have work and family obligations, have taken time off after high school, among other mitigating factors. In the end, vulnerable students are not receiving the benefit of their higher education pursuits, resulting in higher rates of student loan distress and default.

Key Areas for Policy Focus

Given our findings, it seems clear that:

- There is a strong need to promote community colleges in the Bronx and other parts of New York City as an alternative to for-profit schools.
- Colleges need to make more of an effort to be accommodating and accountable to the needs of the growing body of independent students in New York City who often have competing work and family obligations.
- Innovative solutions are needed to help vulnerable groups—older students, students of color, students from low-income backgrounds—complete their degrees, and in fewer years, to reduce debt accumulation and ensure these students receive a positive return on their investment in higher education.

By using the seven indicators of vulnerability to default, we believe we can target New York City services to begin to make a difference for those in student loan debt distress. However, more research is needed to fully understand what is driving the student loan debt crisis in New York City to reverse the high cost for so many of simply trying to build a better life.

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Appendix A
How Each Variable is Defined

Note: Source is in parentheses.

Average Time to Completion – An average, by degree type, of the number of years it took to complete a degree. *(National Student Clearinghouse, NSC)*

Black, non-Hispanic – Residents in Public Use Microdata Area identifying as black, non-Hispanic. *(American Community Survey, ACS)*

For-profit Institution – A private institution in which the individual(s) or agency in control receives compensation other than wages, rent, or other expenses for the assumption of risk (IPEDS definition). DCA limited to four-year degree granting schools because two-year for-profit degree granting schools comprised less than 1 percent of the sample and had outcomes and patterns very different from the four-year institutions. *(NSC)*

Four-Year Public Institution – An educational institution whose programs and activities are operated by publicly elected or appointed school officials and which is supported primarily by public funds (IPEDS definition). Degree requirements for full-time students take at least four years. *(NSC)*

Full-time status (seven-year cohort) – Students in any undergraduate degree program enrolled in 12 or more credit hours or equivalent for the majority of academic terms attended during the 2010-2017 academic years. *(NSC)*

Full-time status (snapshot) – Students in an undergraduate degree program enrolled in 12 or more credit hours or the equivalent for each term attended during the 2016-2017 academic year. *(NSC)*

Hispanic – Residents in Public Use Microdata Area identifying as Hispanic. *(ACS)*

Independent Students – Rate of students aged 25 and older for a cohort of students entering college for the first time and indicating New York City residence in 2010 used as a proxy for independent students. *(NSC)*

Median Income – Estimated median income of households in Public Use Microdata Area. *(ACS)*

Non-completion – First-time associate's or bachelor's degree students entering in fall 2010 who had not completed a degree and were no longer enrolled at any institution seven years later. *(NSC)*

Nonprofit Institution – A private institution in which the individual(s) or agency in control receives no compensation, other than wages, rent, or other expenses for the assumption of risk. These include both independent not-for-profit schools and those affiliated with a religious organization (IPEDS definition). DCA limited to four-year degree granting schools because two-year nonprofit degree granting schools comprised less than 1 percent of the sample and had outcomes and patterns very different from the four-year institutions. *(NSC)*

Part-time status (seven-year cohort) – Students in any undergraduate degree program enrolled in fewer than 12 credit hours or the equivalent for the majority of academic terms attended during the 2010-2017 academic years. *(NSC)*

Part-time status (snapshot) – Rate of students in any degree program enrolled in fewer than 12 credit hours or the equivalent for each term attended during the 2016-2017 academic year. *(NSC)*

Student Loan Debt in Collections – Student loan holders with student loan debt in collections. For federal student loans, debt goes into collections after 270 days of nonpayment. For private student loans, the debt can go into collections after as early as 120 days of nonpayment (Kirkham, 2017). *(Urban Institute, UI)*

Student Loan Holders – Rate of people in credit file with student loan debt on December 31, 2016. *(UI)*

Student Loan Holders in Collections – Rate of student loan holders with one or more student loan in collections on December 31, 2016. To be in collections, a student loan payment must be overdue by 270 days or more. *(UI)*

Two-Year Public – An educational institution whose programs and activities are operated by publicly elected or appointed school officials and which is supported primarily by public funds (Integrated Postsecondary Education Data System, IPEDS, definition). Degree requirements for full-time students take at least two but less than four years. *(NSC)*

White – Residents in Public Use Microdata Area identifying as white, non-Hispanic. *(ACS)*

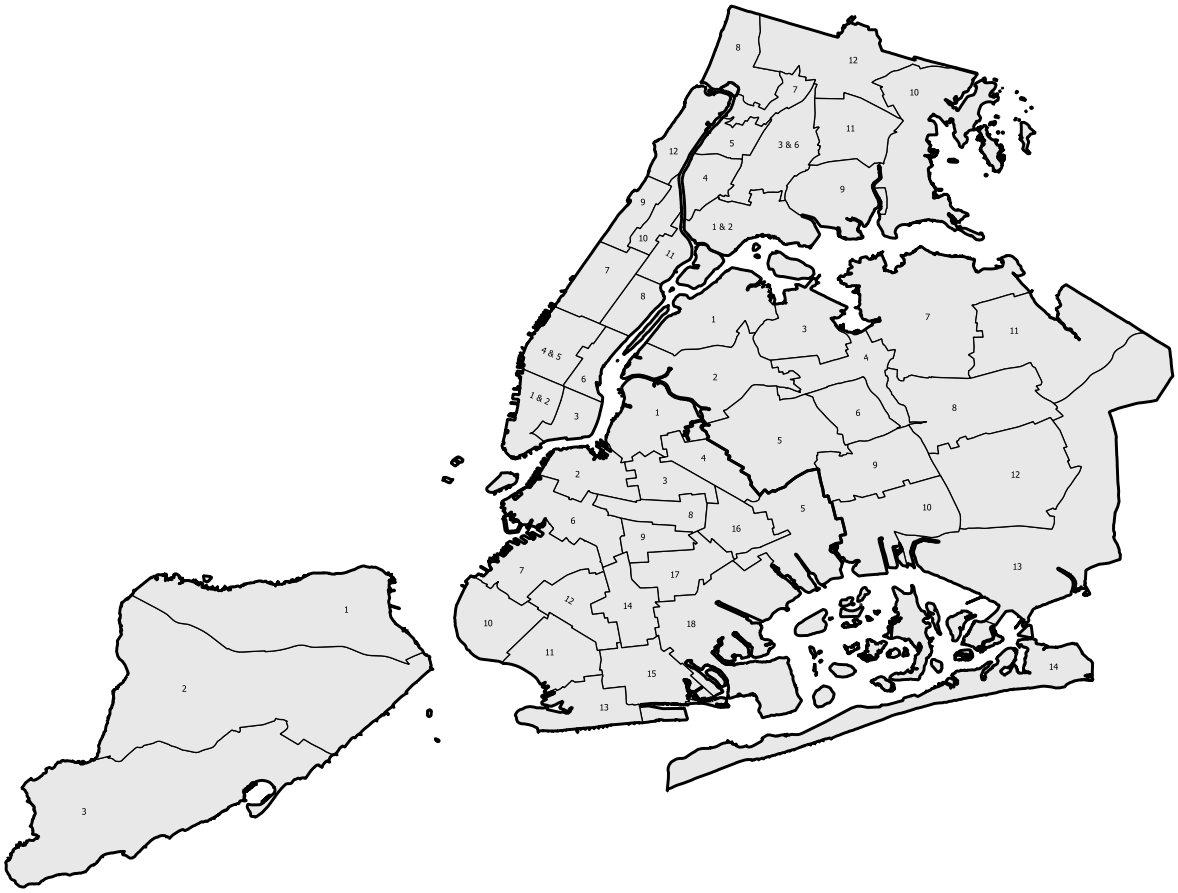
Appendix B

Indicators of Vulnerability for 18 Neighborhood Areas with Highest Rate of Student Loan Debt in Collections

Borough	Community District (CD)	Public Use Microdata Area (PUMA)	Neighborhood Name	Indicators of Vulnerability to Default*							
				Non-completion	Part-time Attendance	For-Profit School	Independent Student	Low Income	Black	Hispanic	Count
BRONX	12	3702	Wakefield, Williamsbridge, and Woodlawn	x	x	x	x		x		5
	3 & 6	3705	Belmont, Crotona Park East, and East Tremont	x		x	x	x	x	x	6
	7	3706	Bedford Park, Fordham North, and Norwood	x	x	x		x		x	5
	5	3707	Morris Heights, Fordham South, and Mount Hope	x		x		x	x	x	5
	4	3708	Concourse, Highbridge, and Mount Eden	x		x	x	x		x	5
	9	3709	Castle Hill, Clason Point, and Parkchester	x		x		x		x	4
	1 & 2	3710	Hunts Point, Longwood, and Melrose	x		x	x	x		x	5
BROOKLYN	3	4003	Bedford-Stuyvesant	x		x	x	x	x		5
	16	4007	Brownsville and Ocean Hill	x		x	x	x	x		5
	5	4008	East New York and Starrett City	x		x	x	x	x		5
	18	4009	Canarsie and Flatlands		x				x		2
	14	4015	Flatbush and Midwood		x				x		2
	13	4018	Brighton Beach and Coney Island					x			1
MANHATTAN	10	3803	Central Harlem	x		x	x	x	x		5
	11	3804	East Harlem	x			x	x	x		4
QUEENS	13	4105	Queens Village, Cambria Heights, and Rosedale		x				x		2
	12	4112	Jamaica, Hollis, and St. Albans	x	x	x	x		x		5
	14	4114	Far Rockaway, Breezy Point, and Broad Channel			x			x		2
Count				**13**	**6**	**13**	**10**	**12**	**13**	**6**	

**"x" indicates neighborhood ranked in the top tercile (bottom for low income) for that indicator.*
Highlighted rows indicate high collections neighborhoods with high levels (or low as in the case of median income) of the indicators of vulnerability to default.

Appendix C
Neighborhood Area Map Key



Borough	Public Use Microdata Area (PUMA)	Community District	Neighborhoods Included
BRONX	3701	8	Riverdale, Fieldston, and Kingsbridge
	3702	12	Wakefield, Williamsbridge, and Woodlawn
	3703	10	Co-op City, Pelham Bay, and Schuylerville
	3704	11	Pelham Parkway, Morris Park, and Laconia
	3705	3 & 6	Belmont, Crotona Park East, and East Tremont
	3706	7	Bedford Park, Fordham North, and Norwood
	3707	5	Morris Heights, Fordham South, and Mount Hope
	3708	4	Concourse, Highbridge, and Mount Eden
	3709	9	Castle Hill, Clason Point, and Parkchester
	3710	1 & 2	Hunts Point, Longwood, and Melrose

Borough	Public Use Microdata Area (PUMA)	Community District	Neighborhoods Included
BROOKLYN	4001	1	Greenpoint and Williamsburg
	4002	4	Bushwick
	4003	3	Bedford-Stuyvesant
	4004	2	Brooklyn Heights and Fort Greene
	4005	6	Park Slope, Carroll Gardens, and Red Hook
	4006	8	Crown Heights North and Prospect Heights
	4007	16	Brownsville and Ocean Hill
	4008	5	East New York and Starrett City
	4009	18	Canarsie and Flatlands
	4010	17	East Flatbush, Farragut, and Rugby
	4011	9	Crown Heights South, Prospect Lefferts, and Wingate
	4012	7	Sunset Park and Windsor Terrace
	4013	10	Bay Ridge and Dyker Heights
	4014	12	Borough Park, Kensington, and Ocean Parkway
	4015	14	Flatbush and Midwood
	4016	15	Sheepshead Bay, Gerritsen Beach, and Homecrest
	4017	11	Bensonhurst and Bath Beach
	4018	13	Brighton Beach and Coney Island
MANHATTAN	3801	12	Washington Heights, Inwood, and Marble Hill
	3802	9	Hamilton Heights, Manhattanville, and West Harlem
	3803	10	Central Harlem
	3804	11	East Harlem
	3805	8	Upper East Side
	3806	7	Upper West Side and West Side
	3807	4 & 5	Chelsea, Clinton, and Midtown Business District
	3808	6	Murray Hill, Gramercy, and Stuyvesant Town
	3809	3	Chinatown and Lower East Side
	3810	1 & 2	Battery Park City, Greenwich Village, and Soho

Borough	Public Use Microdata Area (PUMA)	Community District	Neighborhoods Included
QUEENS	4101	1	Astoria and Long Island City
	4102	3	Jackson Heights and North Corona
	4103	7	Flushing, Murray Hill, and Whitestone
	4104	11	Bayside, Douglaston, and Little Neck
	4105	13	Queens Village, Cambria Heights, and Rosedale
	4106	8	Briarwood, Fresh Meadows, and Hillcrest
	4107	4	Elmhurst and South Corona
	4108	6	Forest Hills and Rego Park
	4109	2	Sunnyside and Woodside
	4110	5	Ridgewood, Glendale, and Middle Village
	4111	9	Richmond Hill and Woodhaven
	4112	12	Jamaica, Hollis, and St. Albans
	4113	10	Howard Beach and Ozone Park
	4114	14	Far Rockaway, Breezy Point, and Broad Channel
STATEN ISLAND	3901	3	Tottenville, Great Kills, and Annadale
	3902	2	New Springville and South Beach
	3903	1	Port Richmond, Stapleton, and Mariners Harbor

Notes

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