



# STUDENT LOAN DEBT IN PHILADELPHIA

BY ANNA TRANFAGLIA \*

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## Introduction

As of December 1, 2018, approximately 310,320 Philadelphians collectively owed \$11.6 billion in student loan debt. The share of adults with student loan debt is greater in Philadelphia (25.3 percent) than in Pennsylvania (21.2 percent) and in the United States as a whole (17.3 percent). This report provides an in-depth analysis of the geographic distribution of this debt in Philadelphia. It reveals that individuals in different zip codes have drastically different experiences in how much they owe, the degree to which they struggle with repayment, and the extent to which they become delinquent.

Increased attention to rising student loan debt has led to a number of national policy proposals aiming to lessen consumers' student debt burden. These discussions about changing how we administer, repay, and possibly forgive federal student loan debt have largely occurred in the absence of understanding how student borrowers cope with indebtedness. One reason is that data on student loans are scarce, especially given their substantial share of household debt. Knowing the underlying relationship between repayment trends and debt levels can help policymakers better predict which borrowers might struggle with student debt repayment. This, in turn, aids in designing and evaluating student loan debt policy proposals.

In addition to providing new descriptive statistics, this report discusses the implications of student loan debt for individual borrowers as well as the economy. The main findings include:

- **Student loan debt balances are not equally distributed geographically.** Certain zip codes have much larger student loan balances than others: Balances in the top 20 percent of zip codes are greater than \$25,000, and balances in the bottom 20 percent of zip codes are less than \$16,000.
- **However, borrowers in zip codes with relatively large student loan balances generally do not suffer from higher delinquency rates.** Conversely, delinquent student borrowers are less likely to have large balances. Both suggest that delinquency may arise for reasons other than simply the size of the balance, such as insufficient income.
- **The highest student loan balances are among the 36–45 year old cohort, not college-age borrowers (18–25).** Additionally, even the 65 and older cohort has higher mean student loan balances than college-age borrowers. This suggests that paying for a dependent's higher education is becoming increasingly common. It is also consistent with postgraduate education generally producing larger levels of debt.
- **Borrowers living in zip codes in the lowest income quintile experienced higher rates of severe delinquency.** One in five student loan borrowers were severely delinquent in December 2018. An additional 10 percent of borrowers were delinquent but not severely delinquent. Only 16 percent of borrowers living in these zip codes made payments on time and experienced decreasing student debt balances.
- **The highest rates of delinquency were in zip codes with high percentages of black and Hispanic residents.** In December 2018, 29.6 percent of borrowers were delinquent, including 20 percent who were severely delinquent, in Philadelphia zip codes with the highest percentage of black and Hispanic residents. Just 16 percent of borrowers living in these zip codes had both a current repayment status and a decreasing debt balance.

## Student Loan Background

Higher education is — and has historically been — an avenue for economic mobility for Americans. However, education generally does not produce equal results for all students.<sup>1</sup> For example, there are notable differences in wealth by race and gender even after accounting for educational attainment.<sup>2</sup> Once more, there is evidence that income depends on choice of college major.<sup>3</sup> While the majority of students in the United States borrow to fund at least a portion of their education expenses,<sup>4</sup> there are differences in student loan take-up rates by socioeconomic level: Low-income students are more likely to use student loans to help finance the cost of college than peers from higher-income families.<sup>5</sup>

Despite the benefits of college, borrowing to finance higher education can still make that education a risky investment for many consumers. In particular, there has been a growing trend of rising default rates among students who attend schools with significantly lower graduation rates.<sup>6</sup> This is problematic because borrowers who do not graduate might experience more challenges when repaying their student loans, since they did not attain the qualifications usually necessary to improve their career prospects.

Nationally, student loan debt has more than doubled in the previous decade and is now the second-largest source of consumer debt.<sup>7</sup> Student loans have several

dissimilarities compared with other credit products that can both be beneficial and harmful for borrowers.

First, student loans are unsecured (i.e., there is no collateral), and the majority of student loans made to students directly (as opposed to loans designed for family members to take out on behalf of students) are not underwritten. Therefore, students' credit histories are not taken into account because the federal student loan program is available to all enrolled students. As a result, more individuals can access college. Given the substantiated disparities in accessing other types of credit in the U.S.,<sup>8</sup> the relative ease of accessing credit for higher education opens the doors for many.<sup>9</sup>

Further, student loans are normally not discharged in bankruptcy. While it is legally possible to discharge this debt, it is rarely done in practice.<sup>10</sup> As a result, severely delinquent debt from a student loan trade line stays on a consumer's credit report for years longer than severely delinquent debt from other types of trade lines, such as credit cards or auto loans.<sup>11</sup>

The recent ballooning of student loan debt has both macro and micro effects. At the macro level, student loan debt is the second-highest consumer debt category in the U.S., with consumers owing \$1.49 trillion.<sup>12</sup> This is partially due to the growth of student loan debt throughout the financial crisis (because of the lack of underwriting on most federal student loans and increasing tuition costs), the same period in which the volumes of other types of debt waned.<sup>13</sup> This growth is also due to the difficulty of discharging federal student loan debt. As delinquency rates increase and remain high, student loan debt becomes a greater liability and cost to both borrowers and taxpayers.

<sup>1</sup> Darrick Hamilton, William Darity Jr., Anne E. Price, Vishnu Sridharan, and Rebecca Tippet (2015), *Umbrellas Don't Make It Rain: Why Studying and Working Hard Isn't Enough for Black Americans*, New York: The New School.

<sup>2</sup> Jhumpa Bhattacharya, Anne Price, and Fenaba Addo (2019), *Clipped Wings: Closing the Wealth Gap for Millennial Women*, Asset Funders Network, available at [assetfunders.org/wp-content/uploads/AFN\\_2019\\_Clipped-Wings\\_Brief.pdf](https://assetfunders.org/wp-content/uploads/AFN_2019_Clipped-Wings_Brief.pdf).

<sup>3</sup> Douglas A. Webber, (2016), "Are College Costs Worth It? How Ability, Major, and Debt Affect the Returns to Schooling," *Economics of Education Review*, 53, pp. 296–310.

<sup>4</sup> Board of Governors of the Federal Reserve System (2019), "Student Loans and Other Education Debt," Board of Governors, [www.federalreserve.gov/publications/2019-economic-well-being-of-us-households-in-2018-student-loans-and-other-education-debt.htm](https://www.federalreserve.gov/publications/2019-economic-well-being-of-us-households-in-2018-student-loans-and-other-education-debt.htm).

<sup>5</sup> Sara Goldrick-Rab (2016), *Paying the Price: College Costs, Financial Aid, and the Betrayal of the American Dream*. Chicago: University of Chicago Press.

<sup>6</sup> Rajashri Chakrabarti, Michael Lovenheim, and Kevin Morris (2016), "Who Falsters at Student Loan Payback Time?" *Liberty Street Economics* blog, [libertystreeteconomics.newyorkfed.org/2016/09/who-falsters-at-student-loan-payback-time.html](https://libertystreeteconomics.newyorkfed.org/2016/09/who-falsters-at-student-loan-payback-time.html).

<sup>7</sup> Federal Reserve Bank of New York, *Quarterly Report on Household Debt and Credit* (2019Q1).

<sup>8</sup> Patrick Bayer, Marcus Casey, Fernando Ferreira, and Robert McMillan (2017), "Racial and Ethnic Price Differentials in the Housing Market." *Journal of Urban Economics*, 102, pp. 91–105.

<sup>9</sup> Alix Carlin and Eileen Divringi (2018), "Home Improvement Lending in the Third District: Patterns by Income, Race, and Gender," *Cascade Focus*: pp. 1–20.

<sup>10</sup> Borrowers must complete a three-part hardship test to determine if repayment would cause "undue hardship."

<sup>11</sup> A trade line is a credit industry term for an account — in this case, a trade line is one student loan account.

<sup>12</sup> Federal Reserve Bank of New York, *Quarterly Report on Household Debt and Credit* (2018Q4).

<sup>13</sup> Federal Reserve Bank of New York, *Quarterly Report on Household Debt and Credit* (2019Q1).

Research suggests that student loan balances can also affect other large investments,<sup>14</sup> such as buying a home<sup>15</sup> or starting a business.<sup>16</sup> Student loan balances can also prevent borrowers from accessing additional credit if their debt-to-income ratio is too high, even when borrowers are making their monthly payments in full and on time.

On a micro level, credit histories are adversely affected for longer periods when borrowers struggle with student loan repayment than they are with other debt instruments. Debt and delinquency can also impact individuals in other facets of day-to-day life, as well. Credit scores are often used by employers when hiring<sup>17</sup> and by landlords when renting.<sup>18</sup> High student loan balances and delinquencies can negatively affect these outcomes, particularly since some types of severely delinquent student loan trade lines remain on credit records until the balance has been repaid.<sup>19</sup>

## About the Data

This report uses student loan data from the Federal Reserve Bank of New York Consumer Credit Panel/Equifax Data (CCP). This anonymous data set is a 5 percent sample of individual-level credit reports from Equifax and contains quarterly information on the number of accounts, debt balances, repayment history, and Equifax Risk Score. The student loan component of the CCP includes quarterly data on the loan balance, payment, origination date, and default status for each

student loan account. I construct total student loan balances, outstanding debts, and additional information about student borrowers by aggregating up to the consumer level. The CCP contains loans originated and disbursed by the Department of Education (federal loans) as well as private loans, but are not disaggregated within this report. The CCP data are supplemented with population, median income, educational attainment, race, and ethnicity for each zip code tabulation area (ZCTA) from the Census Bureau's American Community Survey (ACS) 2013–2017 5-year estimates.<sup>20</sup>

Student loan-level data are aggregated to both the student and zip code level within this analysis. Additionally, adjustments are made for jointly held loans.<sup>21</sup> Student loan trade lines are defined as delinquent when a payment hasn't been received in 90 or more days and severely delinquent when a payment hasn't been received in 270 or more days. While other credit trade lines are considered delinquent after one missed monthly payment, student loan servicers rarely report 30 days past due and 60 days past due delinquencies to the three credit bureaus. Therefore, delinquency is defined as three missed payments on a loan<sup>22</sup> (or 90 days past due).<sup>23</sup>

While this report is unique in that it examines student loan debt with small geographies in Philadelphia, there are still many variables unaccounted for. Race, gender, employment status, income repayment plan status, degree completion, and school type are only a few of the missing variables that are needed to fully understand student loan borrowing and repayment. Therefore, additional research is needed to provide a fuller understanding of borrowers' experiences with student debt.

<sup>14</sup> Marco Di Maggio, Ankit Kalda, and Vincent Yao (2019), "Second Chance: Life without Student Debt," National Bureau of Economic Research Working Paper 25810.

<sup>15</sup> Rajashri Chakrabarti, Nicole Gorton, and Wilbert van der Klaauw, "Diplomas to Doorsteps: Education, Student Debt, and Homeownership," *Liberty Street Economics* blog, [libertystreeteconomics.newyorkfed.org/2017/04/diplomas-to-doorsteps-education-student-debt-and-homeownership.html](http://libertystreeteconomics.newyorkfed.org/2017/04/diplomas-to-doorsteps-education-student-debt-and-homeownership.html).

<sup>16</sup> Brent W. Ambrose, Larry Cordell, and Shuwei Ma (2015), "The Impact of Student Loan Debt on Small Business Formation," Federal Reserve Bank of Philadelphia Working Paper No. 15-26.

<sup>17</sup> Dean Corbae and Andrew Glover (2018), "Employer Credit Checks: Poverty Traps Versus Matching Efficiency," National Bureau of Economic Research Working Paper No. 25005.

<sup>18</sup> Sarena Goodman, Alice Henriques, and Alvaro Mezza (2017), "Where Credit is Due: The Relationship Between Family Background and Credit Health," Board of Governors of the Federal Reserve System Finance and Economics Discussion Series 2017-032, doi.org/10.17016/FEDS.2017.032.

<sup>19</sup> Federal Student Aid, "Student Loan Delinquency and Default," U.S. Department of Education, [studentaid.gov/manage-loans/default](http://studentaid.gov/manage-loans/default).

<sup>20</sup> In the city of Philadelphia, ZCTAs correspond to five-digit zip codes for the entire city. We use the terms zip code and ZCTA interchangeably.

<sup>21</sup> For loans with a cosigner, the balance is divided in half for each borrower before aggregating up to the consumer level, as to not incorrectly report the loan balance as twice its amount.

<sup>22</sup> Kristin Blagg (2018). *Underwater on Student Debt*, Washington, D.C.: Urban Institute, available at [www.urban.org/research/publication/underwater-student-debt](http://www.urban.org/research/publication/underwater-student-debt).

<sup>23</sup> Dubravka Ritter (2018), *Student Loan Repayment: Research, Data, and Policy*, Federal Reserve Bank of Philadelphia, available at [philadelphiafed.org/-/media/consumer-finance-institute/payment-cards-center/events/conferences/2015/student-loan-repayment-conference-summary.pdf?la=en](http://philadelphiafed.org/-/media/consumer-finance-institute/payment-cards-center/events/conferences/2015/student-loan-repayment-conference-summary.pdf?la=en).

## Prevalence of Student Loan Debt in Philadelphia

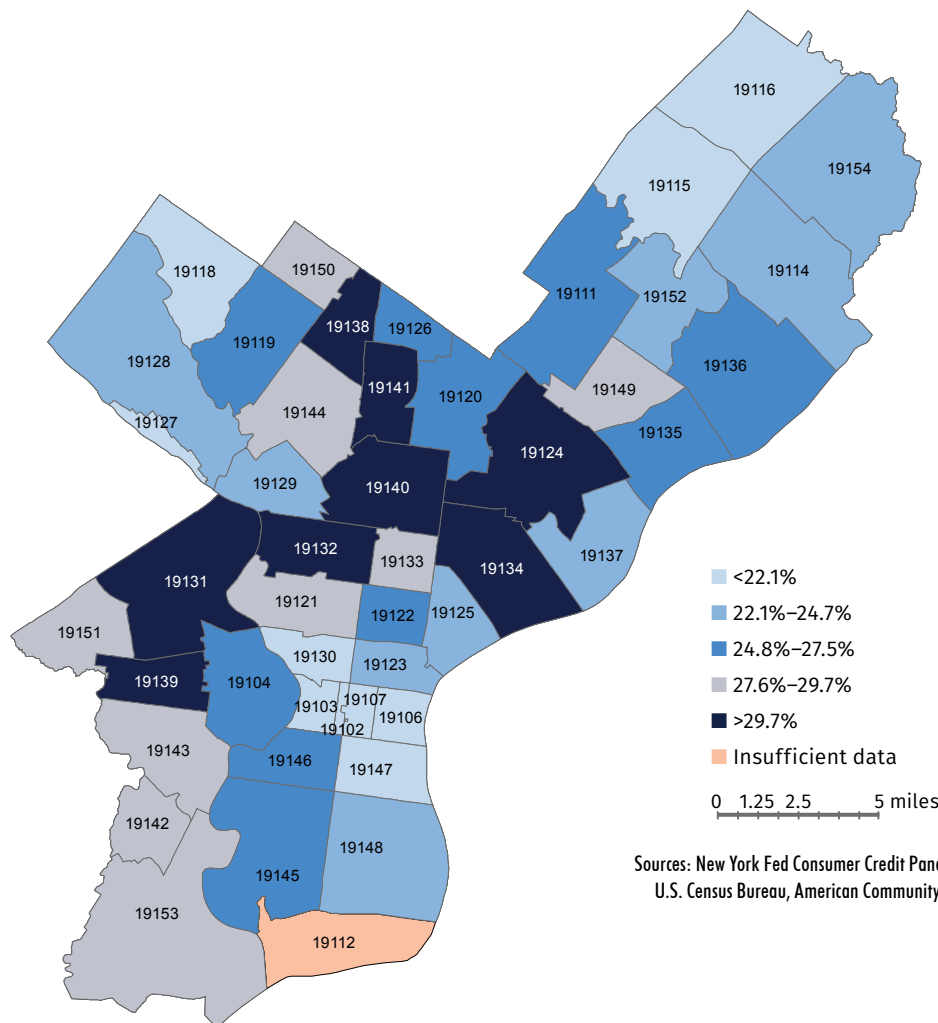
Philadelphia is a city of 1.58 million individuals, of whom 1.22 million are 18 or older. Approximately 310,320, or 25.3 percent, of adults had an active student loan in December 2018. The share of adults with student loan debt is large, but it is not driven by a handful of zip codes. Instead, Philadelphia’s indebtedness appears to be higher than in other major cities in almost all zip codes. For example, even the Philadelphia zip codes with the lowest indebtedness (the bottom fifth of all zip codes) have higher indebtedness than the San Francisco<sup>24</sup> and New York<sup>25</sup> zip codes with the highest indebtedness (the top fifth of all zip codes).

**Figure 1** shows that the share of consumers with student loan debt varies substantially by zip code. **Figures 2** and **3** reveal differences in educational attainment and incomes by zip code. Together, these three figures suggest that

<sup>24</sup> Federal Reserve Bank of San Francisco and the San Francisco Treasurer’s Office of Financial Empowerment (2019), *At What Cost? Student Loan Debt in the Bay Area*, Federal Reserve Bank of San Francisco, available at [www.frbsf.org/community-development/files/student-loan-debt-in-the-bay-area.pdf](http://www.frbsf.org/community-development/files/student-loan-debt-in-the-bay-area.pdf).

<sup>25</sup> Federal Reserve Bank of New York and NYC Department of Consumer Affairs Office of Financial Empowerment (2017), *Student Loan Borrowing Across NYC Neighborhoods*, Federal Reserve Bank of New York, available at [www.newyorkfed.org/medialibrary/media/outreach-and-education/community-development/credit-conditions/student-loan-borrowing-nyc-neighborhoods.pdf](http://www.newyorkfed.org/medialibrary/media/outreach-and-education/community-development/credit-conditions/student-loan-borrowing-nyc-neighborhoods.pdf).

**FIGURE 1. PERCENT OF RESIDENTS WITH STUDENT LOAN DEBT BY ZIP CODE**

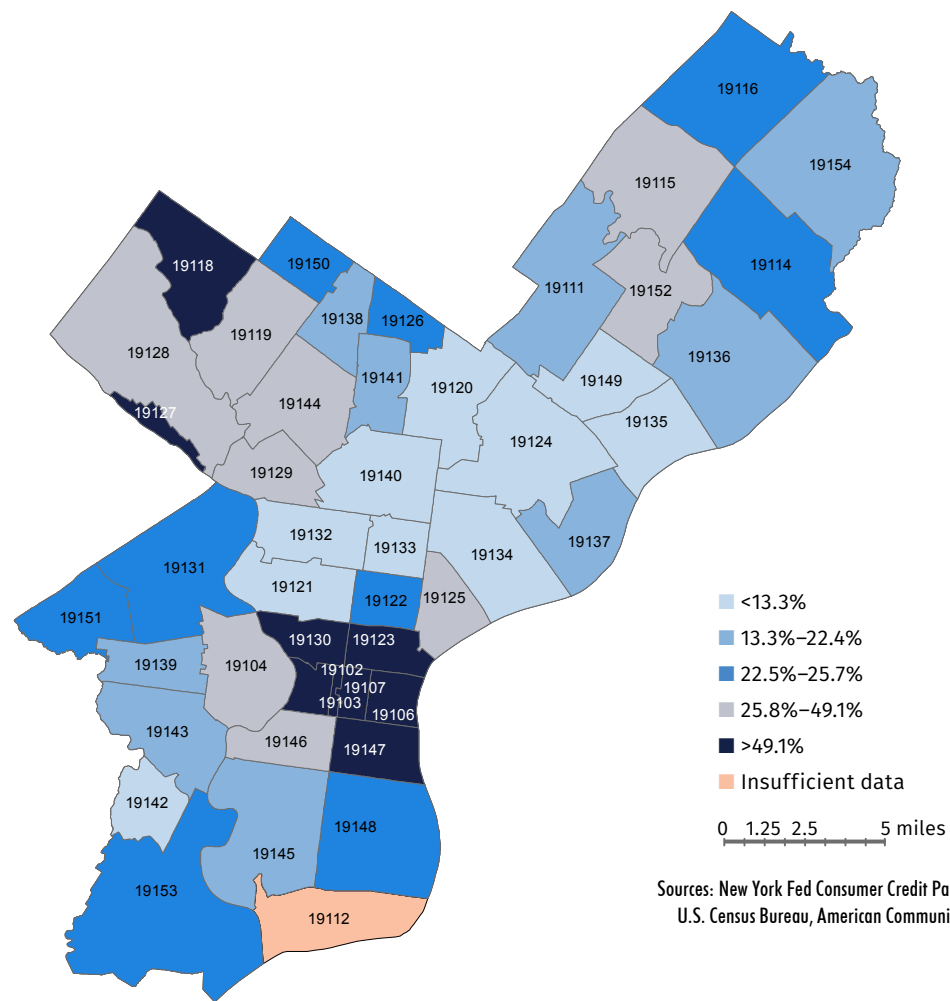


Sources: New York Fed Consumer Credit Panel/Equifax, U.S. Census Bureau, American Community Survey

there is greater student loan debt prevalence in neighborhoods with higher median incomes and higher levels of educational attainment, such as Manayunk (zip code 19127) and Graduate Hospital (zip code 19146). Yet high incidence of student loan debt also occurs in zip codes with low household median income levels, such as those covering Germantown (zip code 19144) and Brewerytown and Strawberry Mansion (zip code 19121).

Despite the general trend of higher student debt prevalence in zip codes with greater educational attainment, one region of the city, Center City, remains an outlier. The majority of Center City zip codes (19102, 19103, 19107,

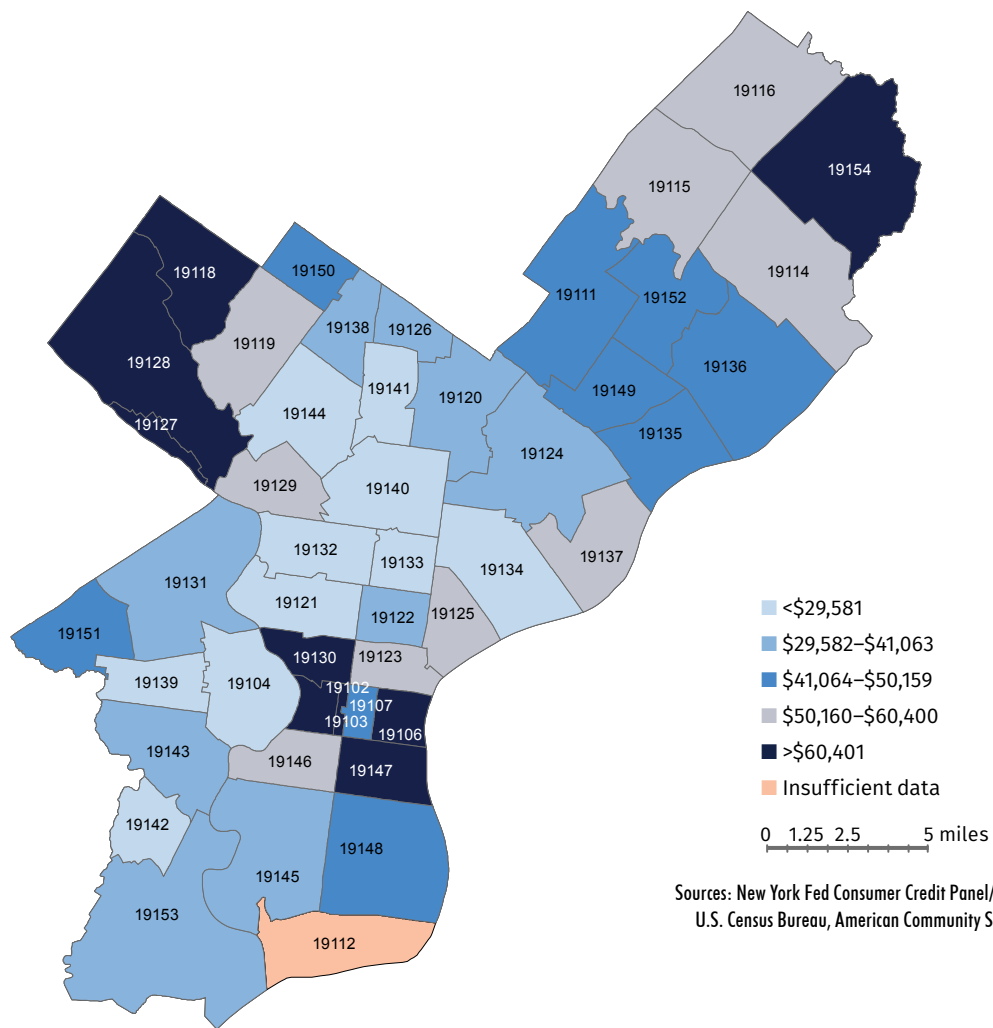
**FIGURE 2. SHARE OF ADULTS WITH BACHELOR'S DEGREE OR HIGHER BY ZIP CODE**



and 19106) have some of the highest rates of residents with at least a bachelor's degree in the city but only moderate to high rates of indebtedness.

Outliers also exist with respect to student loan indebtedness and zip code median household income. Germantown (zip code 19144) and Germantown East (zip code 19138) experience some of the largest rates of student loan debt prevalence but are in the first and second quintiles, respectively, in median household income.

**FIGURE 3. MEDIAN HOUSEHOLD INCOME BY ZIP CODE**



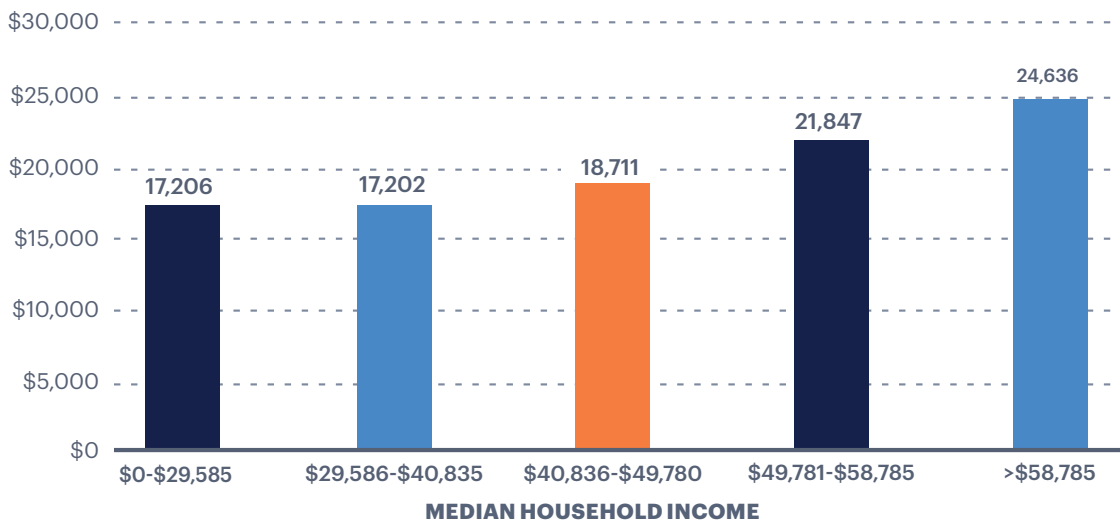
## Balances

**Figure 4** shows that borrowers who live in higher-income zip codes have larger student loan balances, on average. A typical borrower in the lowest-income zip codes owes \$17,000, while a typical borrower in the highest income zip codes owes \$25,000. The median and average across all Philadelphia student loan balances are \$19,235 and \$37,468, respectively.<sup>26</sup>

The correlation between neighborhood income and student loan balances could be partly explained by educational attainment: Borrowers with graduate or professional degrees frequently have greater loan balances than borrowers with bachelor's degrees (who in turn often have higher loan balances than non-four-year college degree holders), and more education is often associated with higher earning potential. It could also be that individuals living in relatively higher-income zip codes are more likely to attend and borrow for college. It is not possible to determine the direction of this relationship.

<sup>26</sup> Both mean and median are conditional on having at least once active student loan trade line.

**FIGURE 4. MEDIAN STUDENT LOAN BALANCE BY NEIGHBORHOOD INCOME**



Source: New York Fed Consumer Credit Panel/Equifax, American Community Survey



**Figure 5** shows median (blue) and average (orange) student loan balances by age cohort. The 18–25-year-old cohort has low median and average student loan balances relative to most other cohorts. Borrowing may be relatively low for members of this cohort in part because they are still in the borrowing phase. Relatedly, graduate school has been shown to be a large driver of student loan debt, and most 18-to-25 year olds are still too young to have attended or completed graduate school.<sup>27</sup>

Figure 5 also shows that the 36–45-year-old cohort has the greatest median and average balances (\$22,749 and \$44,241, respectively), consistent

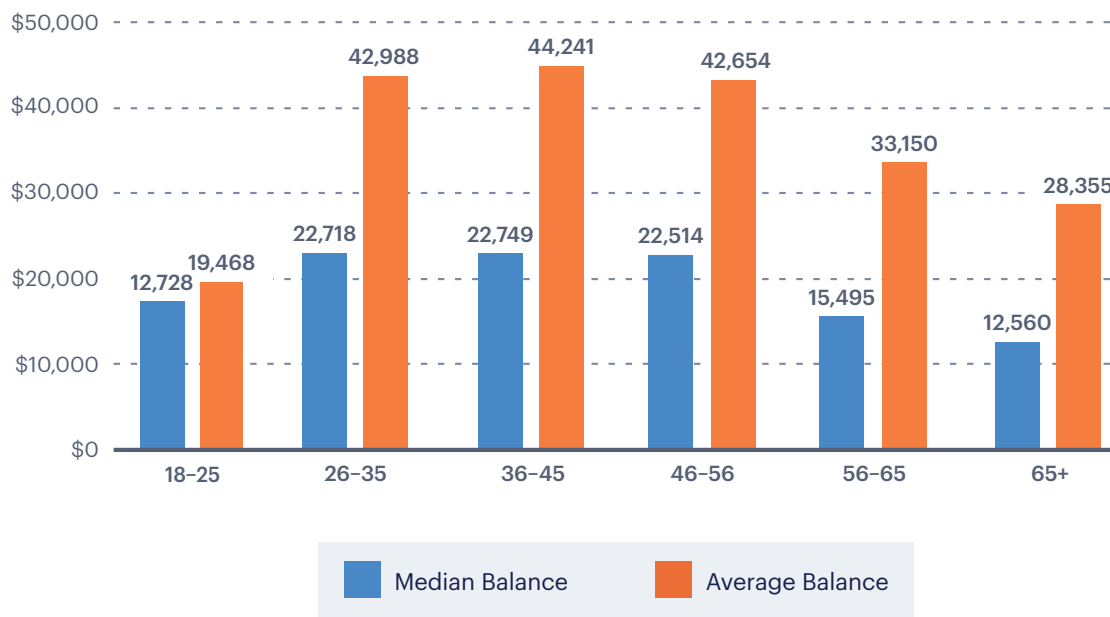
with national findings.<sup>28</sup> The 46–55-year-old and 56–65-year-old cohorts have relatively high student loan balances, which potentially could be explained by a few things. First, individuals could be borrowing for their children’s education. Additionally, individuals in these cohorts could be paying off student loan debt from additional education obtained later in life. Last, older student loan borrowers may exist in the data because they are delinquent and haven’t successfully repaid their loans.<sup>29</sup>

<sup>27</sup> Adam Looney and Constantine Yannelis (2019), “The Consequences of Student Loan Credit Expansions: Evidence from Three Decades of Default Cycles,” Federal Reserve Bank of Philadelphia Working Paper 19-32.

<sup>28</sup> Meta Brown, Andrew Haughwout, Donghoon Lee, Joelle Scally, and Wilbert van der Klaauw (2015), “The Student Loan Landscape,” *Liberty Street Economics* blog, Federal Reserve Bank of New York, available at [libertystreeteconomics.newyorkfed.org/2015/02/the\\_student\\_loan-landscape.html](http://libertystreeteconomics.newyorkfed.org/2015/02/the_student_loan-landscape.html).

<sup>29</sup> Unfortunately, from the CCP data alone, we are unable to disentangle adults who are borrowing to finance their own education from those who are borrowing to finance their child’s education.

**FIGURE 5. MEDIAN AND AVERAGE STUDENT LOAN BALANCE BY AGE COHORT**



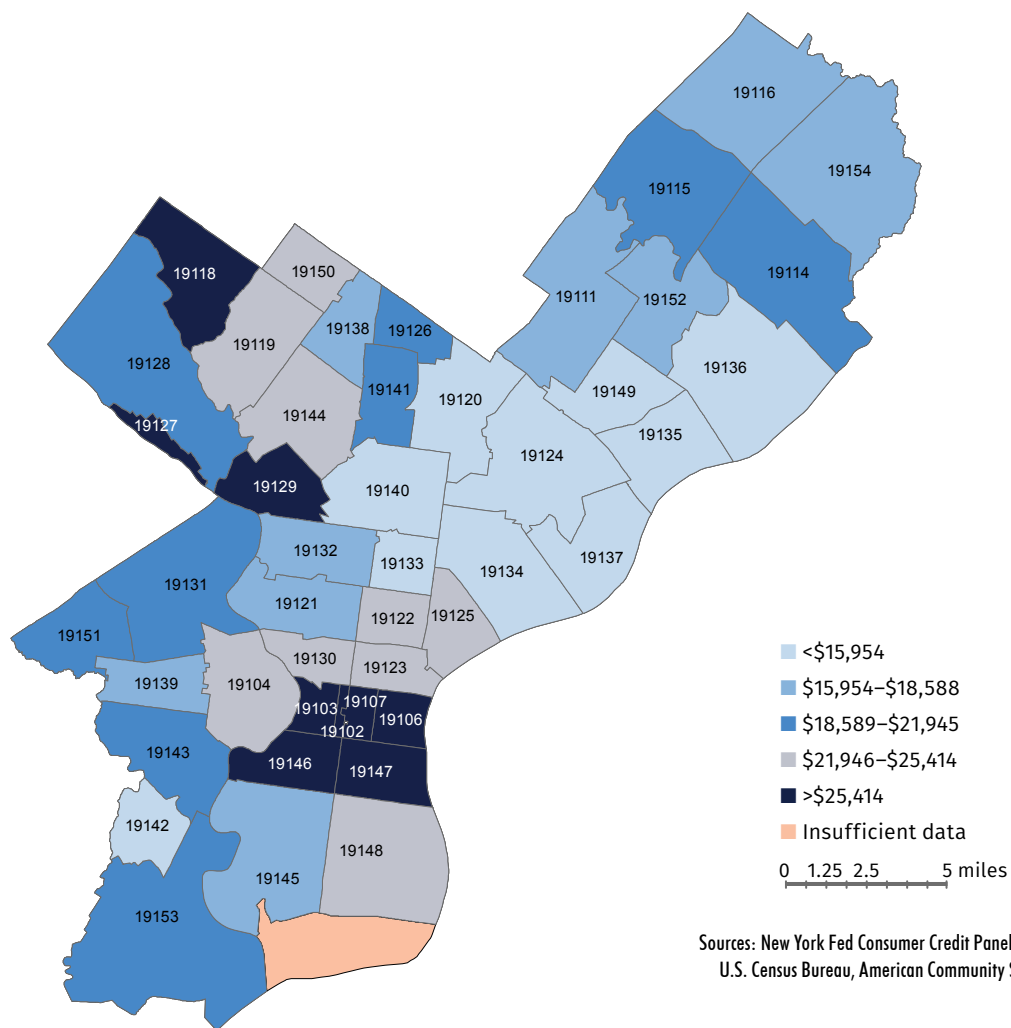
Source: New York Fed Consumer Credit Panel/Equifax, American Community Survey

**Figure 6** shows that there is great spatial variation in total student loan balances across the city. As with the zip codes with high shares of people with student loan debt (Figure 1), the zip codes with high median balances have relatively high median incomes (Figure 3). There is a large cluster of zip codes with small median student loan balances in North and Northeast Philadelphia.

Comparing Figure 6 with Figure 2 also reveals that zip codes with high balances tend to have higher educational attainment. The majority of zip codes in the highest quintile of median student loan balances are also in the top quintile with respect to the percent of adults with a bachelor’s degree or higher.<sup>30</sup> This suggests that individuals with the greatest balances are also likely to have completed their undergraduate degrees or obtained additional postsecondary education.

<sup>30</sup> Although not apparent from these maps, I calculate that 77.8 percent of the zip codes in the highest quintile of median student loan balances (Figure 6) are also in the top quintile with respect to the percent of adults with a bachelor’s degree or higher (Figure 2).

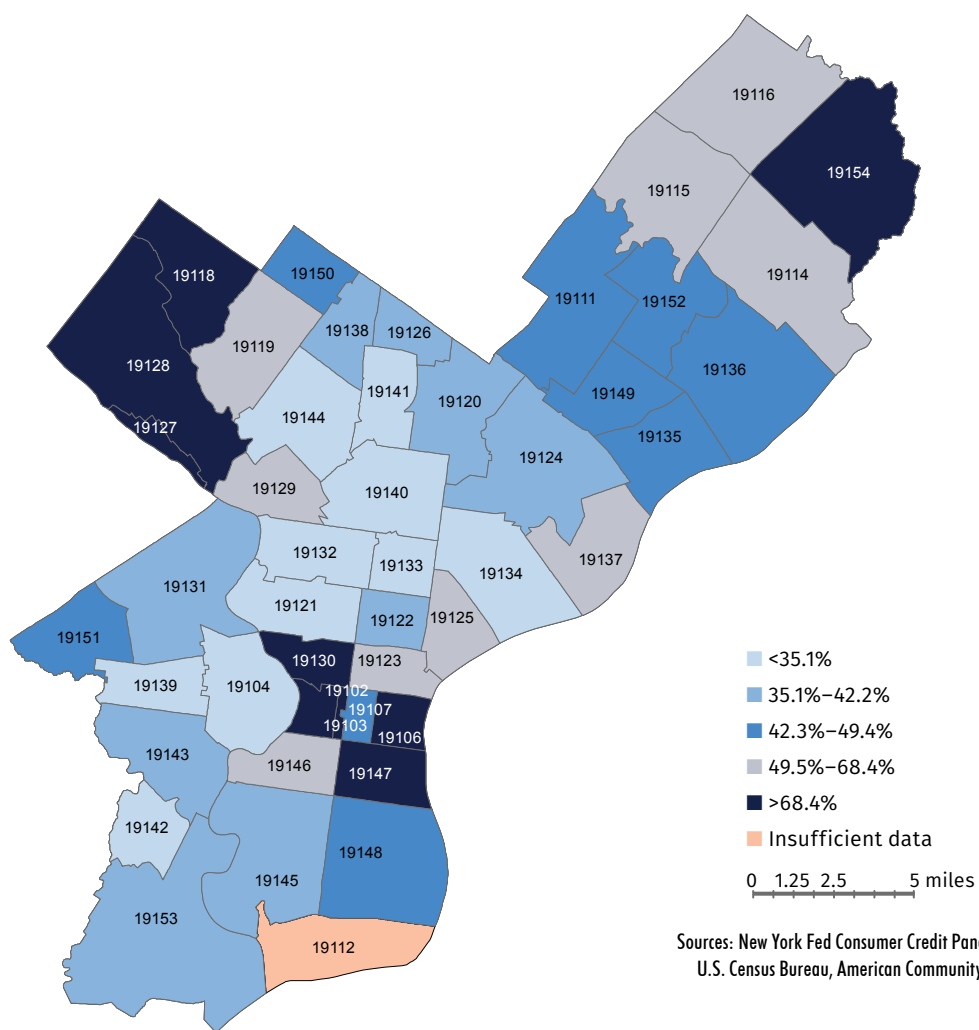
**FIGURE 6. MEDIAN STUDENT LOAN BALANCE BY ZIP CODE**



**Figure 7** shows zip code median loan balances divided by zip code median income to provide a different perspective on indebtedness and potential ability to repay debt. For example, a \$20,000 student loan balance when one’s income is \$40,000 is generally more difficult to repay than the same indebtedness level with an income of \$100,000.

Comparing Figure 7 with Figure 6 shows that the zip codes with the highest ratios of student loan debt to income are not always the zip codes with the highest median student loan debt. One case of interest is zip codes that are in the top quintile with respect to balance but do not have relatively high ratios of student loan debt to median income. The presence of zip codes with high median debt but relatively low ratios suggests that even though individuals are borrowing a great deal for education, these sums may be manageable, given the median household income in their neighborhoods. By contrast, many zip codes with high ratios are not located in high-income neighborhoods; for example, the cluster located in North Philadelphia.

**FIGURE 7. MEDIAN STUDENT LOAN BALANCE TO MEDIAN HOUSEHOLD INCOME BY ZIP CODE**



## Delinquency

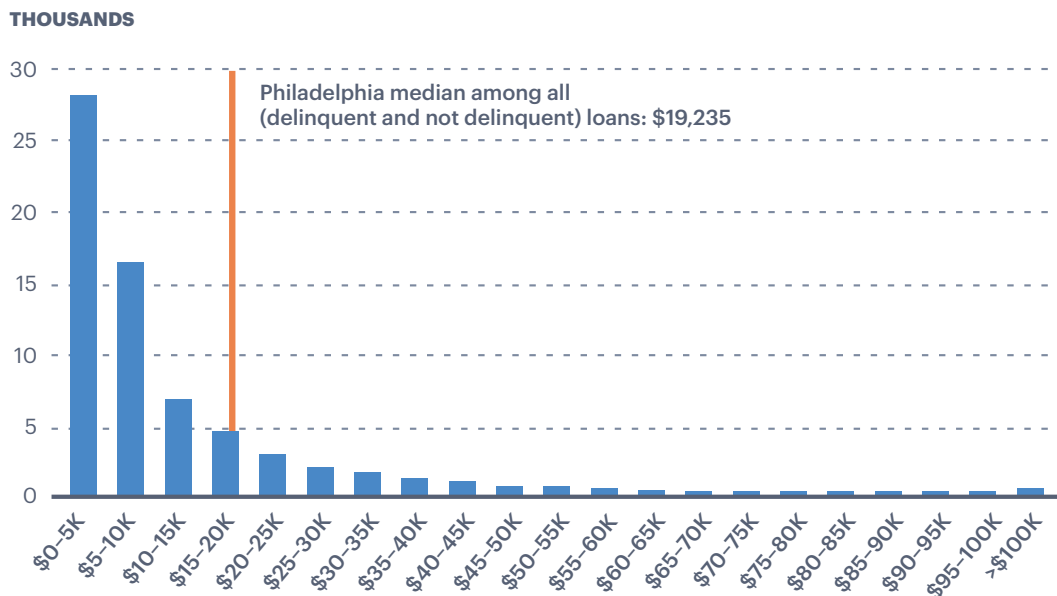
In Philadelphia, 21.5 percent of student loan borrowers were delinquent in the fourth quarter of 2018, meaning they were 90 days or more past due.<sup>31</sup> However, only 7 percent of borrowers were exactly 90 days or more past due. Thus, the majority of delinquent borrowers have missed many months of payments.<sup>32</sup> Student loans are less likely to be reported delinquent at earlier stages of delinquency than other types of credit accounts.

**Figure 8** shows the distribution of total delinquent balance (for delinquent borrowers) in \$5,000 increments. Figure 8 shows that compared with the distribution of all student loan balances, the distribution of delinquent balances is skewed toward smaller balances. Approximately 66.7 percent of all delinquent borrowers owe less than \$10,000. The median loan balance in delinquency status is \$5,876, much lower than the median loan balance among all (delinquent and not delinquent) loans in Philadelphia (\$19,235).

<sup>31</sup> Delinquency is defined in this report as 90 or more days past due on at least one student loan.

<sup>32</sup> This means that of those who are at least 90 days past due on one student loan trade line, the majority have missed more than three payments (for example, they could be 120, 180, or 270 days past due).

**FIGURE 8. DELINQUENT STUDENT LOAN BORROWERS BY LOAN BALANCE**



Source: New York Fed Consumer Credit Panel/Equifax, American Community Survey

**Figure 9** shows delinquency rates by zip code. Many of the zip codes with relatively low delinquency rates are also those with relatively high median incomes (Figure 3) and student loan debt balances (Figure 4). This pattern suggests that high balances do not necessarily imply high delinquency rates.<sup>33</sup>

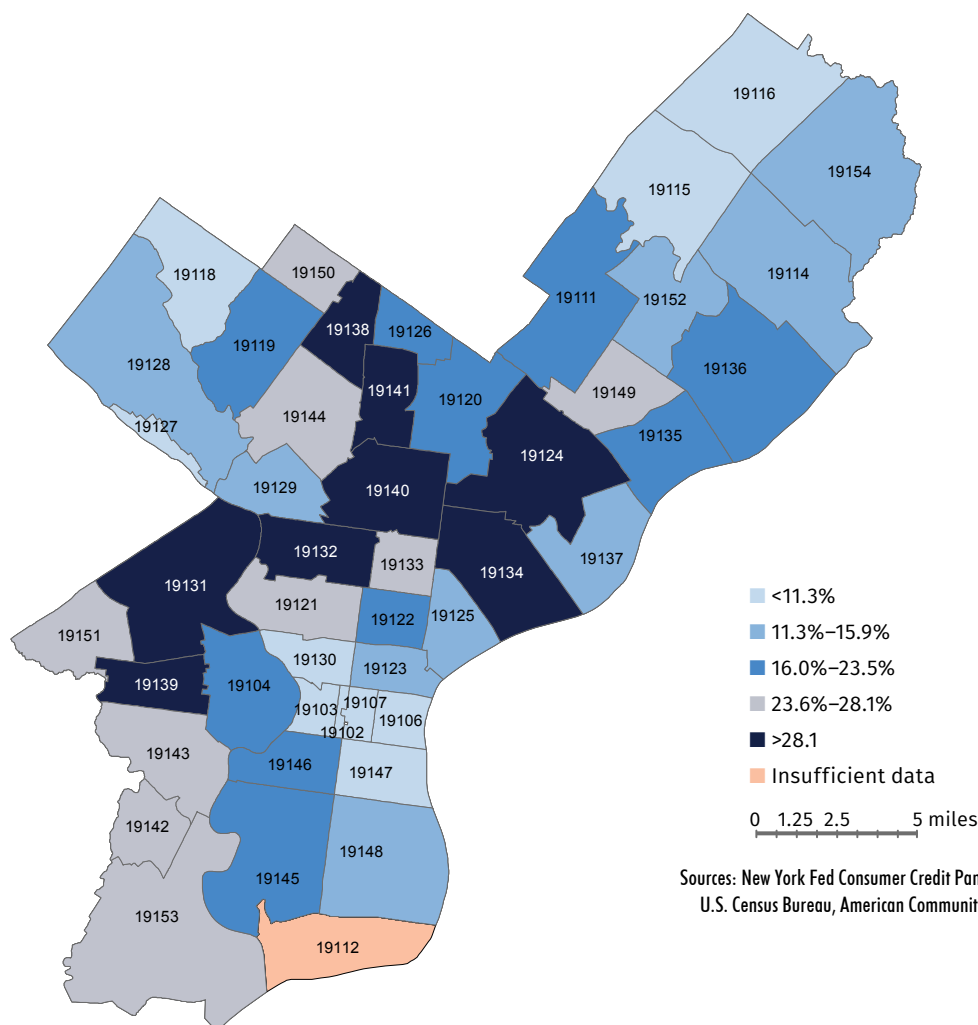
The zip codes with the lowest delinquency levels include relatively wealthy neighborhoods in Center City (zip codes 19102, 19103, 19106, and 19107), Manayunk (zip code 19127), and Chestnut Hill (zip code 19118).

Severe student loan delinquency is defined as being 270 days or more past due. In Philadelphia, 67.6 percent of delinquent borrowers are severely delinquent. Severely delinquent borrowers make up a majority of all delinquent borrowers because severely delinquent student loan debt is seldom discharged; thus, these borrowers' severely delinquent status persists in the credit bureau data.<sup>34</sup>

<sup>33</sup> Susan Dynarski (2016), *The Trouble with Student Loans? Low Earnings, not High Debt*, Washington, D.C.: Brookings Institution.

<sup>34</sup> A three-part "undue hardship" test is required in order to obtain a discharge. This is rare and difficult in practice.

**FIGURE 9. PERCENT OF STUDENT LOAN BORROWERS DELINQUENT (90+ DAYS PAST DUE) BY ZIP CODE**



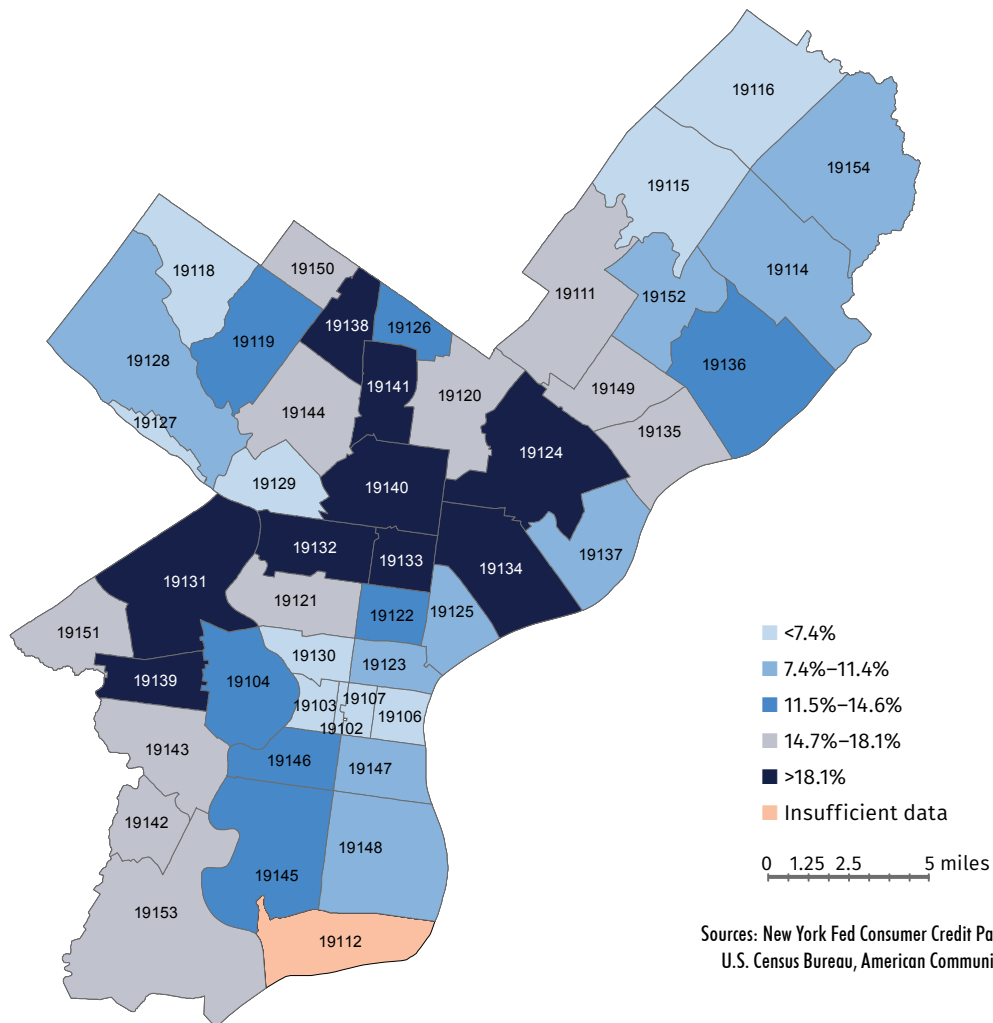
Severely delinquent student loan borrowers receive one chance to rehabilitate their loans in order to cure them; however, this is generally not successful.<sup>35</sup> Rehabilitating a student loan requires the borrower to agree — in writing — with their loan servicer to make nine affordable monthly payments. Payments must be made within 20 days of the due date. Over the course of the next 10 months, borrowers must make nine payments (in full). If the borrower completes both steps correctly, then the loans will not be in default.

If the loans aren't cured, then severely delinquent loans can be collected via tax refund or wage garnishment. Additionally, severely delinquent borrowers can struggle with accessing any type of credit in the future. For these reasons, financial security is threatened by reaching this delinquency status.

**Figure 10** shows that borrowers who live in lower-income zip codes are more likely to be severely delinquent (270 or more days past due) than borrowers who reside in higher-income geographies. The zip codes with the largest share of borrowers in severely delinquent status are located in North and West Philadelphia (Figure 10). It is

<sup>35</sup> Blagg, *Underwater on Student Debt*.

**FIGURE 10. PERCENT OF STUDENT LOAN BORROWERS SEVERELY DELINQUENT (270+ DAYS PAST DUE) BY ZIP CODE**



important to note that Figure 10 only shows the percentage of borrowers who are 270 or more days past due on their student loan payments and does not indicate that these zip codes have the greatest number of residents who are severely delinquent. Rather, of the zip code population that has a positive student loan balance, the share of borrowers who are 270 or more days past due on their student loans is largest in these zip codes.

### Philadelphia Repayment Outcomes

This section breaks current student loan trade lines into five categories to better understand how much progress borrowers make paying down their balances. The first three describe current borrowers. The first category, Current, Balance Down, is borrowers whose accounts were current and whose balance had declined relative to the previous quarter. The second category, Current, Balance Same, is borrowers whose accounts were current but whose balance was flat

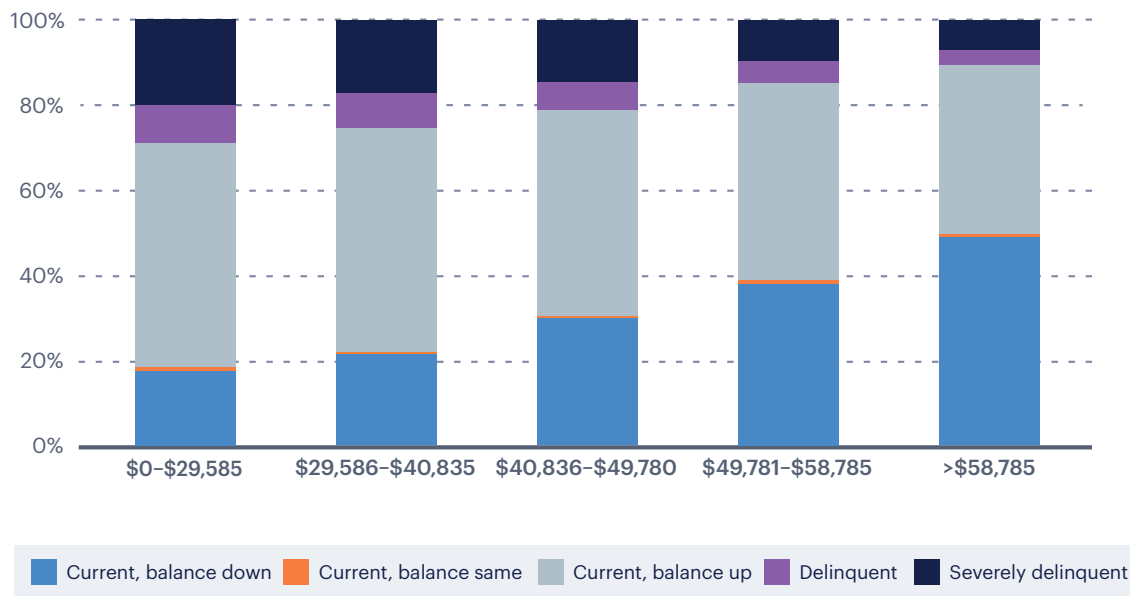
relative to the previous quarter.<sup>36</sup> The third category, Current, Balance Up, is individuals whose accounts were current but whose balance increased compared with the previous quarter. These are then combined with two categories of both delinquency status (Delinquent and Severely Delinquent) to provide a complete snapshot of repayment trends.

Among all individuals with student loan debt, 28.8 percent were current and experienced declining balances in the fourth quarter of 2018, 48.7 percent were current but experienced increasing balances, and 21.5 percent of student loan borrowers were delinquent during the fourth quarter of 2018.

**Figure 11** splits borrowers into income quintiles based on zip code median household income. It reveals a clear relationship between income and repayment success: As zip code income increases, the rate of delin-

<sup>36</sup> This suggests a situation in which the borrower is making monthly interest payments on time but is not paying down the capital portion of the loan. Alternatively, this could represent borrowers holding non-interest-accruing loans — such as Direct Subsidized Loans — during a deferment period.

**FIGURE 11. PHILADELPHIA BORROWERS' STUDENT LOAN REPAYMENT STATUS (PERCENT) BY NEIGHBORHOOD INCOME**



Source: New York Fed Consumer Credit Panel/Equifax, American Community Survey

quency declines and the share of individuals with current and declining balances rises. This is an encouraging result, as it suggests the borrower is on track for successful repayment.

Simultaneously, the percentage of individuals whose accounts were current but whose balances increased declines as zip code income increases. This category is difficult to interpret because it includes multiple types of borrowers and because it is not possible to identify current students in the CCP data.<sup>37</sup> Most borrowers who are currently enrolled in school are likely in this borrower category, as their balances are increasing with each semester or year of school. Also included are individuals who are not making adequate payments to offset the accruing interest. Borrowers could be making insufficient payments for multiple reasons, including participation in an income-based repayment plan (IBR).<sup>38</sup>

Figure 11 also shows that approximately 30 percent of borrowers living in the lowest-income (bottom quintile) zip codes were delinquent or seriously delinquent.<sup>39</sup> Within this population, less than 17 percent of borrowers were current and experienced declining balances. Slightly more than half of all student loan borrowers in these zip codes were current yet experienced increasing loan balances.

These numbers are quite different in the highest-income quintile of zip codes. In the highest-income zip codes, nearly 50 percent of borrowers have accounts that are current and experiencing declining balances while only 10 percent of student loan borrowers were delinquent or severely delinquent.

**Figure 12** shows the share of all current borrowers who experienced increasing balances with respect to the previous quarter as a share of all current borrowers, separately by zip code median income. Isolating current borrowers in this way helps identify those who may soon experience trouble making progress paying down their student loans. Barring current students, borrowers who are making monthly payments on time, yet experience increasing student loan balances, are less likely to successfully pay off their student loans. Should these borrowers start to miss payments and enter delinquency status, they will owe relatively large sums (compared with what they initially borrowed).

It shows that the share of current borrowers with increasing balances decreases with zip code income: 74 percent of current borrowers in the lowest-income zip codes experienced increasing student loan balances, while 45 percent of those in the highest-income zip codes did so. Previous scholarly literature has shown that black and Hispanic borrowers — especially female borrowers — struggle with student loan debt.<sup>40</sup> Therefore, Figure 13 shows patterns of student loan repayment status by zip code racial and ethnic composition. Specifically, each zip code is separated by quintile of the share of its residents who are black or Hispanic residents.<sup>41</sup>

**Figure 13** shows a strong negative relationship between the percent of zip code residents who are black or Hispanic and repayment success (whether measured by delinquency rates or the share of individuals with current and declining balances). In the quintile with the highest share of Hispanic and black residents, more than 85 percent of the zip code population is Hispanic or black. Thirty percent of borrowers in these neighborhoods were delinquent or severely delinquent. Approximately 16 percent of borrowers in these zip codes were current on their student loans and experienced declining balances.

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<sup>37</sup> The difficulty in isolating these types of borrowers is a challenge for researchers. Disaggregating current students from borrowers in a formal repayment plan to borrowers struggling to make an adequate payment will require additional data and analysis beyond the scope of this report. Even with these limitations, disaggregating repayment success into Delinquent, Severely Delinquent, and the three Current categories sheds light on how Philadelphia student loan borrowers are faring.

<sup>38</sup> For example, the federal Pay As You Earn (PAYE) plan generally calculates monthly payments as 10 percent of discretionary income. So, depending on the size of the loan and the borrower's income, the full monthly payment can be smaller than the accruing interest.

<sup>39</sup> Not only does the lowest zip code income quintile have the largest share of borrowers who are severely delinquent (Figure 12) but there is also a larger number of total borrowers in the category. Additionally, borrowers with active student loans (in any repayment status) are more prevalent in the lower- and middle-income zip codes. There is a sharp drop in the number of student loan borrowers in zip codes with higher median household incomes; this occurs without a complementary drop in zip code population.

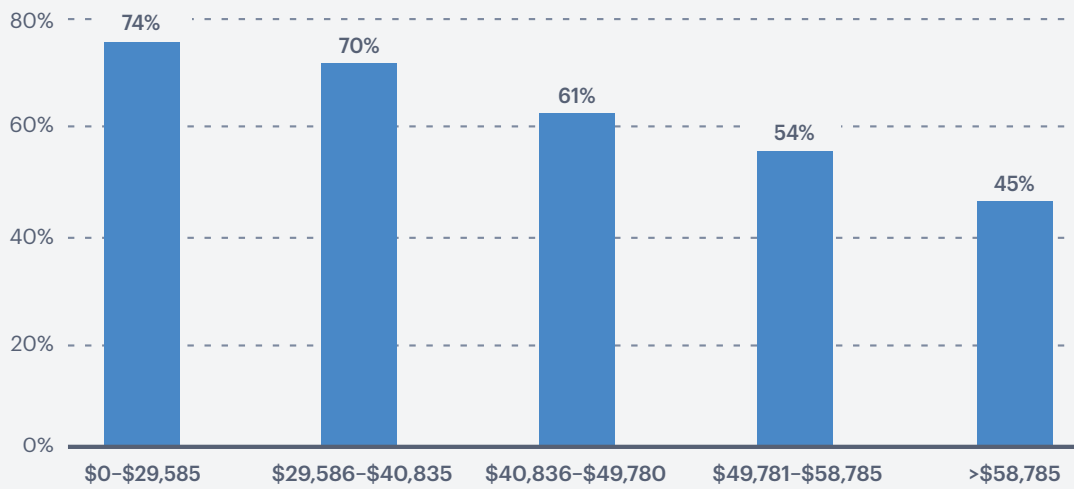
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<sup>40</sup> Bhattacharya, Price, and Addo, *Clipped Wings*.

<sup>41</sup> The CCP data contain neither a race variable nor a gender variable, so American Community Survey (ACS) data are used to estimate race and ethnicity at the zip code level.

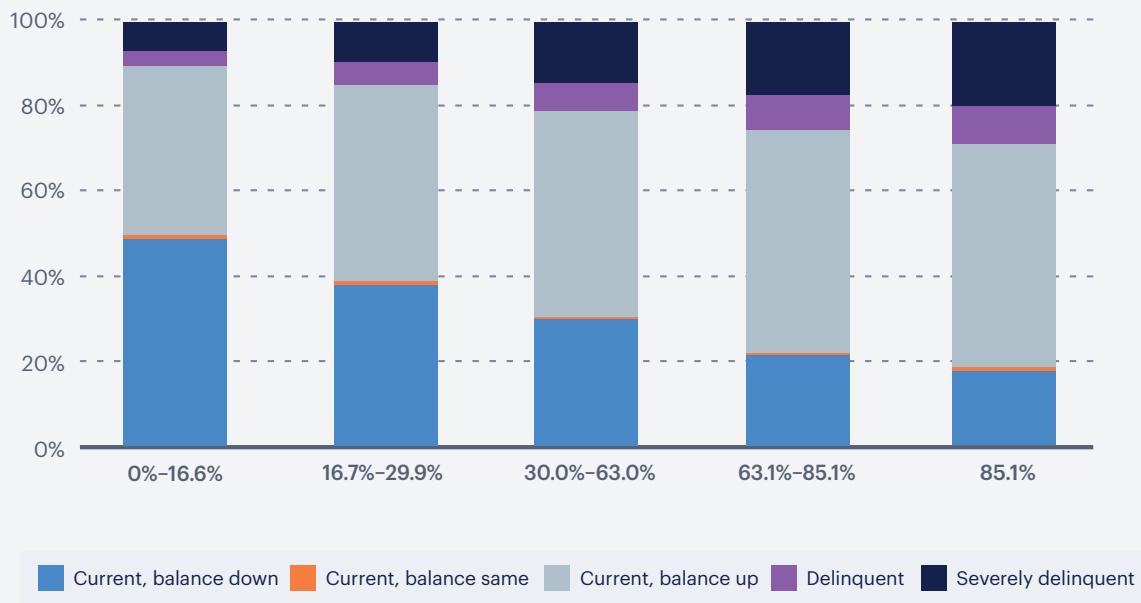


**FIGURE 12. SHARE "CURRENT" STATUS BORROWERS WHOSE BALANCES ARE INCREASING BY NEIGHBORHOOD INCOME**



Source: New York Fed Consumer Credit Panel/Equifax, American Community Survey

**FIGURE 13. STUDENT LOAN REPAYMENT SUCCESS BY PERCENTAGE OF ZIP CODE POPULATION OF BLACK AND HISPANIC RESIDENTS**



Source: New York Fed Consumer Credit Panel/Equifax, American Community Survey

Compared with the fifth quintile, the first quintile (zip codes where less than 16.7 percent of residents are black or Hispanic) experienced an 11 percent aggregate delinquency rate. Additionally, just over 43 percent of borrowers living in this zip code quintile had current student loan accounts and declining balances. This is slightly less than three times the share in the neighborhoods with the highest percentage of black and Hispanic residents. Again, this analysis cannot identify the race of the borrower. Therefore, while this pattern exists at the zip code level, it is incorrect to make assumptions about race and ethnicity with respect to student loan repayment status.

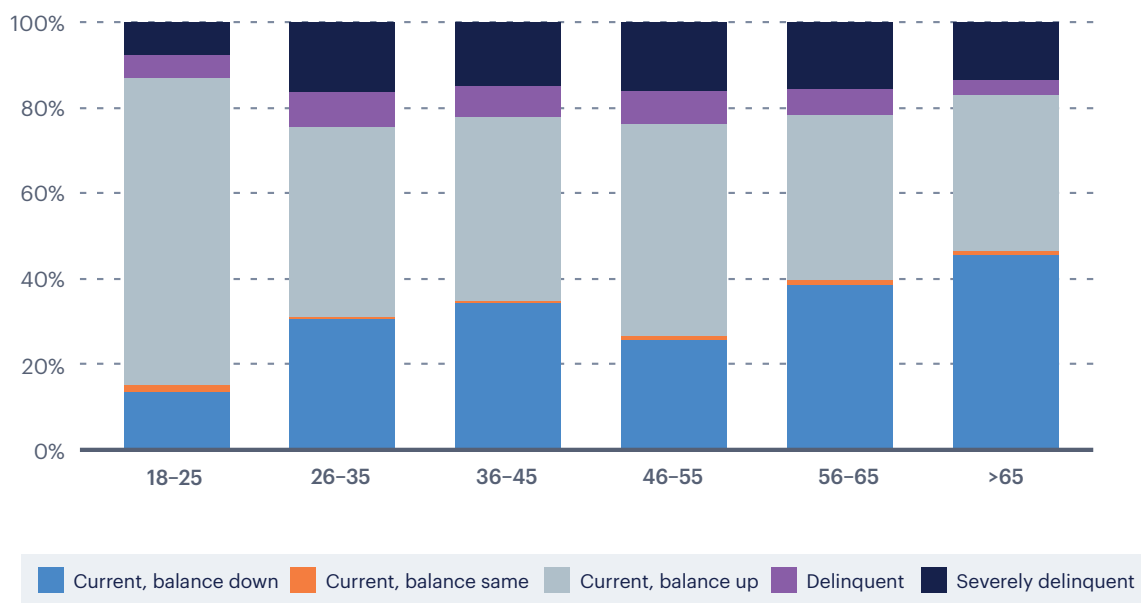
Finally, **Figure 14** disaggregates repayment status by age cohort. It shows that for younger borrowers, a relatively large share of individuals were current on their loans and experienced increasing balances. With respect to older borrowers in this category, the data prevent us from identifying whether the loan balance is due to their own education or a

family member's education.<sup>42</sup> This manifests itself in the data for the 46–55-year-old cohort. This subgroup has the second-largest of share of borrowers whose student loan debt is current, yet the balances were increasing. This is likely due to adults accruing more debt on behalf of their children.

Figure 14 also shows both the rates of delinquency (90 or more days past due) and severe delinquency (270 or more days past due). The set of borrowers who are 270 or more days past due make up more than half of all delinquent borrowers in each age cohort. The youngest cohort (18–25 years old) has the lowest delinquency rates. Younger borrowers are likely to be in the borrowing and deferment phases, which could help explain the relatively low rates of delinquencies. Delinquency is higher among the 26–35, 36–45, and 46–55-year-old age cohorts. After age 55, both delinquency rates and severe delinquency rates begin to decline.

<sup>42</sup> For example, there are federal loan products for parents, such as the Parent PLUS loan, that adults take out in order to help finance a child's education.

**FIGURE 14. REPAYMENT STATUS BY AGE COHORT**



Source: New York Fed Consumer Credit Panel/Equifax, American Community Survey

## Conclusion

This report shows that student loan debt, delinquency, and other outcomes differ significantly within Philadelphia. These differences exist by geographic location, by neighborhood characteristics, and by borrower age. By exploring and comparing these many differences, we are able to better understand important features and potential responses to the student loan crisis. There are three major conclusions.

First, student loan distress (as measured by delinquency or severe delinquency) is concentrated in specific Philadelphia neighborhoods. Results show that low- and moderate-income zip codes have more student loan borrowers in delinquency status, although borrowers in these zip codes also had smaller student loan balances on average. The report also shows that zip codes with greater percentages of black and Hispanic borrowers experience disproportionately higher rates of delinquency and disproportionately smaller shares of individuals with declining student loan balances.

Second, traditionally college-age individuals have the smallest median and average loan balances, and individuals in this age cohort experience the lowest delinquency rates. This is likely due to the large segment of adults who are currently attending school and have not yet completed borrowing for their higher education.

Finally, delinquent borrowers owe rather modest sums in Philadelphia. Additional attention and research is warranted for this group of borrowers, as relatively small amounts of debt can damage borrowers' credit for long periods of time. Many of these findings are not unique to Philadelphia. For example, at the national level, the majority of student loan borrowers in delinquency status have relatively small balances.<sup>43</sup> Additionally, both in Philadelphia and in the nation, borrowers in their 30s and early 40s have larger student loan debt balances than borrowers in other age cohorts.<sup>44</sup>

This report adds to the student loan debt micro analysis literature and provides insight into regions of Philadelphia with student loan-related financial distress. Pinpointing debt levels in specific geographies may allow for a more tailored policy approach, such as targeting enrollment assistance for debt repayment programs or encouraging forbearance and deferment take-up to specific neighborhoods. This analysis is an important first step in understanding student loan debt in Philadelphia, but additional research is warranted to uncover more about those who are struggling to repay their student loan debt. ■

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<sup>43</sup> Dynarski, *The Trouble with Student Loans*.

<sup>44</sup> Federal Reserve Bank of New York, *Quarterly Report on Household Debt and Credit* (2019Q1).

## APPENDIX

Philly Zips (ZCTAs)	Neighborhood	Share with Student Loans	Median Balance	Current, Balance			Delinquent	Severely Delinquent
				Decreasing	Un-changed	Increasing		
19102	Middle Center City	24.05%	\$39,440	62.96%	0.00%	31.48%	5.56%	1.85%
19103	Center City West	19.34%	\$47,906	46.12%	0.97%	47.09%	5.83%	4.37%
19104	University City, Belmont	15.71%	\$23,835	24.52%	2.20%	53.17%	20.11%	12.67%
19106	Old City	22.45%	\$33,074	56.80%	0.00%	38.40%	4.80%	3.20%
19107	Center City East	23.63%	\$46,225	41.96%	0.70%	48.95%	8.39%	4.90%
19111	Fox Chase	24.69%	\$16,031	32.01%	0.96%	47.13%	19.90%	14.65%
19114	Torresdale	25.68%	\$18,860	37.93%	0.63%	47.65%	13.79%	8.46%
19115	Bustleton	23.22%	\$20,372	36.86%	0.64%	51.28%	11.22%	7.37%
19116	Somerton	19.97%	\$15,969	40.67%	2.61%	45.90%	10.82%	6.72%
19118	Chestnut Hill	20.45%	\$26,964	41.76%	1.10%	48.35%	8.79%	5.49%
19119	Mt. Airy	25.98%	\$25,414	28.81%	0.66%	47.68%	22.85%	14.57%
19120	Olney, Lawncrest	24.68%	\$15,862	17.39%	0.97%	58.13%	23.51%	15.14%
19121	Brewerytown, Strawberry Mansion	30.83%	\$18,175	18.48%	0.82%	53.80%	26.90%	17.66%
19122	North Philadelphia East, Kensington	20.38%	\$22,626	28.42%	0.55%	51.37%	19.67%	13.11%
19123	Poplar, Northern Liberties	26.95%	\$22,673	44.38%	0.59%	40.83%	14.20%	9.47%
19124	Frankford	28.95%	\$14,230	18.42%	0.74%	51.41%	29.42%	20.06%
19125	Fishtown	26.57%	\$24,716	51.16%	1.94%	34.50%	12.40%	8.14%

<b>Philly Zips (ZCTAs)</b>	<b>Household Median Income</b>	<b>Less than College Education</b>	<b>Associate's Degree</b>	<b>Bachelor's Degree</b>	<b>Grad/Prof Degree</b>	<b>Percent Black</b>	<b>Percent White</b>	<b>Percent Asian</b>	<b>Percent Hispanic</b>
19102	\$99,167	10.89%	3.70%	36.75%	48.66%	3.31%	71.10%	17.00%	7.38%
19103	\$70,638	17.31%	1.78%	36.31%	44.59%	6.60%	72.69%	11.84%	6.02%
19104	\$25,005	59.84%	4.39%	17.02%	18.75%	42.93%	34.21%	14.20%	4.82%
19106	\$106,823	20.93%	1.87%	37.77%	39.43%	10.49%	73.95%	7.47%	6.29%
19107	\$49,776	30.49%	3.61%	30.89%	35.01%	8.22%	55.86%	27.42%	4.62%
19111	\$46,214	70.65%	7.28%	15.64%	6.44%	21.96%	44.28%	10.50%	19.70%
19114	\$56,785	67.69%	7.03%	17.11%	8.17%	10.25%	76.76%	3.82%	8.30%
19115	\$50,810	58.24%	7.01%	22.19%	12.56%	7.99%	68.86%	12.99%	8.06%
19116	\$51,267	66.18%	8.04%	16.55%	9.23%	6.77%	69.72%	14.84%	5.33%
19118	\$82,712	27.81%	4.87%	30.07%	37.26%	17.22%	64.73%	5.79%	8.55%
19119	\$56,018	48.36%	5.43%	20.15%	26.05%	61.32%	28.86%	1.49%	3.24%
19120	\$33,117	80.16%	7.51%	8.67%	3.66%	47.90%	7.55%	12.86%	30.07%
19121	\$17,482	82.96%	4.40%	7.34%	5.30%	77.24%	13.57%	3.35%	4.14%
19122	\$32,284	72.17%	3.46%	17.51%	6.85%	36.10%	26.91%	6.36%	28.25%
19123	\$60,400	43.03%	4.44%	30.68%	21.85%	30.92%	45.77%	7.12%	11.28%
19124	\$31,219	84.61%	5.50%	6.74%	3.15%	37.21%	14.57%	5.51%	39.42%
19125	\$56,508	57.39%	4.86%	25.18%	12.58%	4.29%	73.39%	6.24%	13.96%

Philly Zips (ZCTAs)	Neighborhood	Share with Student Loans	Median Balance	Current, Balance			Delinquent	Severely Delinquent
				Decreasing	Unchanged	Increasing		
19126	West Oak Lane, East Oak Lane	30.63%	\$19,817	24.19%	1.61%	53.23%	20.97%	12.37%
19127	Manayunk	32.57%	\$28,052	51.14%	0.00%	43.18%	5.68%	4.55%
19128	Roxborough	30.30%	\$21,602	50.00%	0.43%	37.28%	12.28%	7.76%
19129	East Falls	26.29%	\$29,273	40.16%	0.00%	48.36%	11.48%	5.74%
19130	Fairmount, Francisville, Spring Garden	29.10%	\$24,373	53.01%	0.90%	37.65%	8.43%	6.33%
19131	Wynnefield	26.07%	\$20,253	18.63%	0.89%	51.88%	28.60%	18.63%
19132	Strawberry Mansion, Stanton	25.90%	\$16,111	12.58%	0.94%	46.54%	39.94%	28.62%
19133	Fairhill, West Kensington	17.42%	\$14,072	16.67%	0.60%	54.76%	27.98%	19.05%
19134	Port Richmond, Kensington	19.28%	\$12,911	23.23%	2.20%	42.54%	32.03%	23.47%
19135	Tacony, Wissinoming	26.28%	\$15,478	24.45%	0.94%	51.10%	23.51%	17.55%
19136	Holmesburg	23.12%	\$15,953	32.54%	1.36%	47.80%	18.31%	12.54%
19137	Bridesburg	24.33%	\$14,421	39.19%	2.70%	44.59%	13.51%	10.81%
19138	Germantown East, West Oak Lane	28.91%	\$17,025	14.97%	0.51%	54.82%	29.70%	22.34%
19139	West Philadelphia	29.79%	\$18,336	14.88%	0.62%	55.37%	29.13%	19.01%
19140	Tioga, Nicetown, Hunting Park	23.65%	\$12,438	9.69%	1.18%	53.19%	35.93%	24.82%
19141	Logan, Fern Rock, Ogontz	27.31%	\$20,258	14.03%	0.90%	56.12%	28.96%	20.00%
19142	Elmwood Park	28.75%	\$14,612	14.39%	0.72%	57.19%	27.70%	16.19%
19143	Kingressing, Cobbs Creek, Cedar Park	27.72%	\$18,951	20.98%	0.72%	51.87%	26.44%	17.82%
19144	Germantown	32.00%	\$22,253	18.48%	0.78%	54.28%	26.46%	18.06%

<b>Philly Zips (ZCTAs)</b>	<b>Household Median Income</b>	<b>Less than College Education</b>	<b>Associate's Degree</b>	<b>Bachelor's Degree</b>	<b>Grad/Prof Degree</b>	<b>Percent Black</b>	<b>Percent White</b>	<b>Percent Asian</b>	<b>Percent Hispanic</b>
19126	\$37,819	71.01%	6.43%	13.71%	8.85%	81.89%	5.72%	5.20%	3.69%
19127	\$66,325	40.34%	3.19%	39.23%	17.24%	10.55%	81.19%	1.01%	5.52%
19128	\$67,530	46.89%	5.30%	28.35%	19.46%	10.47%	77.85%	3.39%	4.60%
19129	\$50,162	46.24%	4.57%	25.40%	23.79%	34.62%	51.80%	4.80%	4.77%
19130	\$76,464	29.59%	2.10%	34.14%	34.17%	18.86%	65.77%	6.73%	6.19%
19131	\$32,873	69.19%	6.68%	13.49%	10.64%	80.49%	11.07%	3.56%	2.91%
19132	\$18,918	87.50%	4.69%	5.52%	2.29%	88.23%	5.51%	0.97%	3.18%
19133	\$15,232	91.36%	4.71%	3.19%	0.75%	31.92%	5.41%	1.03%	60.07%
19134	\$27,546	85.24%	4.51%	7.51%	2.74%	15.12%	34.77%	1.15%	47.44%
19135	\$43,192	80.72%	6.07%	10.11%	3.09%	23.84%	47.02%	3.63%	23.67%
19136	\$45,570	78.71%	5.19%	10.89%	5.21%	14.55%	67.85%	3.04%	11.65%
19137	\$52,376	79.14%	5.67%	9.69%	5.60%	2.00%	87.94%	0.30%	9.00%
19138	\$37,842	79.14%	6.32%	9.19%	5.35%	91.53%	2.92%	0.44%	1.96%
19139	\$26,804	78.73%	6.46%	9.61%	5.20%	87.89%	5.02%	1.65%	3.05%
19140	\$18,557	90.02%	3.94%	3.74%	2.31%	50.27%	5.29%	0.82%	42.37%
19141	\$28,398	77.92%	6.34%	11.22%	4.51%	83.82%	6.05%	4.85%	3.44%
19142	\$29,581	85.14%	5.34%	6.66%	2.86%	80.83%	6.10%	8.40%	3.32%
19143	\$32,741	71.99%	5.54%	13.39%	9.09%	79.73%	11.54%	2.23%	3.30%
19144	\$29,505	66.05%	5.50%	15.55%	12.90%	72.77%	18.01%	1.86%	3.62%

Philly Zips (ZCTAs)	Neighborhood	Share with Student Loans	Median Balance	Current, Balance			Delinquent	Severely Delinquent
				Decreasing	Unchanged	Increasing		
19145	Grays Ferry, Newbold, Packer Park	26.31%	\$18,588	35.06%	0.83%	45.02%	19.09%	12.66%
19146	Graduate Hospital, Point Breeze, Grays Ferry	30.12%	\$29,197	38.62%	0.63%	43.22%	17.54%	11.69%
19147	Queen Village, Passyunk Square	25.62%	\$26,672	53.53%	1.22%	34.06%	11.19%	8.76%
19148	East Passyunk, Pennsport, Lower Moyamensing	20.67%	\$22,652	44.26%	0.23%	39.58%	15.93%	11.48%
19149	Oxford Circle, Mayfair	22.30%	\$15,372	24.84%	1.07%	50.32%	23.77%	17.56%
19150	Stenton, Cedarbrook	31.53%	\$23,468	23.86%	0.65%	50.98%	24.51%	14.71%
19151	Overbrook	28.62%	\$19,138	18.83%	0.00%	57.03%	24.14%	16.18%
19152	Rhawnhurst	20.90%	\$17,776	32.16%	1.41%	50.88%	15.55%	9.89%
19153	Eastwick	24.79%	\$21,945	28.91%	0.00%	42.97%	28.13%	16.41%
19154	Millbrook, Parkwood	29.59%	\$16,550	38.46%	0.80%	47.21%	13.53%	8.22%



<b>Philly Zips (ZCTAs)</b>	<b>Household Median Income</b>	<b>Less than College Education</b>	<b>Associate's Degree</b>	<b>Bachelor's Degree</b>	<b>Grad/Prof Degree</b>	<b>Percent Black</b>	<b>Percent White</b>	<b>Percent Asian</b>	<b>Percent Hispanic</b>
19145	\$39,374	72.32%	6.63%	14.74%	6.32%	31.46%	48.03%	13.19%	5.55%
19146	\$58,784	46.92%	3.92%	24.82%	24.34%	45.16%	43.23%	5.02%	3.48%
19147	\$73,231	38.85%	3.86%	29.72%	27.58%	8.76%	64.20%	12.56%	11.59%
19148	\$49,469	71.25%	4.87%	15.55%	8.33%	6.73%	55.21%	21.29%	13.72%
19149	\$41,599	80.31%	6.43%	9.55%	3.72%	27.39%	33.29%	15.20%	21.04%
19150	\$44,764	66.82%	9.20%	15.08%	8.90%	94.56%	1.85%	0.50%	1.38%
19151	\$47,287	68.61%	6.77%	14.58%	10.03%	86.74%	6.86%	0.87%	3.70%
19152	\$50,159	68.34%	5.00%	18.47%	8.19%	14.23%	59.93%	12.61%	10.69%
19153	\$41,063	70.41%	4.82%	13.79%	10.98%	76.04%	11.80%	3.51%	6.91%
19154	\$61,892	70.86%	7.38%	15.18%	6.58%	7.72%	81.32%	3.45%	6.46%

Source: New York Fed Consumer Credit Panel/Equifax, American Community Survey



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