PAY EQUITY IN NYC

New York City Council

Analysis of pay differences in the New York City municipal workforce

NEW YORK CITY COUNCIL

New York City Council Data Operations Unit

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Dear New Yorkers,

Every day, hundreds of thousands of New Yorkers wake up and go to work for the City that they love. They are our sanitation workers, our social service workers, our firefighters, and our custodians. They come from the City's many diverse communities and bring a wealth of skills, knowledge, and experience to their jobs. However, as has been true in industries across this country for generations, the compensation that these individuals receive for their hard work is not always equitable.

In 2018, the New York City Council heard and passed Local Law 18, which required the Mayor's Office of Data Analytics to report pay data from City agencies. The bill required the Mayoral Administration to provide the Council direct access to the data, so the Council could conduct its own statistical analysis and determine whether any disparities exist across gender, race, age, and other categories protected by the City's Human Rights Law. In advancing Local Law 18, the Council recognized that the contributions of all employees, including non-white individuals and women, and especially non-white women, must be valued where it matters most – in their paychecks.

Of course, pay inequity is not a new problem. It is one that has evolved over time; and one that has become more difficult to identify as instances of direct wage discrimination have subsided. This report, like others before it, finds that individuals with the same civil service title generally receive equal pay. This success can be directly attributed to the strength of our unions and their ability to bargain collectively. However, our analysis also found that municipal employees are often concentrated in certain jobs along gender and racial lines, and that these jobs come with vastly different levels of compensation. Inequity in this form, known as occupational segregation, is not unique to the municipal workforce; however, government can and should lead the way in eradicating inequity wherever it arises.

Our municipal workforce came together like never before this past year as our City faced the worst of the COVID-19 pandemic, providing meals to students and their families, staffing our testing and vaccination sites, and facing the virus head on when providing emergency services. The work these individuals do keeps the Greatest City in the World running, and it is only right that they be compensated equitably and fairly. However, we can only address these disparities if we know they exist. Identifying the ways in which inequity persists in our City's pay structure, as set forth in this report and analysis, is therefore a necessary step toward ensuring that all our City's employees are valued for their extraordinary contributions.

Sincerely,

Corey Johnson
Speaker

EXECUTIVE SUMMARY

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Introduction

In 2019, the New York City Council passed Local Law 18 (the "Pay Equity Law" or "Local Law 18"), sponsored by Majority Leader Laurie Cumbo, for the purpose of analyzing pay disparities based on race, ethnicity, gender, and other protected classes among employees of the City of New York (NYC).

The call for pay equity, or to provide "equal pay for equal work" in the United States is a multi-faceted and evolving problem that has persisted for generations. Federal, state, and local governments have attempted to address inequality in employment opportunities and unequal pay through various forms of anti-discrimination policies and legislation since the 19th century.[1] However, those efforts—which have made it unlawful to discriminate in hiring or pay based on protected classes and have allowed individuals the opportunity to file complaints and take legal action if they have been discriminated against[2]—while helpful, have not eliminated these issues.

Nationally, there continue to be significant wage gaps based on gender, race, and ethnicity. At the local level, the Council's analysis revealed small wage gaps within the same positions in City government. Additionally, among New York City municipal employees, the analysis found that inequity continues to exist in the form of occupational segregation. That is, certain races, ethnicities, and genders are concentrated in certain positions within City government, and those positions and careers are compensated differently than jobs filled by a different demographic of employees. This siloing of demographic groups in particular types of work may contribute to inequity in compensation and exacerbate the pay gap.[3]

The impact of inequity in compensation among the workforce affects more than just individual employees. In fact, studies have estimated that eliminating the pay gap could reduce child and family poverty by more than 40%.[4] The salaries that families live on also affect the type of housing they can afford, the educational opportunities they have access to, the quality of the food they eat, the healthcare they receive, the transportation choices available to them, and the activities and experiences they have throughout their lifetimes.[5] The lack of equal financial opportunity can therefore have a cyclical, generational impact; New York City—as the largest employer in the city[6]—can and should play a vital role in ensuring equity for all New Yorkers.

The following report outlines the Council's analysis of pay among the NYC municipal workforce, including an overview of the Pay Equity Law, takeaways based on the dataset received, recommendations for achieving greater equity in City worker compensation, and areas for further analysis.

For purposes of this report, the "NYC municipal workforce" refers to employees represented in the dataset provided to the City Council pursuant to Local Law 18. For additional details on which employees this includes, see "Data, Limitations, and Methodology," infra p. 16. The data reported by the Mayoral Administration pursuant to Local Law 18 requires the Mayoral Administration to provide data on "sex"; however, the data received was presented as "gender," but uses the terms "male" and "female." Additionally, race information was presented as: "White," "Black or African American," "Hispanic or Latino," "Asian," "Other," and

"Ethnicity Unknown or Chose Not to Disclose." The Council's analysis and this report thus also use these terms, to reflect the information exactly as it was provided by the Administration. For details on the grouping of race and ethnicity, see Appendix B.

Key Findings (2018)

Citywide Findings

- There is a very large non-adjusted pay gap between Black or African American or Hispanic or Latino employees and white employees, and between male and female employees in the NYC municipal workforce. This pay gap shrinks dramatically when comparing individuals in the same job title. This suggests that occupational segregation—the over- (or under-) representation of certain demographic categories of individuals in occupations that pay differently—remains a driving force of inequity among City employees.

    - Within the NYC municipal workforce, the median salary for male employees is $21,600 higher than the median salary for female employees, looking only at differences in salary by gender. However, a female employee with the same civil service title, who is in the same agency and has the same demographic characteristics as a male employee, would expect to make 99.6% the salary of a male employee.
    - Within the NYC municipal workforce, the median salary for a white employee is $27,800 higher than the median salary for a Black or African American employee and $22,200 higher than the median salary for a Hispanic or Latino employee, looking only at differences in salary by race/ethnicity. However, a Black or African American employee with the same civil service title, who is in the same agency and has the same demographic characteristics as a white employee, would expect to make 98.6% the salary of a white employee. A Hispanic or Latino employee with the same civil service title, who is in the same agency and has the same demographic characteristics as a non-Hispanic or Latino white employee would expect to make 98.9% the salary of a non-Hispanic or Latino white employee.

- Even after adjusting for job title and other variables that may affect salaries, the analysis found a small but significant difference in the salaries of non-white employees, particularly non-white female employees. For example, Black or African American female employees and Hispanic or Latino[I] females are expected to make 1.9% and 1.5% less, respectively, than white male employees; Black or African American male employees are expected to earn 1.2% less than white male employees.

- The civil service titles with the lowest median salaries have a larger proportion of female and non-white employees. The civil service titles with the highest median salaries have a smaller proportion of female and non-white employees.

[I] The data reported by the Mayoral Administration pursuant to Local Law 18 was presented as "Hispanic or Latino," regardless of sex or gender. The Council's analysis and this report thus also use that term, to reflect the information exactly as it was provided by the Administration.

Agency Findings and Other Takeaways:

- Of the five largest agencies in the dataset, the Fire Department (FDNY) has the biggest difference between the proportion of white employees (57% of the agency) and the city's labor force as a whole (35% of the entire labor force of NYC).[7] The Human Resources Administration (HRA) has the biggest difference between the proportion of Black or African American employees (53% of the agency) and the city's labor force as a whole (18% of the entire labor force of NYC).[8] The median salary at FDNY is $85,292, while the median salary at HRA is $48,417.

- The agencies with the highest median salary difference between males and females are Department of Information Technology & Telecommunications (DOITT), New York City Police Department (NYPD), New York City Fire Department (FDNY), Department of Sanitation (DSNY), Department Environmental Protection (DEP).

- Municipal employees' earnings peak around age 45, with employees in both younger and older age groups making less than the median salary of the entire municipal workforce ($67,792).

- The median age of female employees is greater than the median age of male employees.

- Black or African American female employees represent the largest proportion of female employees that are 60 years or older (50%).

- The median salary of male employees over the age of 30 (~$85,000) is considerably higher than that of female employees over the age of 30 (~$60,000).

- Uniformed employees[II] make up 44% of the workforce represented in the subset of data analyzed and have a median salary of $85,292, which does not differ between male and female employees. Meanwhile, non-uniformed employees have a median salary of $60,248 and median age of 47.[III]

- At nearly[IV] every level of education, male employees have a higher median salary than female employees do. White employees always have a higher median salary than non-white employees do.

- Female employees make up the majority of part-time employees by gender (70%); in comparison, they represent only 40% of full-time employees. Similarly, while Black or African American part-time employees are a plurality by race and ethnicity (41%), only 29% of full-time employees are Black or African American.

II See Appendix D: Uniform Title Codes for a complete list of job titles for uniformed employees.
III The dataset does not include pedagogues employed by the DOE.
IV Female employees with post-doctoral degrees make more than male employees with post-doctoral degrees. The dataset includes 25 employees with post-doctoral degrees.

Recommendations

Better data

- To allow future analyses to determine changes in pay year over year and provide a more complete picture of the City workforce, including insights into attrition, promotion, advancement, or hindrances in pay equity over time, the Council will consider legislation that clarifies[V] and expands the Pay Equity Law to require the following additional information:
  - Historical data regarding all prior City employees;
  - Data on Department of Education (DOE) pedagogical employees;
  - All agencies and employees found in the Department for Citywide Administrative Services' (DCAS) NYC Government Workforce Profile Report;[VI]
  - Unique identifier for each employee;[VII]
  - Current title entry date;[VIII]
  - Full leave status history, including the date and amount of leave taken and cause of leave (and specifically, whether the leave is related to new parenthood);
  - Whether a civil service title is a promotional title;[IX]
  - Business title;[X]
  - Union status, including unique code, description of the union representing the civil service title, and bargaining unit name;[XI]
  - Overtime and benefit pay;
  - Whether a civil service title is a uniformed position;[XII] and
  - Minimum education requirement for position and education level attained by employee.[XIII]

V The Pay Equity Law passed in 2019 requires the City to report a wide array of information on the municipal workforce. In certain instances, there were disagreements in the interpretation of the law, leading to a discrepancy between what was reported by the City, and the Council's original intent behind the legislation. In other instances, due to technological shortcomings, the data was not reported pursuant to the law.

VI The report mandated by the Pay Equity Law includes only 36 agencies, while 72 agencies are reported in the DCAS report, including DOE pedagogues, the New York City Housing Authority, NYC Health + Hospitals, the School Construction Authority, elected bodies, and several boards and commissions.

VII If the Administration were to provide the required historical data (not currently included in the dataset), a unique identifier that is not personally identifiable would be needed to track employees over time, which would allow for analysis on promotion, attrition and changes in pay.

VIII In addition to start date of employment with the City, which is currently included in the dataset, the title entry date would provide the start date of the most recent position.

IX Knowing which titles are the next title in the career ladder would allow for analysis on employee promotions and make it possible to assess whether there are correlations between certain titles and demographics of employees that have strong career promotion opportunities versus demographics that do not.

X This data is currently reported but could be improved by indicating "NA" for employees who do not have a business title. If an employee's business title matches their civil service title, then the business title should be filled with the civil service title.

XI Although union information is already available as a separate dataset on the open data portal, adding this information to the Local Law 18 dataset would allow for more efficient analysis on the effect unions may have on pay.

XII Whether a job title was a uniformed title was not indicated in the dataset. See "Uniformed Titles" under the "Data, Limitations, and Methodology" section, *infra* p. 16 , for details on how the Council performed uniformed analysis in this report.

XIII Employees' educational attainment is presently reported in the dataset, but is available only if entered by the employee. The majority of employees did not report their education level.

Job Pipeline, Hiring Practices, and the Civil Service Exam System

- The Council will consider legislation to require reporting on the race and gender of applicants for the civil service exam and on admission and graduation statistics from agency training programs by expanding Local Law 49 of 2015 to apply to all agencies. This expansion should include:
  - (i) Requiring all agencies to collect demographic information from applicants, in a non-personally identifiable manner, to assess diversity in the applicant pool; and
  - (ii) Requiring admission and graduation statistics from all agency training programs required of successful civil service examinees.
- The City should examine job postings and recruitment materials for municipal jobs to evaluate whether biases exist that may be turning away qualified applicants before they even consider applying.
- The Council will consider legislation that expands Local Law 173 of 2018, which requires information about upcoming civil service exams be distributed to high school students in the year that they are graduating, to require DOE and DCAS to reach out to students earlier to make them aware of potential future career opportunities in the municipal workforce.
- The Council will consider legislation that requires agencies, in conjunction with DCAS, to perform community outreach at periodic intervals within communities that have very low representation within their agencies.
- The Council will consider legislation aimed at increasing the number of women and non-white employees in agencies demonstrating low levels of diversity. The legislation would require agencies to take actions such as developing a diversity plan, improving facilities, requiring diversity and inclusion training, and enhancing public reporting.
- The Council will consider legislation that requires agencies, in conjunction with DCAS, to analyze the pay data of their current workforce and adjust salaries as necessary to achieve pay equity.

Comparable Worth Analysis

- The City should identify jobs held primarily by women and/or non-white employees and conduct comparable worth analyses[XIV] to assess whether these positions are compensated equivalently to similar jobs held primarily by men and/or white employees when accounting for non-demographic factors.
- The City should perform an interagency analysis akin to a comparable worth analysis to better understand why agencies with large proportions of female and/or non-white employees have lower median salaries than comparable agencies and propose measures to correct any unexplained discrepancies in wages across agencies.

XIV A comparative worth analysis would examine the salaries of jobs that conduct similar work using similar skills and adjust the salaries if one is underpaid. Heidi I. Hartman, Comparable Worth, New Directions for Research, Committee on Women's Employment and Related Social Issues, Commission on Behavioral and Social Sciences and Education, and National Research Council, (1985), *available at* https://www.nap.edu/catalog/55/comparable-worth-new-directions-for-research.

BACKGROUND

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Pay Equity Legislation

On January 24, 2019, the New York City Council enacted Local Law 18 of 2018 ("Local Law 18" or the "Pay Equity Law"), greatly expanding access to and reporting of pay and employment equity data of New York City agencies.[9] Local Law 18 requires the Mayoral Administration to provide the City Council with electronic and secure access to employment data on all current and former[XV] City employees annually. DCAS is required to provide data about each City employee, including information such as agency, start date, civil service and business title, base salary, race, gender, and ethnicity.

Local Law 18 requires that the employee information was provided to the Council via a Remote Desktop Protocol, which allowed the Council's Data Operations Unit to access, view, and analyze the data without downloading or saving the individualized information, to preserve specificity and indicate that the data was shared securely. The Pay Equity Law is the first ever New York City local law that grants the Council direct access to individualized data in this way, thus permitting the level of analysis contained in this report.

The first step in addressing pay disparity is to understand the landscape, scope, and severity of pay disparity within the City's workforce. The access to municipal pay and workforce data provided by Local Law 18 aided the Council in exercising its powers of investigation and oversight of City agencies. This report sets forth the first annual analysis of this employment data with the goal of highlighting the most acute causes of pay disparity. The Council expects to expand this analysis annually.

The Wage Gap: Gender and Race/Ethnicity

Perhaps the most cited metrics for measuring disparities in pay equity are the gender wage gap—the difference in earnings between men and women[10]—and the racial wage gap.[11] Accordingly, the Council's analysis focused on examining the wage gap among New York City municipal employees both in terms of (i) race/ethnicity[XVI] and (ii) gender.[XVII] Historically, women and non-white persons have been denied job opportunities that were readily accessible to their white, male peers.[12] Despite the legislative and policy gains of recent history, such as anti-discrimination statutes on the federal, state, and local levels, the wage gap persists.[13]

Research has shown that the primary driving factors of the gender wage gap include:[14]
- Labor force participation;[XVIII]
- Occupational segregation;
- Education level;
- Labor force experience and hours worked;

XV Local Law 18 requires the Mayoral Administration to provide data on current and former employees covered by the law. The dataset provided did not include information about former employees. See "Data with Voluntary Fields," *infra* p. 17.
XVI See Appendix B for an explanation of why race and ethnicity are considered together.
XVII See FN XXVIII for information regarding the use of gender versus sex.
XVIII Labor force participation is defined as the percentage of the civilian noninstitutional population 16 years and older that is working or actively looking for work. US Bureau of Labor Statistics, Labor Force Statistics from the Current Population Survey, Concepts and Definitions, (last updated Jan. 27, 2021) *available at* https://www.bls.gov/cps/definitions.htm#lfpr.

- Gender differences in formal job training and retention;
- The impact of gender on the division of labor and on family caregiving; and
- Labor market discrimination.

While the gender gap in education level has been reversed and the gender gap in labor force experience has been greatly reduced since the 1980s, the gender pay gap has persisted.[XIX] According to a Pew Research survey, one in four women believe they have been paid less than men for doing the same job, while only 5% of men believe that they are paid less than a woman doing the same job.[15] Occupational segregation, in particular, remains a persistent force driving the gender wage gap, with some studies claiming it accounts for around 50% of the remaining wage gap.[16]

Exceedingly large pay differences also persist across racial and ethnic groups nationally. Historically marginalized groups in the United States, such as Black or African American individuals, earn less than their white peers.[17] Similar outcomes are observed for Hispanic or Latino, American Indian or Alaskan native, and multi-race individuals.[18] While historic discrimination faced by both women and non-white individuals has contributed to the current wage gap,[19] current research identifies some factors with respect to the race wage gap in particular, including:
- Higher rates of incarceration;[20]
- Inequitable educational opportunity;[21]
- Opportunity gaps in professional growth and promotions;[22] and
- Occupational segregation.[23]

The wage gap is also more pronounced for those with intersectional identities. For example, the wage gap is larger for women who are non-white than it is for white women.[24] Historically marginalized statuses such as immigration status and disability status that may intersect with gender identity or race have been shown to affect the wage gap;[93] however, such analysis could not be conducted via the Local Law 18 dataset, as this information is self-identified and therefore not uniformly available for the NYC municipal workforce.

The Wage Gap in New York

New York State has the smallest wage gap between men and women in the nation;[XX] however, the gender gap still exists in both the state and New York City. The gender gap remains acute for non-white employees, and non-white women in particular. In 2016 in New York State, for each dollar white men earned, Black women earned 53 cents, Latina women earned 44 cents, Asian women earned 74 cents, and white women earned 76 cents.[25] According to a recent report by then-Public Advocate Letitia James, the average salary of women at the top 10 majority women New York City agencies[26] is $10,000 less than the average salary of men at the top 10 majority men New York City agencies.[27] However, this report also found that in some agencies, men and women

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XIX Women now have higher educational attainment than men, and this trend is projected to continue. See National Center for Education Statistics, Total undergraduate fall enrollment in degree-granting postsecondary institutions, by attendance status, sex of student, and control and level of institution: Selected years, 1970 through 2026, *available at* https://nces.ed.gov/programs/digest/d16/tables/dt16_303.70.asp (last visited May 27, 2021); A.W. Geiger, et. al., For Women's History Month, a Look at Gender Gains and Gaps in the United States, Pew Research Center, (Mar. 15, 2018) *available at* https://www.pewresearch.org/fact-tank/2018/03/15/for-womens-history-month-a-look-at-gender-gains-and-gaps-in-the-u-s/.

XX This and all following wage gap comparisons account for full-time, year-round employees' median annual earnings.

employees of the same rank or position are paid equally and that collective bargaining agreements and civil service examinations can be an effective tool to both address wage inequity and other issues related to retention and promotion.[28]

Similar to national trends, the wage gap also persists across different races and ethnicities within New York. Nationally, it has been reported that the racial wage gap between Black and African American and white workers is as large as it was in 1950.[29] Although a 2020 study found that New York has the 15th smallest racial pay gap out of all 50 states, Black or African American workers still earn just 79 cents to every dollar white persons make.[30] In New York City specifically, a 2020 report found that Black or African American workers earned more than white workers in just 12 of nearly 140 industries analyzed, and that within those 12 industries, all but four paid less than $39,000 annually.[31] In 33 other industries analyzed, the gap in median incomes for Black or African American and white workers was less than $10,000.[32] In the remaining 92 industries, the income gap was greater than $10,000.[33]

In recent years, the City has actively taken steps to help eliminate the wage gap and provide for wage equity. In 2016, for example, Mayor Bill de Blasio signed an executive order that eliminated salary history as a requirement when a person applies for a job within a mayoral agency.[34] The following year, the Council expanded that requirement by enacting Local Law 67 of 2017, which prohibits all employers in New York City from inquiring about or relying on a prospective employee's salary history.[35] In addition, in 2019, the Council enacted Local Law 12, establishing an Office of Diversity and Inclusion within DCAS, which is responsible for creating policies with the goal of diversifying the City workforce[36] and Local Law 13, which requires the Equal Employment Practice Commission (EEPC) to analyze and report annually on whether agencies are meeting their racial and ethnic affirmative employment objectives.[37,XXI] Despite these efforts, the Council's analysis demonstrates that wage inequity still persists among the municipal workforce.

Occupational Segregation

Occupational segregation refers to the over - or under-representation of certain demographic groups in particular jobs and industries, which often provide distinct levels of compensation.[38] Occupational segregation by gender in the American workforce has been studied since at least the late 1960s[39] and is still a prevalent issue today, although some evidence indicates that gender-based occupational segregation is decreasing among millennials.[40] A Pew Research Survey from 2018 found that 48% of women say they work in settings where the majority of employees are women, while only 18% of women say they work in settings that are majority male.[41] Furthermore, according to the Bureau of Labor Statistics Survey of 2020, while women account for 47% of the labor force overall in the United States, they account for 87% of all registered nurses and 80% of elementary and middle school teachers.[42] Conversely, women account for just 29% of all chief executives, illustrating that women are concentrated in particular occupations in the workforce.[43]

Occupational segregation by race and ethnicity is widespread as well. For instance, a national 2020 Bureau of Labor Statistics survey found that while Black or African American, Asian, and Hispanic or Latino individuals account for 12.1%, 6.4%, and 17.6% of the employed

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XXI As of the date of this publication of the paper, the Council has not received the Local Law 12 report. The Administration submitted the Local Law 13 report on July 21, 2021, and the Council is reviewing the report.

labor force, respectively, they account for only 4.3%, 5.4%, and 7.4% of all chief executives, respectively.[44]

Crucially, occupations with a higher percentage of women or non-white employees tend to pay less, even accounting for education level and skill.[45] The U.S. Bureau of Labor Statistics Current Population Survey of 2019 shows a stark divide in the weekly earnings of jobs held mostly by men and those held mostly by women.[46] Nationally, only four of the top 20 highest-paying jobs are more than 50% women, while 15 of the bottom 20 are more than 50% women.[47] A 2016 review of pay gap literature in the United States found that while the overall gender pay gap is decreasing nationwide, the majority of the gender pay gap is now explained by differences in occupation and industry.[48]

Occupational segregation also contributes to differences in earnings by race and ethnicity. One national study found that 20% of the wage gap between Black/African American workers and white workers could be explained by occupational segregation, while 51% of the remaining difference was due to education and workforce experience.[49] Black/African American men appear to be particularly under-represented in construction, extraction, and maintenance occupations—occupations that pay more compared to other occupations with similar educational requirements.[50]

Notably, the intersection of race and gender can have a particularly large effect on wages. While there is a wage penalty for working in an occupation dominated by women, it is larger for Black women than for white women.[51] Moreover, efforts to address race-based occupational segregation appear to have stalled in the last decades.[52]

The Council's analysis of municipal pay found similar results among the municipal workforce: occupational segregation appears to be a large driver of differences in pay across protected classes and is particularly prominent in certain agencies, notably the FDNY, NYPD, and DOITT.

Terminology and Model Results

Language Choices

For purposes of this report, the "NYC municipal workforce" refers to employees represented in the dataset provided to the City Council pursuant to Local Law 18. For additional details on which employees this includes, see "Data, Limitations, and Methodology," *infra* p. 16. The data reported by the Mayoral Administration pursuant to Local Law 18 requires the Mayoral Admin-istration to provide data on "sex"; however, the data received was presented as "gender," but uses the terms "male" and "female." The Council's analysis and this report thus also use these terms, to reflect the information exactly as it was provided by the Administration. For details on the grouping of race and ethnicity, see Appendix B.

Non-Adjusted and Adjusted Pay Gaps

The analysis in this report focuses on two metrics to understand pay equity in the NYC municipal workforce: the non-adjusted pay gap and the adjusted pay gap.

The **non-adjusted pay gap** is the median pay difference between two demographic groups when not accounting for other demographic categories or variables that may affect salaries.[XXII] For example, the non-adjusted pay gap compares the median salary for males to the median salary for females, regardless of their race, age, job title, or other known characteristics the individuals in those groups might hold.

The **adjusted pay gap** accounts for other variables that may affect salary. To do this, the Council's Data Operations Unit employed a model that evaluates the pay differential between different demographic groups (gender, race and ethnicity, and age) adjusting for the following variables: the employee's length of service, civil service title code, civil service title suffix, civil service title level, agency, and managerial status. This model evaluates the adjusted pay gap between groups, meaning the gap correlated only with being a given gender, race/ethnicity, or age, when accounting for the other modeled variables.

Model Results

While large non-adjusted pay inequities exist across gender and race/ethnicity, the pay gap largely, but not completely, diminishes after adjusting for variables in the regression model. If the position that an individual holds is omitted from the model, large pay inequities across gender and race/ethnicity once again appear. These results suggest that differences in salary across these protected classifications can best be explained by employees' civil service title codes.

For example, the pay difference between male and female employees is small when looking at salaries across protected groups within the same job title. The same is true for Black or African American employees compared with white employees. In contrast, the pay gap is large when looking at salaries across different jobs and occupations. As the percentage of female and non-white employees who hold a civil service title increases from one title to another, the median salary for those positions tends to decrease. This suggests that the significant difference in pay between demographic groups is better explained by the different positions that individuals in these protected categories hold. In other words, occupational segregation by race and by gender are a driving force behind the pay gap.

Data, Limitations, and Methodology

The dataset provided includes municipal employees who were either active or on temporary leave as of December 31, 2018. Active seasonal employees from summer 2018 were also included.

There are 181,136 employees working across 36 agencies included in the dataset. The data set has individual-level data for each worker including age, gender, race, ethnicity, job, and base salary (full list below). Of the 181,136 employees, 166,840 are full-time; 10,616 are part-time; and 3,680 are seasonal. The dataset does not include pedagogical employees

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XXII Variables that may affect salaries include the following factors: length of service, civil service title code, civil service title level, civil service title suffix, agency, date of birth, and managerial status.

from the DOE,[XXIII] elected officials, or agencies with heads appointed by officials other than the mayor or by multi-member bodies.[XXIV] After filtering and cleaning, the subset of data analyzed contains 161,347 employees.[XXV] The analyses and results presented, including where the report refers to the NYC municipal workforce, are based on and in reference to this subset, unless explicitly stated otherwise.[XXVI]

The primary analysis in this report focuses on full-time employees, but the report also includes a discussion on part-time employees. In addition, the analysis focuses on employees with title classifications of "competitive" or "non-competitive,"[XXVII] and removes employees with title classifications of "exempt," "labor," "pending classification," and "unclassified service," who represent 3% of full-time employees.

VARIABLES	
Agency	Salary Pay Band
Start Date	DCAS Occupational Group Code
Civil Service Title Code	DCAS Occupational Group Name
Civil Service Title Name	Managerial
Minimum Salary	Highest Education Level
Maximum Salary	Gender
Business Title	Race
Title Classification	Ethnicity
Job Category	Date of Birth
Civil Service Title Level	Provisional Status
Civil Service Title Suffix	Personnel Status Change Description
Base Salary	Previously Employed

Data with Voluntary Fields

Former Employees

Local Law 18 requires data to be provided on "each current and former employee." However, the dataset provided by the Administration only included information on each employee in the municipal workforce as of December 31, 2018, as well as active seasonal employees from summer 2018. Therefore, this report only includes a point-in-time analysis of the municipal workforce as it existed in 2018.

XXIII See "Data with Voluntary Fields," *infra* p. 17 for a description of data that was not provided by the Administration.
XXIV See Appendices A-C for more on how the dataset was cleaned, in addition to variable definitions.
XXV Cleaning involved making sure the variables were coded as their correct data types (e.g. "Date of Birth" as a date instead of text), using the "Date of Birth" and "Start Date" variables to create the "Age" and "Length of Service" variables, recoding the "Race" and "Ethnicity" variables into a combined "Race/Ethnicity" variable, and setting the baseline value (ex. Male for the Gender variable) for purposes of running the model. Variables that may affect salaries include the following factors: length of service, civil service title code, civil service title level, civil service title suffix, agency, date of birth, and managerial status. This reduced the data from 166,840 to 161,347 full-time employees.
XXVI See Appendix A for more information on statistical methods used to perform the analysis.
XXVII Full definitions of the classifications in New York State can be found at: New York State Department of Civil Service, Summary of New York State Civil Service Law, (Oct. 2008), *available at* https://www.cs.ny.gov/pio/publications/summofcsl.pdf.

Gender

The majority of the workers self-identified as either "Male" or "Female."[XXVIII] Only 121 employees in the subset of data analyzed were classified "unknown or choose not to disclose."

Race/Ethnicity

About 27% of employees had an unknown race or chose not to disclose their race. About 11% of employees had an unknown ethnicity or chose not to disclose their ethnicity.

Education Level

72% of employee data on education level has a value of 'Not Indicated' which includes non-degree education, such as, certifications. In addition, the available data does not always reflect the highest education level a worker achieved. Due to these limitations, the analysis largely excludes education level. However, the final model was deployed on the data both with and without education level, and results remained the same in both scenarios.

Despite not having a reliable education variable, many of the civil service title codes and title levels require some form of minimum education level. Therefore, by knowing the job an individual is working, the analysis incorporates information regarding the minimum education level required for the job.

Missing Education Data: Agencies Chart		
Agency	Count and Percent of Agency	Percent of all "NA"
NYPD	50,649 (97% of NYPD)	43% of all "NA"
FDNY	13,344 (78% of FDNY)	11% of all "NA"
DOE*	10,795 (92% of DOE*)	9% of all "NA"
DOC	9,822 (81% of DOC)	8% of all "NA"

* non-pedagogical employee

Agencies

The dataset only includes 36 agencies and does not include every employee in those 36 agencies. In particular, the dataset is missing pedagogical employees in the DOE. However, the Fiscal Year 2018 New York City Government Workforce Profile Report[53] from DCAS includes the entire DOE employee population. According to that report, there were 135,167 DOE full-time employees in 2018.[54] Pedagogical employees, like teachers, counselors, and principals, are 60.8% (82,190) of DOE full-time employees. If the entire DOE employee population were included in the current dataset, the analyzed subset would nearly double in size, bringing it to about 285,000 employees.[55]

Count of City Workforce by Agency

For analyses where agencies are being compared to one another, five agencies—the Mayor's Office of Contract Services (MOCS), the Law Department, the Office of the Mayor (MAYOR), the Office of Management and Budget (OMB), and the Office of Emergency Management

XXVIII As previously explained, Local Law 18 required the Administration to provide data on "sex." In the dataset, the information was presented as "gender," but used the terms "male" and "female." Because the data was presented in this way, the Council's analysis also uses these terms.

(OEM)—were excluded. These agencies cannot be compared to the rest since they have few competitive and non-competitive employee employee population, as shown in the table below. Most of their employees have title classifications that have been excluded from the analysis (i.e., exempt, labor, pending, and unclassified).[XXIX]

Count of Non-Competitive and Competitive Employees		
Agency	Number	Percent
MAYOR	13	2.7%
OEM	10	5.3%
OMB	22	5.5%
MOCS	32	19.3%
LAW	753	43.7%

Uniformed Titles

Whether a job title was a uniformed title was not indicated in the dataset. For purposes of the analysis, the Council identified titles within the NYPD, DSNY, FDNY, and DOC by referencing internet sources that provide information on employee rank and structure for each of those agencies. This helped identify most of the commonly known uniformed titles. The NYC Civil Service Titles[56] dataset on the Open Data Portal, along with the civilian and uniformed contract agreements on the the Office of Labor

Relations (OLR) website[57] were used to identify the lesser-known uniformed titles and/or confirm whether a title is a civilian title or uniformed. The full list of uniformed title codes can be found in Appendix D.[XXX]

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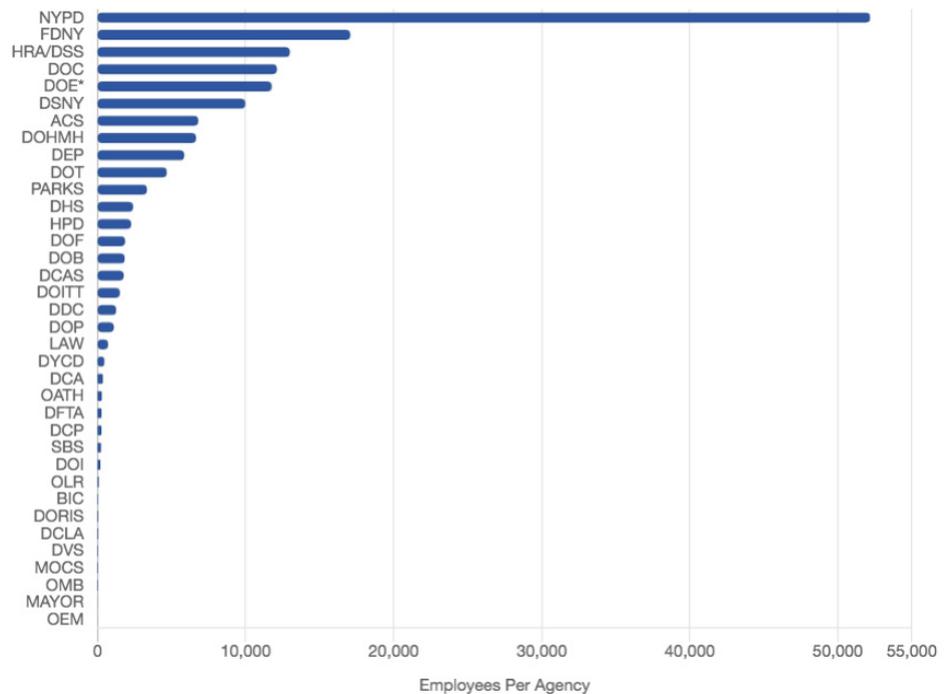
XXIX The data was subset so that it only included employees whose "Title Classification" was competitive or non-competitive.
XXX This list is likely representative of the entire uniformed workforce, after verifying information on uniformed titles provided by DCAS.

Effect of Uniformed Titles on Conclusion

The demographics of uniformed titles differ from that of the other civil service titles, with a higher percentage of white and male employees in this part of the workforce. To determine whether uniformed titles skewed the data, the Council's Data Operations Unit developed a model that excluded uniformed titles to determine whether their exclusion affected the model results. The differences found were not significant overall. The most notable difference was for gender. When analyzed in the model including uniformed titles, female workers make approximately $304 less than male workers after adjusting for race/ethnicity, age, years of service with the City, and managerial status, and when looking at female and male employees within the same civil service title codes. When analyzed in the model excluding uniformed titles, accounting for the same variables, female employees were found to make approximately $200 less than male employees. This difference of $104 is small enough on a base salary of $60,000 that the analysis found the inclusion of uniformed titles did not significantly affect the regression model.

MAIN TAKEAWAYS/ CONCLUSIONS
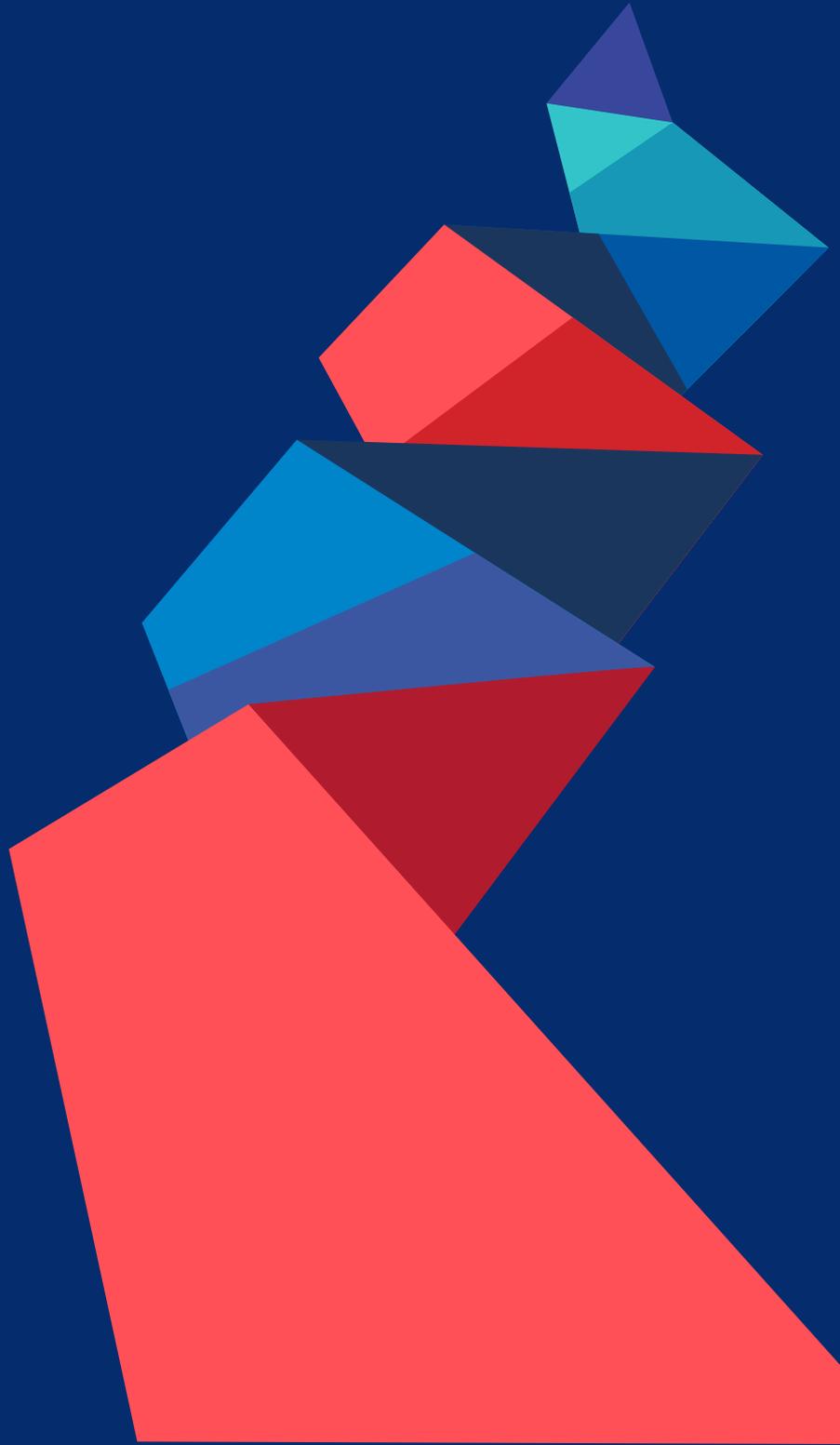
Main Takeaways/Conclusions

A small but significant pay difference remains even after accounting for all factors

Collective bargaining, which is a system that allows employees to negotiate for better wages and employment conditions with their employers through unions, seems to be working. On average, there is only a small difference in salaries across gender and race/ethnicity groups after adjusting for civil service title, agency, length of service and other characteristics. However, the analysis found a small but significant difference in the salaries of non-white employees, particularly non-white female employees, even after adjusting for job title and other characteristics.

The model predicts that Black or African American female employees will make 1.9% less than white male employees in the same positions when accounting for all given factors, while Hispanic or Latino[XXXI] female employees and Black or African American male employees will make 1.5% and 1.2% less, respectively, than white male employees in the same positions. For example, in a position where a white male employee earns the median City salary of $67,792, a Black or African American female employee would expect to earn $66,504. The Council's analysis cannot definitively conclude why these discrepancies persist, yet the cause must be determined and addressed.

Gender
When looking only at gender, the adjusted pay gap is extremely small: 0.4%.

Gender	Adjusted Cents on the Dollar (Versus Male)
Male	$1.00
Female	$0.996

Race/Ethnicity

When looking at only at race/ethnicity, non-white employees make slightly less than white employees do. Black or African American employees earn $0.986 on the dollar compared to white employees. Hispanic or Latino employees earn $0.989 on the dollar compared to white employees. Asian employees earn $0.993 on the dollar compared to white employees.

XXXI The data reported by the Mayoral Administration pursuant to Local Law 18 was presented as "Hispanic or Latino," regardless of sex or gender. The Council's analysis and this report thus also use that term, to reflect the information exactly as it was provided by the Administration.

Race/Ethnicity	Adjusted Cents on the Dollar (Versus White)
White	$1.00
Black or African American	$0.986
Hispanic or Latino	$0.989
Asian	$0.993
Other	$0.977
Ethnicity Unknown or Choose Not to Disclose	$0.986

Gender and Race/Ethnicity

When looking at gender and race/ethnicity together, a small gap still exists. While white male employees make the most, white female employees earn 0.2% less. Non-white male and non-white female employees make less than white male and white female employees do. Black or African American female employees earn $0.981 on the dollar and Hispanic or Latino[XXXII] female employees earn $0.985 on the dollar compared to white male employees.

Gender (Male), Race/Eth	Adjusted Cents on the Dollar (Versus White Male)
Male, White	$1.00
Male, Black or African American	$0.988
Male, Hispanic or Latino	$0.989
Male, Asian	$0.991
Male, Other	$0.978
Male, Ethnicity Unknown or Choose Not to Disclose	$0.987

Gender (Female), Race/Eth	Adjusted Cents on the Dollar (Versus White Male)
Female, White	$0.998
Female, Black or African American	$0.981
Female, Hispanic or Latino	$0.985
Female, Asian	$0.993
Female, Other	$0.972
Female, Ethnicity Unknown or Choose Not to Disclose	$0.979

Difference in Salary within Civil Service Title Code

The difference in pay between male and female employees who hold the same civil service title code, level, and suffix is generally small, even prior to accounting for other job and employee characteristics. Over 75% of all male and female employees holding the same civil service title, level, and suffix make within $2,500 of each other as calculated by the

XXXII The data reported by the Mayoral Administration pursuant to Local Law 18 was presented as "Hispanic or Latino," regardless of sex or gender. The Council's analysis and this report thus also use that term, to reflect the information exactly as it was provided by the Administration.

difference between the median salary held by male and female employees with the same civil service title code, level, and suffix. This relatively small difference could potentially be attributable to length of service, or to other factors that differ between males and females in those positions. This also further suggests that occupational segregation is responsible for the vast majority of the non-adjusted pay gap between male and female employees in the City workforce.

Median Pay Difference for Male Employees and Female Employees
For those with same Civil Service Title Code, Level, and Suffix
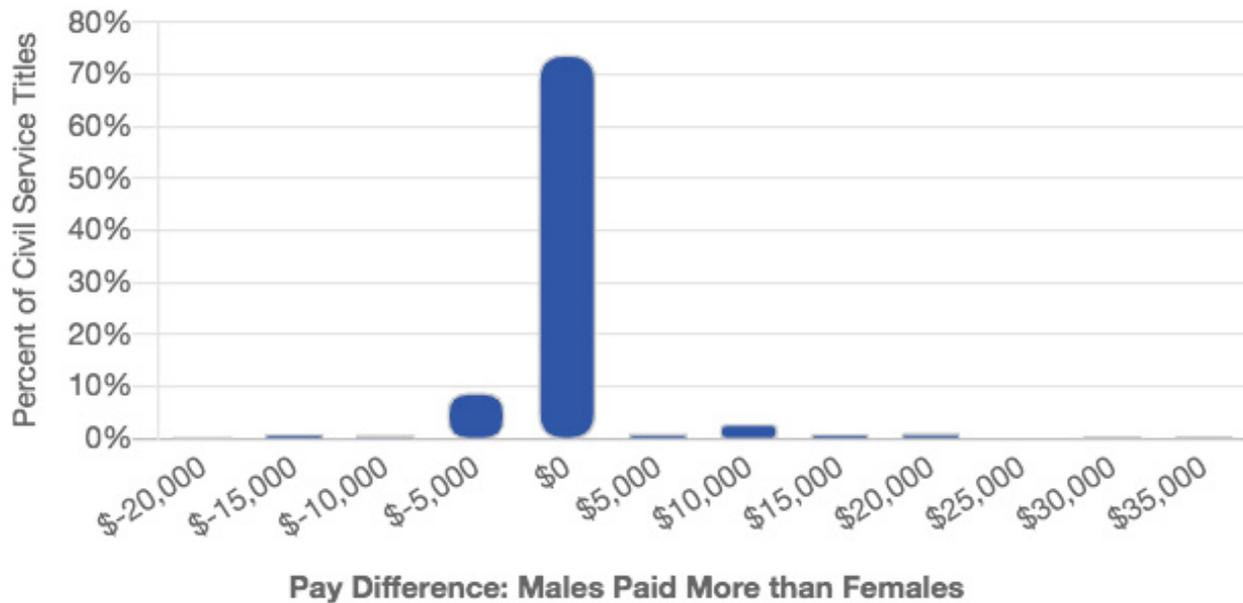
While for most positions male and female employees have similar median salaries, there are some positions for which the median salaries of male and female employees differ significantly. Listed in the table below are the 10 civil service titles (with the same Title Code, Civil Service Title Level and Civil Service Title Suffix) with over five employees of each gender that possess the largest median salary differences between male and female employees. This data does not account for variables that may differ across gender—such as length of service—so the Council's analysis cannot determine the cause of these differences. However, the available data suggests that further investigation into pay equity for these titles may be warranted.

Civil Service Titles with the Largest Median Salary Difference	
Civil Service Title (Title Code)	Median salary difference (Males - Females)
Inspector General (31145)	$33,700
Sanitation Worker (70112)	$32,700
Educational Management Associate (Department of Education) (10245)	$30,900
Deputy City Sheriff (30312)	$28,400
Administrative Supervisor of Building Maintenance (10035)	$21,400
Administrative Manager (10025)	$20,100
General Superintendent (Sanitation) (70196)	$20,100
Director of Correctional Standards Review (52620)	$18,700
Computer Operations Manager (10074)	$18,100

Collective bargaining and the civil service system seem to have played an important role in moving the City towards the goal of equitable pay for individuals in the same positions.[58] However, the challenge that persists is achieving equity in the types of work males and females pursue within City government and ensuring that all job titles that perform the same duties are compensated equivalently.[XXXIII]

Effect of Uniformed versus Non-Uniformed

Male employees and female employees in uniformed titles earn similar base salaries. The median salary for both is $85,292, which is the salary of an NYPD officer (70210), DOC officer (70410) or FDNY firefighter (70310). The large number of male and female employees in this category who hold these titles with equitable compensation suggests the effectiveness of collective bargaining agreements. Although salaries diverge when promotions and higher titles are considered, those higher-paid positions represent a smaller portion of the overall population of uniformed officers.

Occupational Segregation

Occupational segregation—the over- or under-representation of certain demographic categories of individuals in certain occupations—remains a driving force of inequality among City employees. While different demographic groups (by gender and by race/ethnicity) are generally paid similar salaries for doing the same job (meaning same civil service title code, level, and suffix), the types of jobs that different demographic groups hold within City government tend to be different.

XXXIII See "Department of Correction and Department of Probation" in "Areas of Further Analysis," *infra* p. 46, as an example.

Gender	Median Salary	Cents on the Dollar (Versus Male)
Male	$79,000	$1.00
Female	$57,400	$0.73

Race/Ethnicity	Median Salary	Cents on the Dollar (Versus White)
White	$85,300	$1.00
Black or African American	$57,500	$0.67
Hispanic or Latino	$63,100	$0.74
Asian	$70,600	$0.83
Other	$58,200	$0.68
Ethnicity Unknown or Choose Not to Disclose	$52,200	$0.61

Gender (Males), Race/Eth	Median Salary	Cents on the Dollar (Versus White, Male)
Male, White	$85,292	$1.00
Male, Black or African American	$65,579	$0.769
Male, Hispanic or Latino	$77,318	$0.907
Male, Asian	$74,383	$0.872
Male, Other	$65,586	$0.769
Male, Ethnicity Unknown or Choose Not to Disclose	$55,192	$0.647

Gender (Females), Race/Eth	Median Salary	Cents on the Dollar (Versus White, Male)
Female, White	$72,750	$0.853
Female, Black or African American	$56,282	$0.660
Female, Hispanic or Latino	$56,000	$0.657
Female, Asian	$67,792	$0.795
Female, Other	$56,387	$0.661
Female, Ethnicity Unknown or Choose Not to Disclose	$50,763	$0.595

Occupational Segregation across the Municipal Workforce

As the proportion of non-white employees increases from one job title to another, there is a marked and nearly linear decline in wages. In positions that have less than 10% non-white employees, the median salary is $125,500. For titles that are mostly non-white (greater than 60%) the median salary decreases from $97,300 (for titles that have 50-60% non-white employees) to $47,400 (for titles that have 90-100% non-white employees).

Median Salary for Civil Service Title Codes by Share of Non-White Employees per Title
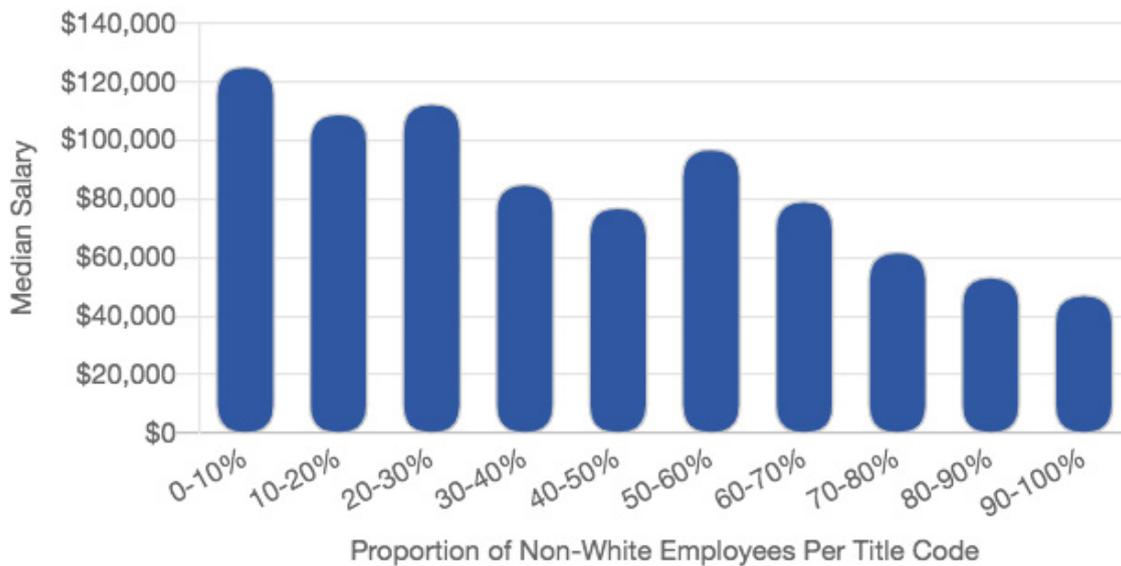
The figure below groups civil service title codes by the proportion of female employees that hold each title code, and then calculates the median salary of each group. As the proportion of female employees increases from one civil service title code to another, the median salary decreases. Civil service title codes that are less than 10% female make a median salary of $84,100, while civil service title codes that are 90-100% female make a median salary of only $52,500—a difference of over $30,000.

Median Salary for Civil Service Title Codes by Share of Female Employees per Title
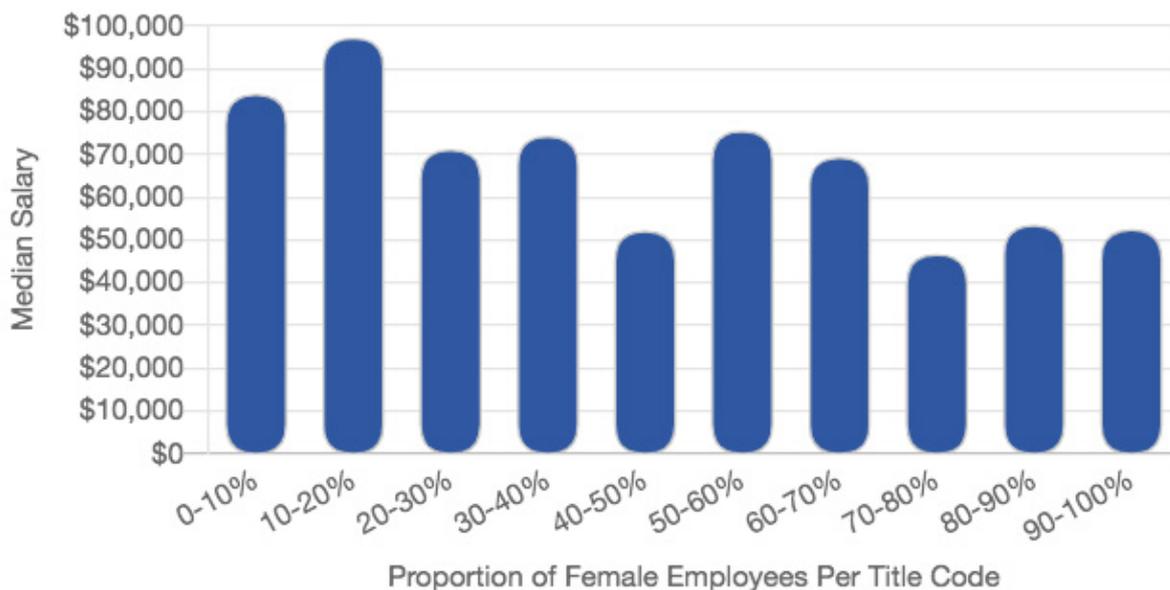
At the most extreme example, the Council's analysis of civil service titles that are held entirely by either male or female employees revealed similar trends.

For example, the five most populous titles held by mostly female employees (fewer than five male employees) and their median salaries are:
- Public Health Nurse (Department of Health and Mental Hygiene) - 51011
- Early Childhood Education Consultant (multiple agencies) - 51611
- Supervisor I Social Work (multiple agencies) - 52631
- Program Officer (Department for the Aging) - 51454
- Supervising Therapist (Department of Education) - 5124A

For example, the five most populous titles held by mostly male employees (fewer than five female employees) and their median salaries are:
- Auto Mechanic (multiple agencies) - 92510
- Sewage Treatment Worker (Department of Environmental Protection) - 90739
- Fire Captain (FDNY) - 70365
- Electrician (multiple agencies) - 91717
- Battalion Chief (FDNY) - 70370

Finally, the median salary for the highest-paid title held entirely by male employees is $234,100 for Assistant Chief of Department (Managerial) (FDNY) - 7038B, while the median salary for the highest-paid title held entirely by female employees is $140,800 for Director of Management Planning (HRA).[XXXIV] In fact, of the five most highly-paid titles (by median salary) in the entire dataset, two of those titles—Assistant Chief of Department (FDNY) and Deputy Assistant Chief of Department (Managerial) - 7038A (FDNY)—are held entirely by male employees.

The figure below shows that the more non-white females in a position, the lower the median salary tends to be for that position. The median salary for positions with over 60% non-white female employees is well below the median salary of the entire municipal workforce. On the other hand, positions with less than 20% non-white female employees are paid a median salary of $85,300, which is $17,000 greater than the median salary of the entire municipal workforce.

This general trend is consistent with the findings for male compared to female employees and white employees compared to non-white employees.

XXXIV See Appendix E for a table showing the most highly-paid roles held entirely by male employees or female employees.

Median Salary for Civil Service Title Codes by Share of Non-White Female Employees per Title
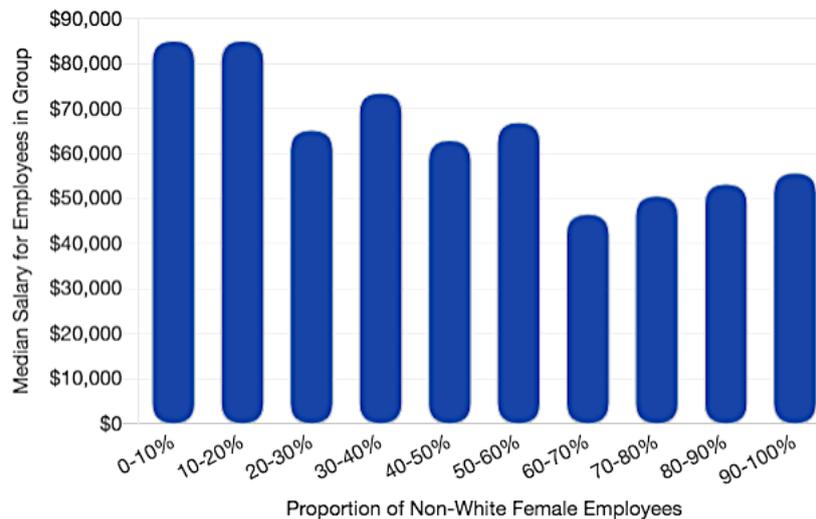
Occupational Segregation between Agencies

The top five largest agencies account for well over half of the data in the analyses (106,314 employees) and provide an understanding as to which agencies have the greatest effect on the racial/ethnic distribution of the municipal workforce as a whole. The immediate takeaways are that the FDNY employs many more white individuals as a fraction of its workforce size than found in the NYC population and many fewer Black or African American individuals. The opposite is true for HRA.

Agencies with Highest Percentages of Non-white Employees		
Agency	Percent Non-white	Median Agency Salary
Department Of Correction (DOC)	92.10%	$84,509
Department Of Homeless Services (DHS)	92.00%	$48,499
Department Of Veterans' Services (DVS)	90.60%	$75,387
Administration For Children's Services (ACS)	88.50%	$57,470
Department Of Probation (DOP)	87.70%	$54,589

Agencies with Lowest Percentages of Non-white Employees		
Agency	Percent Non-white	Median Agency Salary
Office Of Management And Budget (OMB)	27.30%	$147,879
Fire Department (FDNY)	43.10%	$85,292
Department of City Planning (DCP)	47.80%	$76,805
Department of Sanitation (DSNY)	49.00%	$77,318
Department of Environmental Protection (DEP)	51.80%	$80,217

Occupational Segregation in Uniformed versus Non-uniformed Titles

When looking at non-uniformed titles, 43% of employees are male and 57% of employees are female. In contrast, 82% of employees in uniformed titles are male. Uniformed titles are generally better compensated compared to non-uniformed titles. This has a significant effect on the balance of pay by gender within the entire NYC municipal workforce, as the median salary for a uniformed employee is $85,292—the salary of a police officer or firefighter. This fact significantly increases the median salary of male employees within the entire workforce.

Uniformed versus Non-Uniformed Employees by Gender

Uniformed vs Non-Uniformed Employees by Gender
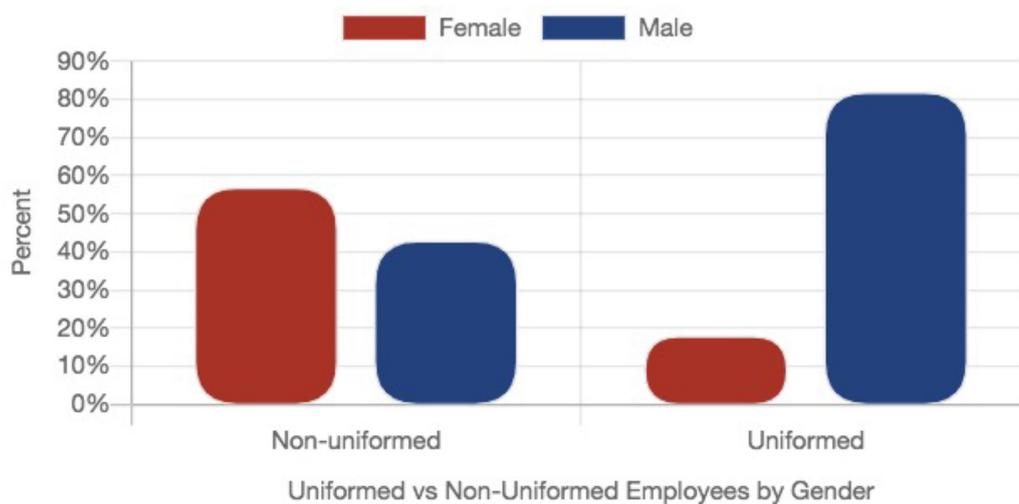
While the NYC municipal workforce as a whole is only 32% white, the uniformed positions are 41% white, a notably higher proportion. When excluding uniformed officers, the remainder of the municipal workforce is just 25% white.

Again, when considering occupational segregation and the disparity in pay between race/ethnicities within the municipal workforce as a whole, the high fraction of white uniformed employees serves to sharply increase the median salary of white municipal employees overall as these are highly-compensated jobs.

Uniformed versus Non-Uniformed Employees by Race/Ethnicity

Uniformed vs Non-Uniformed Employees by Race/Ethnicity
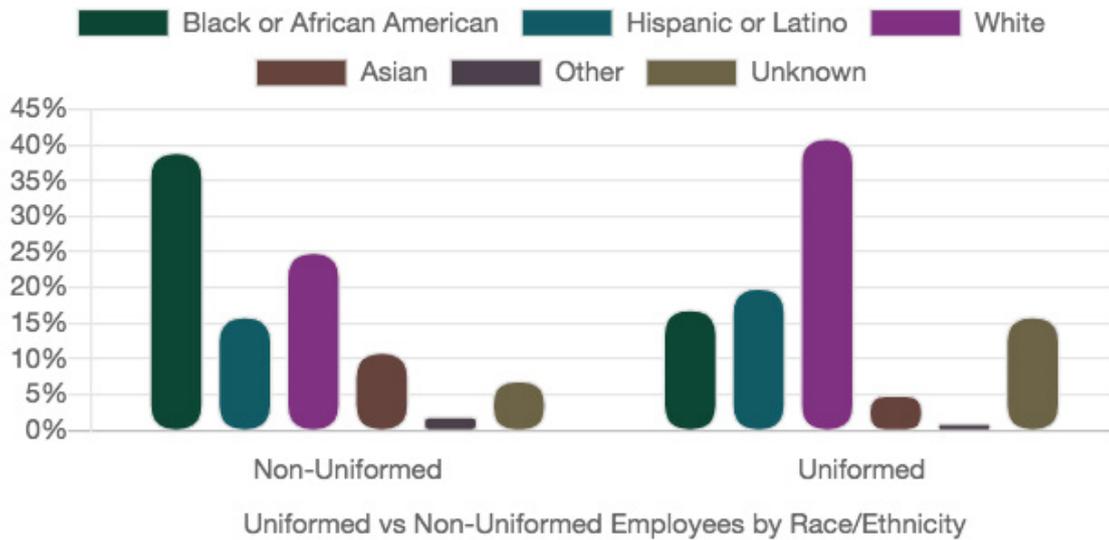
Occupational Segregation within Agencies

The five agencies with the largest difference in median pay between male and female employees are: DOITT, NYPD, FDNY, DSNY and DEP. These agencies have a median pay difference of at least $15,000 between male employees and female employees, with one agency—DOITT—showing a difference in median pay of over $40,000.

The highest-paying roles in the FDNY are all promotions from Firefighter. The position of Firefighter is 98.8% held by male employees, and each level above Firefighter is held by an even higher proportion of male employees.

FDNY Salaries by Gender Composition
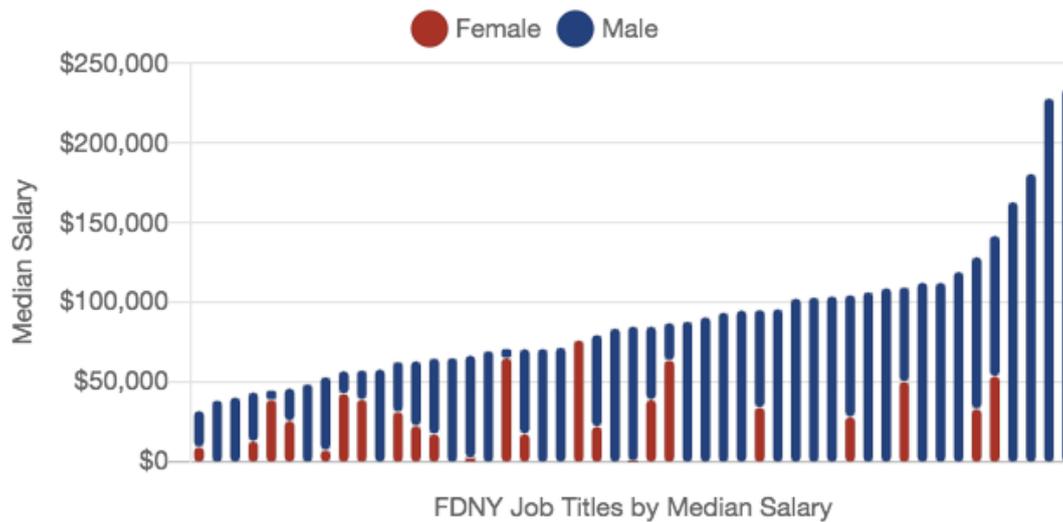
Title Name & Code	Median Salary	Males in Title Code	Females in Title Code
Assistant Chief of Department (Managerial) (FDNY) - 7038B	$234,096	100%	0%
Deputy Assistant Chief of Department (7038A)	$228,604	100%	0%
Deputy Chief (Fire) (70382)	$181,172	100%	0%
Battalion Chief (70370)	$163,454	100%	0%
Fire Medical Officer (53050)	$142,173	62%	38%
Computer Systems Manager (10050)	$128,827	74%	26%
Supervising Fire Marshal Unif (70393)	$119,596	100%	0%
Supervisor Communication Electrician (91763)	$112,877	100%	0%
Supervisor of Mechanics (Mechanical Equipment) (92575)	$112,821	100%	0%
Administrative Staff Analyst (Non-Managerial) (1002D)	$110,000	54%	46%
Lieutenant (Fire) (70360)	$109,360	100%	0%
Electrician (91717)	$106,953	100%	0%
Supervising Emergency Medical Specialist - EMS Manager (5305E)	$105,041	73%	27%
Administrative Fire Protection Inspector (1002H)	$104,242	100%	0%
Communication Electrician (91762)	$103,565	100%	0%
Cert It Developer App (13643)	$102,935	100%	0%
Pilot (70312)	$96,236	100%	0%
Computer Specialist (Software) (13632)	$95,645	64%	36%
Certified IT Administrator (LAN/WAN) (13652)	$95,317	100%	0%
Marine Engineer (With License) (70316)	$94,065	100%	0%
Carpenter (92005)	$91,131	100%	0%
Wiper (Uniformed) (70314)	$88,400	100%	0%
Agency Attorney (30087)	$87,543	27%	73%
Administrative Staff Analyst (1002A)	$85,356	54%	46%
Firefighter (70310)	$85,292	99%	1%
Auto Mechanic (Diesel) (92511)	$84,146	100%	0%
Computer Assoc (Software) (13631)	$80,061	72%	28%
Case - Management Nurse Fire (50959)	$76,555	0%	100%
City Laborer (90702)	$72,036	100%	0%
Computer Assoc (Tech Supp) (13611)	$71,294	100%	0%
Supervising Emergency Medical (53055)	$71,202	75%	25%
Adm Manager-non-mgrl Frm M1/M2 (1002C)	$71,132	8%	92%
Telecommunications Associate (20246)	$69,958	100%	0%
Associate Fire Protection Inspector (31662)	$67,073	96%	4%
Associate Inspector Electrical (31643)	$65,514	100%	0%
Emergency Medical Specialist-Paramedic (53054)	$65,226	73%	27%
Fire Alarm Dispatcher (71010)	$63,500	64%	36%

|			
Staff Analyst (12626)	$63,122	50%	50%
Rubber Tire Repairer (90736)	$58,360	100%	0%
Procurement Analyst (12158)	$57,743	32%	68%
Principal Administrative Associate (10124)	$57,216	25%	75%
Fire Protection Inspector (31661)	$53,598	86%	14%
Supervisor Of Stock Workers (12202)	$49,105	100%	0%
Investigator (31105)	$46,316	44%	56%
Clerical Associate (10251)	$44,967	13%	87%
Emergency Medical Specialist-EMT (53053)	$43,901	70%	30%
Automotive Service Worker (92508)	$40,745	100%	0%
Institutional Aide (81803)	$38,847	100%	0%
Emergency Medical Specialist-Trainee (53052)	$32,195	71%	29%

The roles start at a median salary of approximately $85,300 for a Firefighter and increase from there to a salary of approximately $109,400 for a Lieutenant; $125,500 for a Fire Captain; $163,500 for a Battalion Chief; $181,200 for a Deputy Chief; $228,600 for Deputy Assistant Chief of Department; and $234,100 for Assistant Chief of Department. Beyond the rank of Lieutenant, there are no female employees in any of the above roles. In fact, the two senior roles are in the top five most highly-compensated positions in the entire dataset.

Meanwhile, the roles within FDNY held mostly by female employees are administrative in nature such as clerical associate (median pay: $45,000, 87% female) and administrative manager non-managerial (median pay: $71,100, 92% female). Some roles held by roughly an equal number of male and female employees in FDNY, such as administrative staff analyst, are well compensated, but the salaries of their usual career trajectories are unlikely to reach that of a Firefighter.

Similarly, the NYPD is largely comprised of uniformed officers. There are 12 civil service titles within the NYPD with median salaries of over $100,000. Of those titles, all but one are uniformed titles, with the maximum fraction of female employees in any of those 11 uniformed titles being 22% (Sergeant D/A Special Assignment - 7023A). The other title, Executive Agency Counsel, is more evenly divided at 53% female (median salary of $149,100).

In contrast, the NYPD has 15 civil service titles with annual salaries less than $50,000. Of these titles, six are at least two-thirds female, and the lowest percentage of females in any role is 16% (stock workers).

NYPD Salaries by Gender Composition
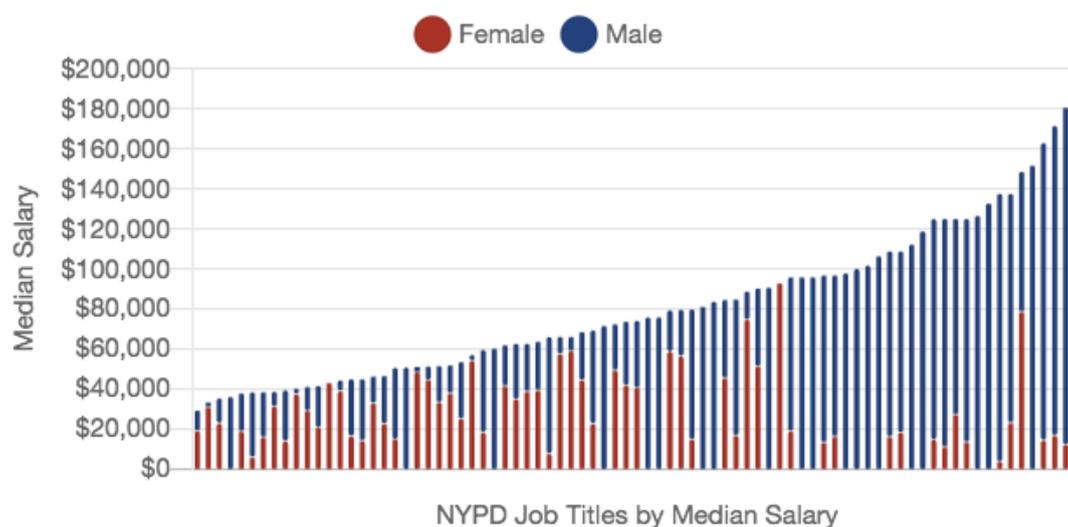
Title Name & Code	Median Salary	Men in Title & Code	Women in Title & Code
Captain D/A Inspector (Rec N/S (7026E)	$181,172	93%	7%
Captain D/A Deputy Inspector (70260)	$172,058	90%	10%
Captain (Police Service) (70265)	$163,454	91%	9%
Computer Operations Manager (10074)	$152,261	100%	0%
Executive Agency Counsel (95005)	$149,060	47%	53%
Lieutenant D/A Commander Of De (70268)	$138,089	97%	3%
Lieutenant D/A Special Assignm (7026A)	$138,089	83%	17%
Manager Of Radio Repair Operations (8298E)	$133,191	100%	0%
Stationary Engineer (91644)	$127,034	100%	0%
Lieutenant (Police) (Recur Ns) (70260)	$125,531	88%	12%
Police Officer D/A Detective 1 (7021C)	$125,531	91%	9%
Sergeant D/A Special Assignment (7023A)	$125,531	78%	22%
Sergeant D/A Supervisor Detective (70238)	$125,531	89%	11%
Oiler (91628)	$119,371	100%	0%
Supervisor of Mechanics (Mechanical Equipment) (92575)	$112,821	100%	0%
Police Officer Oja Detective (70218)	$109,360	85%	15%
Sergeant (Recurring Night Shift) (70235)	$109,360	83%	17%
Electrician (91717)	$106,953	100%	0%
Radio Repair Mechanic (90733)	$102,208	100%	0%
Steam Fitter (91925)	$100,485	100%	0%
Sheet Metal Worker (92340)	$98,274	100%	0%
Police Officer D/A Detective 3 (7021A)	$97,324	86%	14%
Police Officer Det. Specialist (70210)	$97,324	83%	17%

Plumber (91915)	$96,447	100%	0%
Thermostat Repairer (91940)	$96,447	100%	0%
Computer Specialist (Software) (13632)	$96,388	80%	20%
Stenographer To Each Deputy Commissioner (10227)	$93,417	0%	100%
Carpenter (92005)	$91,131	100%	0%
Intelligence Research Special! (31170)	$90,737	43%	57%
Administrative Staff Analyst (Non-Managerial) (1002A)	$89,322	16%	84%
Police Officer (Recurring Night) (70210)	$85,292	80%	20%
Agency Attorney (30087)	$85,029	46%	54%
Auto Mechanic (Diesel) (92511)	$84,146	100%	0%
Printing Press Operator (92123)	$81,620	100%	0%
Computer Assoc (Software) (13631)	$80,182	81%	19%
Associate Staff Analyst (12627)	$80,126	29%	71%
Criminalist (21849)	$79,802	26%	74%
Painter (91830)	$76,350	100%	0%
Telecommunications Associate (20246)	$76,261	100%	0%
Associate Supervisor Of School (60821)	$74,561	45%	55%
Management Auditor (40502)	$74,189	43%	57%
Psychologist (52110)	$72,983	32%	68%
City Laborer (90702)	$72,036	100%	0%
Administrative Traffic Enforce (10042)	$69,884	67%	33%
Supervisor Of School Security (60820)	$69,038	35%	65%
Principal Police Communication (71014)	$66,644	11%	89%
Supervising Police Communications Technician (71013)	$66,590	13%	87%
Computer Assoc (Operations) (13621)	$66,463	88%	12%
Accountant (40510)	$64,150	38%	62%
Procurement Analyst (12158)	$63,137	38%	62%
Staff Analyst (12626)	$63,073	44%	56%
Community Coordinator (56058)	$62,380	33%	67%
Auto Body Worker (92501)	$60,675	100%	0%
Fitness Instructor (51225)	$60,109	69%	31%
Principal Administrative Associate (10124)	$57,441	5%	95%
Evidence And Property Control (71022)	$54,010	53%	47%
Bookkeeper (40526)	$52,438	27%	73%
Crime Analyst (31175)	$52,020	35%	65%
Police Communications Technician (71012)	$51,700	13%	87%
Senior Police Administrative Aide (10147)	$51,464	5%	95%
Supervisor Of Stock Workers (12202)	$51,252	100%	0%
Photographer (90610)	$51,019	70%	30%

Associate Traffic Enforcement Agent (71652)	$47,053	51%	49%
School Safety Agent (60817)	$46,737	29%	71%
Traffic Enforcement Agent L3&4 (7165A)	$45,397	68%	32%
Hostler (81901)	$45,320	63%	37%
Clerical Associate (10251)	$44,774	12%	88%
Investigator Trainee (Pyrl Not (31101)	$43,520	0%	100%
Paralegal Aide (30080)	$41,967	50%	50%
Police Attendant (90202)	$41,512	29%	71%
Police Administrative Aide (10144)	$40,663	7%	93%
Media Services Technician (90622)	$39,841	64%	36%
Associate Fingerprint Technician (71141)	$39,015	19%	81%
Traffic Enforcement Agent (71651)	$38,986	58%	42%
Stock Worker (12200)	$38,816	84%	16%
Custodian (80609)	$38,277	50%	50%
Custodial Assistant (82015)	$36,504	100%	0%
City Custodial Assistant (90644)	$35,840	35%	65%
School Crossing Guard (70208)	$33,617	7%	93%
Fingerprint Technician Trainee (71105)	$29,788	35%	65%

The pattern of many of the highest-paying titles being filled primarily by males is repeated at DOITT, which does not have uniformed officers but instead includes a significant number of technical positions. At DOITT, civil service title codes with a high base salary, such as IT Administrator and Computer Systems Manager, have median salaries of $113,300 and $130,500, respectively, while being made up of 90% and 78% male employees, respectively. In contrast, roles within DOITT held primarily by female employees, such as Call Center Representatives (75% female) or Community Associate (also 75% female) make median salaries, of $39,200 and $49,400, respectively. Some administrative jobs within the agency, such as administrative staff analyst, in contrast, do have high salaries (median salary $155,200) while also having a high percentage of female employees (64%).

DOITT Salaries by Gender Composition
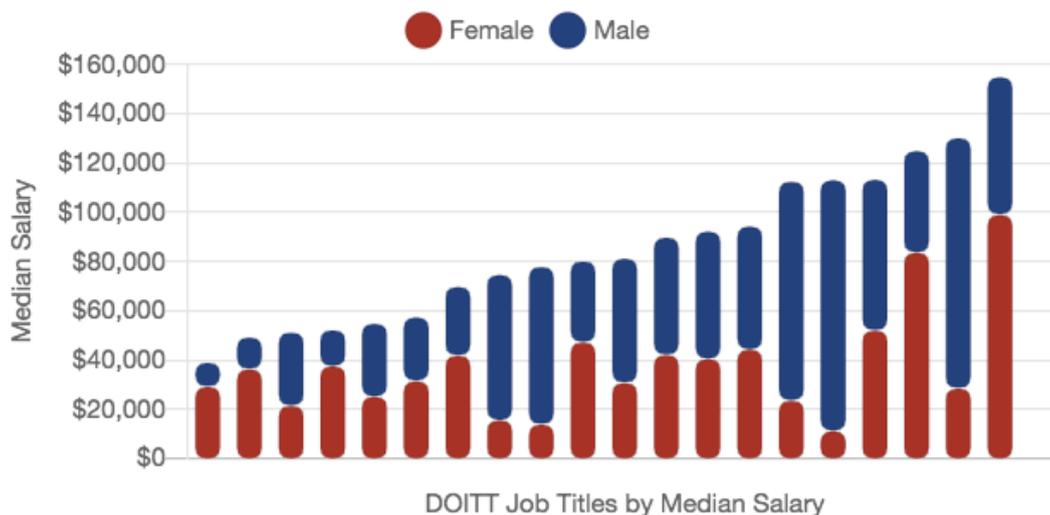
Title Name & Code	Median Salary	Men in Title & Code	Women in Title & Code
Administrative Staff Analyst (Non-Managerial) (10026)	$155,166	36%	64%
Computer Systems Manager (10050)	$130,490	78%	22%
Administrative Business Promot (10009)	$125,154	33%	67%
Administrative Staff Analyst (Non-Managerial) (10020)	$113,500	54%	46%
Certified It Administrator (La (13652)	$113,322	90%	10%
Computer Specialist (Software) (13632)	$112,744	79%	21%
Administrative Procurement Analyst (8297A)	$94,571	53%	47%
Computer Associate (Technical Support) (13631)	$92,474	56%	44%
It Project Specialist (95710)	$90,000	53%	47%
Administrative Staff Analyst (Non-Managerial) (1002A)	$81,420	62%	38%
Adm Manager-non-mgrl Frm M1/M2 (1002C)	$80,319	41%	59%
Computer Assoc (Operations) (13621)	$78,050	82%	18%
Telecommunications Associate (20246)	$74,875	79%	21%
Community Coordinator (56058)	$70,000	40%	60%
Staff Analyst (12626)	$57,590	45%	55%
Computer Assoc (Tech Supp) (13611)	$55,000	54%	46%
Associate Call Center Representative (10271)	$52,351	28%	72%
Computer Aide (13620)	$51,400	58%	42%
Community Associate (56057)	$49,375	26%	74%
Call Center Representative (10260)	$39,170	25%	75%

## Occupational Segregation in the Part-Time Workforce

Full-time employees work a standard work week in a full-time title with a regular annual work schedule, while part-time employees are defined as those who work fewer than 35 hours per week or who are in titles having no standard hours per week or days per year. The dataset includes 9,524 part-time employees. While the full-time workforce is only 40% female, the part-time workforce is 70% female—an example of occupational segregation in the types of employment held by male and female employees.

The lowest-paying part-time titles are Job Training Participants, School Crossing Guards, and School Lunch Aides. The employees holding these positions are majority Black or African American[XXXV] or Hispanic or Latino. These positions have a median salary of $13.80/hour, $14.60/hour, and $15.10/hour, respectively. Analyzing the highest-paying part-time titles by race/ethnicity, all five of the titles (City Medical Specialist; Hearing Officer; Occupational

XXXV Job Training Participants, School Crossing Guards, and School Lunch Aides are 67%, 31%, and 39% Black or African American, respectively, and are 18%, 31%, and 30% Hispanic or Latino, respectively.

Therapist; Sign Language Interpreter; and Stationary Engineer) are predominantly white. Out of these latter five titles, Occupational Therapist for the DOE has the highest proportion of white employees at 80%. This is followed by Stationary Engineers, who are 76% white. These positions have a median salary of $62.10/hour and $60.80/hour, respectively.

Race/Ethnicity Breakdown for Lowest-Paying Civil Service Titles
*(Part-Time Employees)*
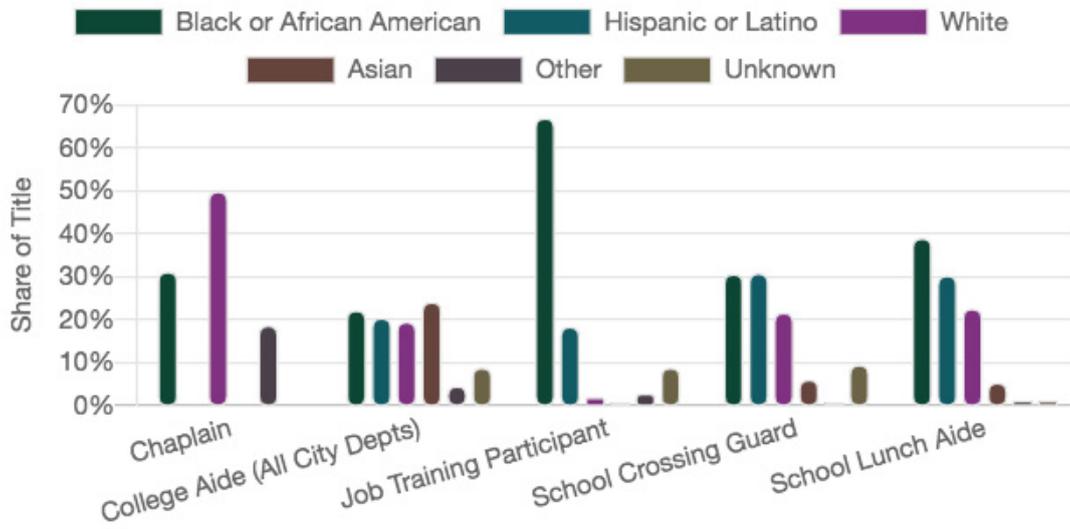
Race/Ethnicity Breakdown for Highest-Paying Civil Service Titles
(Part-Time Employees)
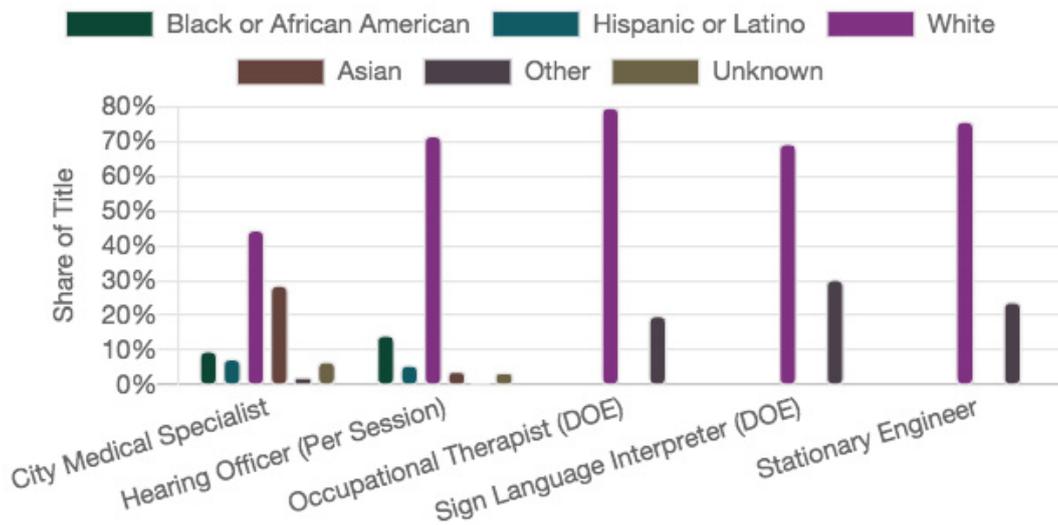
Areas for Further Analysis

The current dataset offers a snapshot of the City's workforce in 2018 and does not include historical information. This prevents longitudinal analysis, which requires monitoring employees over time. Without longitudinal data, it is not possible to ascertain whether employees are leaving the workforce at a particular age to have children or if they are leaving to retire. It is only possible to say that there are fewer employees in 2018 of a given age. This section thus presents data from which analysis cannot yet draw conclusions, but for which additional employee data over time might provide answers.
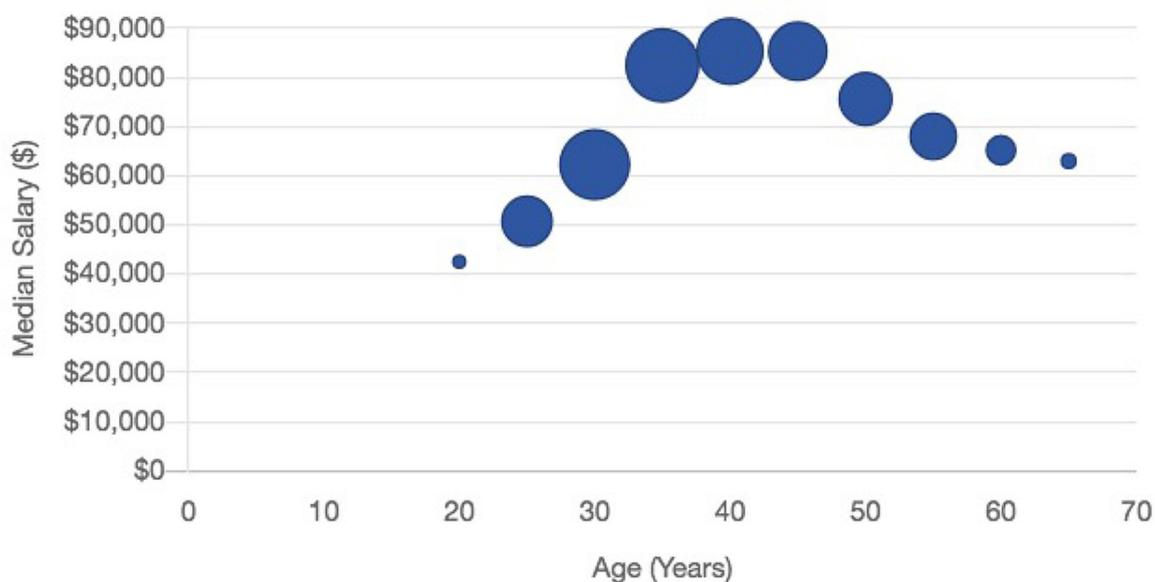
Salaries Peak at Age 45

The median age of full-time City workers included in the subset of data analyzed is 42 years old. Employees aged less than 30 make a median salary of $48,700, and employees aged 60 and over make a median salary of $64,000, both below the Citywide median salary of $67,790. Salaries peak between the ages of 40 and 47, where the median salary is $85,292.

This trend cannot be explained from the data provided. Individuals with higher salaries are, generally, financially able to retire earlier,[59] which might lead to a higher fraction of individuals with lower salaries within the workforce as age increases. Similarly, on the other end of the spectrum, it is likely that younger individuals have less education or previous experience when hired and so are paid less.

Male Employees Leave the City Workforce after Fewer Years/at a Younger Age than Female Employees

The median female employee is 44 years old, while the median male employee is 41 years old.

One possible explanation for this is that uniformed officers constitute 44% of the subset of data analyzed and are 82% male. Therefore, their retirement profiles likely have a significant

effect on the number of male employees in the workforce by age. For example, uniformed officers (both male and female) in the NYPD account for 33% of the overall dataset and are eligible to retire after 22 years of service, at which point they continue to earn a pension at one half of their salary.[60] The number of male employees in the overall dataset peaks at age 37 and then begins to decline. Similarly, the number of male employees peaks at age 36 and then begins to decline while the number of non-uniformed employees (both male and female) only peaks at age 55.

Gender and Age Distribution
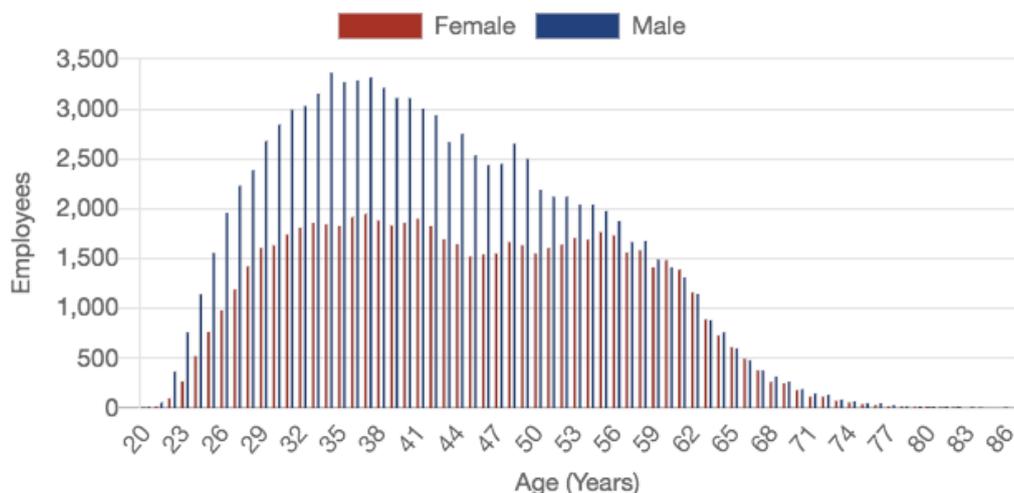
Similarly, female employees remain in the municipal workforce longer than male employees. It is not possible to ascertain with the data available what is causing this trend. One possibility is that female employees earn less and are thus waiting longer to retire.

Gender and Length of Service
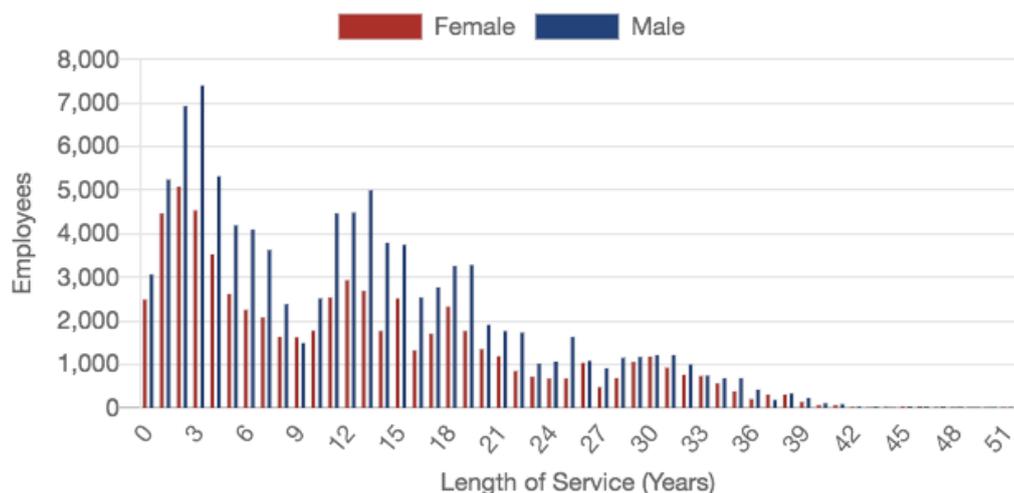
**Age of Uniform versus Non-Uniformed Employees**

Per the data, the median salary for male employees and female employees under 30 is the same, with the top 25% of female employees under 30 earning at least $3,200 more than the top 25% of male employees under 30. However, when looking at employees over age 60, these numbers diverge significantly. Male employees who remain in the municipal workforce over age 60 have a higher median salary than female employees over age 60. The top 25% of female employees over 60 earn less than the top 25% of all female employees by at least $6,000. In contrast, the top 25% of male employees over 60 earn more than the top 25% of all male employees by at least $6,000.

One possible explanation for this observation is that older male employees are more likely than younger or female employees to be in senior positions with high salaries. For example, as shown earlier, promotions from Firefighter are even more predominantly male than the entry-level position, and promotions require some additional years of experience. On a national scale, men reach their peak salary later than women do; a report on a survey of earnings data conducted between 2016 and 2019 showed that women with bachelor's degrees saw their earnings peak at age 44 while men's earnings peaked later, at age 55.[61]

While no overtime pay data was available for this analysis, the addition of that data would likely only exacerbate this trend, as final average earnings for retirement plans are calculated including overtime pay.[62] Men may also be willing to work more overtime hours than women do,[63] thus maximizing retirement salaries.

Base Salary for Youngest and Oldest Cohorts Compared Citywide by Gender[XXXVI]
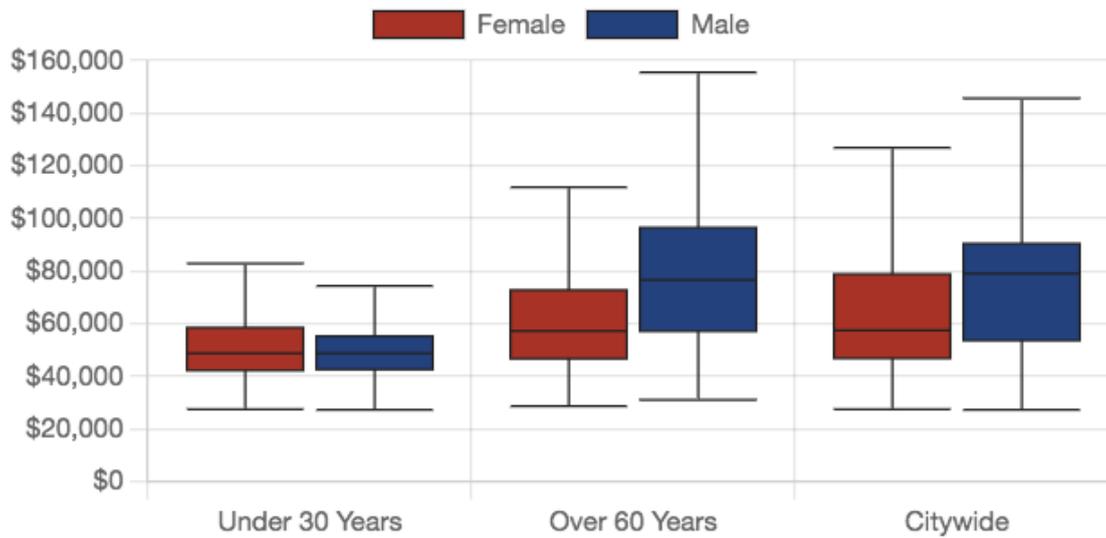
Salaries of Male Employees over the Age of 30 Are Considerably Higher than Those of Female Employees over the Age of 30

The data also shows that the median salary earned by male employees at every age over 30 is higher than the median salary earned by female employees at every age over 30. It is not clear from the data provided why that is the case, but there are several possible explanations.

One explanation is the effect of motherhood. According to national surveys, women are more likely than men to take a break from the workforce, reduce work hours, or leave the workforce entirely during their childbearing years to care for children.[64] Women are more likely than men to take family leave, and to take it for longer periods.[65] They are also more likely to feel that their career has suffered as a result.[66] These factors are the most significant to the gender pay gap,[67] and their effect may possibly be reflected in the municipal workforce as well.

Alternatively, it is possible that pay equity has increased in recent years, and so those employees hired more recently (who tend to be younger) have more equitable salaries. Because the available data is inconclusive, it will be important to continue to monitor the workforce as it ages, to understand why these age-related trends are occurring.

XXXVI The boxes within the box plots encompass the middle 50% of earners. The top of the box indicates that 25% of individuals earn above that amount, while the bottom of the box indicates that 75% of individuals earn above that amount. The line in the middle of the box splits the dataset in half, so that 50% of earners are above, and 50% are below.

Median Salary by Gender & Age
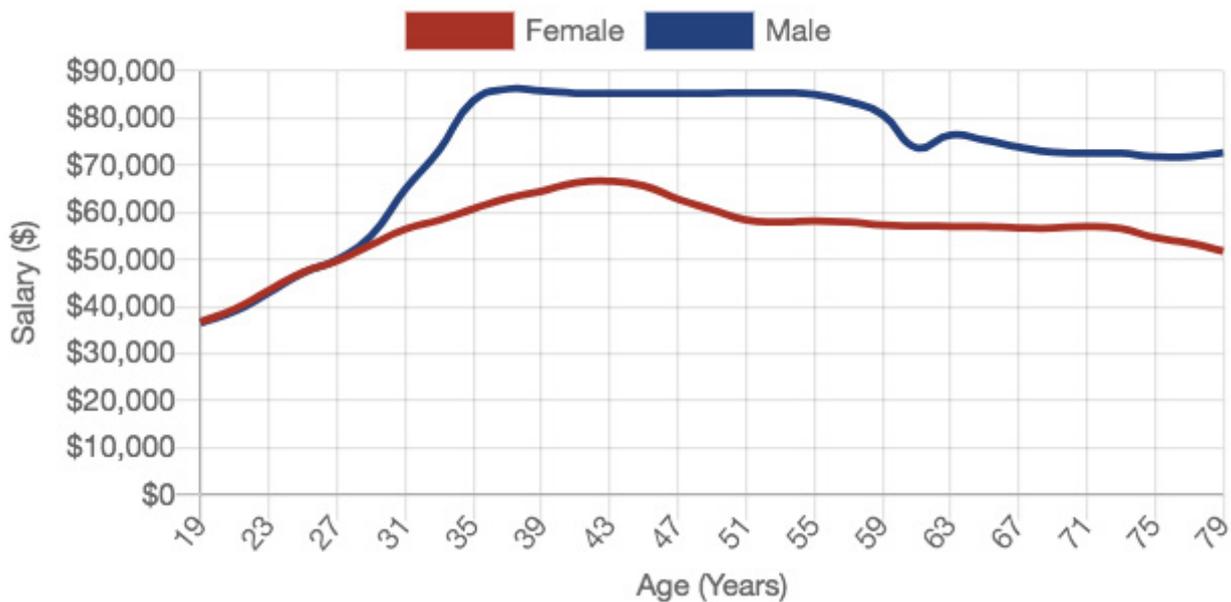
White Employees Are More Likely to Hold Senior Titles

Demographic distributions show that white employees are disproportionately more likely to hold senior titles. Possible explanations are that white employees are more likely to be promoted to higher-level positions,[68] or that the diversity within the corresponding agencies has only recently increased. As a result, a more diverse group of candidates is now represented in the junior titles of these agencies, while senior titles are held by a less diverse group of individuals who have been with the City for longer.[XXXVII]

This is supported by analyses of the workforce at some NYC agencies. For example, FDNY is divided into four EMS titles, ranked from entry-level to most senior: Emergency Medical Specialist- Trainee (53052) (84 individuals), Emergency Medical Specialist-EMT (53053) (2,584 individuals), Emergency Medical Specialist-Paramedic (53054) (786 individuals), and Supervising Emergency Medical Service Specialist (exclusively Title Code 53055) (506 individuals).


XXXVII Such analysis cannot be performed without data about former employees. Local Law 18 requires the Administration to provide such data, but the information was not provided. See "Data with Voluntary Fields," supra, p. 17.

FDNY: EMS Civil Service Titles by Race
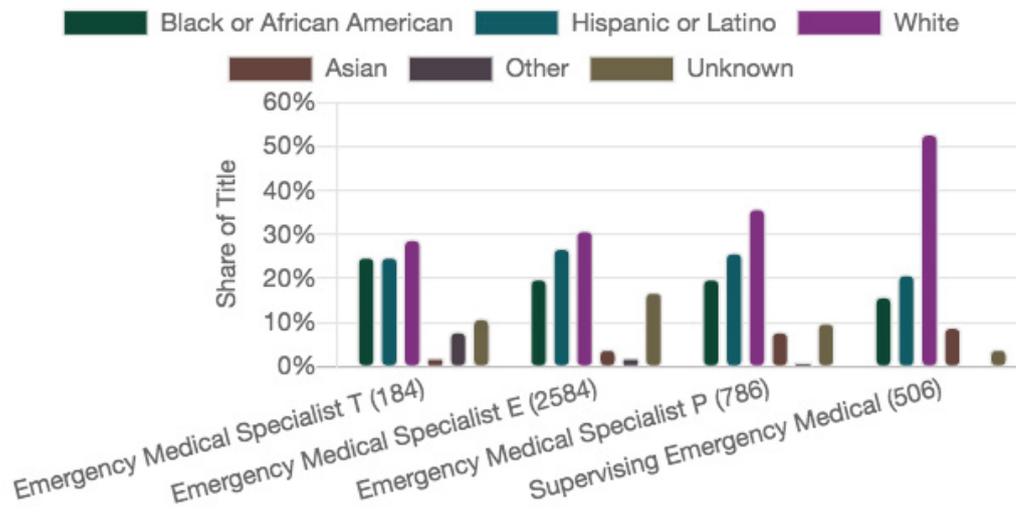
The FDNY has 10 titles that are ranked from entry to most senior: Firefighter (70310), Fire Marshal (70392), Lieutenant (70360), Captain (70365), Chief Fire Marshal (7039C), Supervising Fire Marshal (70393), Battalion Chief (70370), Deputy Chief (70382), Assistant Chief of the Department (7038B), and Deputy Assistant Chief of Department (7038A). The most entry-level position, Firefighter, has a median salary of $85,292 and is predominantly white. On average, the median years of service for white employees in these positions are higher than for other races, with the exception of several civil service titles, for example Battalion Chief and Captain (Fire). This is likely due to the high number of white employees holding these positions over long periods. Fewer, if any, non-white employees hold higher-ranking positions in FDNY.

FDNY: Civil Service Titles by Race from Junior to Senior
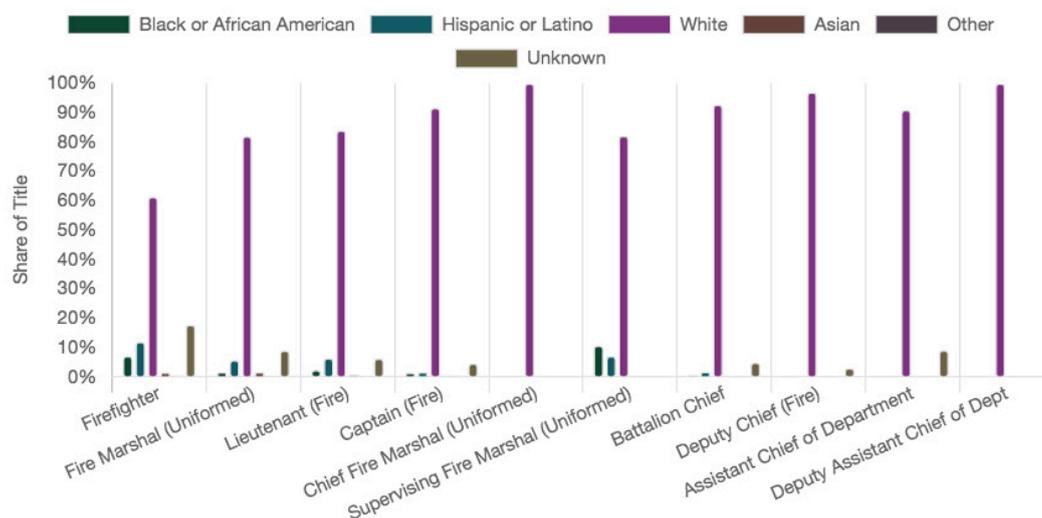
There are three titles within DSNY's "sanitation service." The Sanitation Worker is an entry-level position and includes 6,674 employees. Of this group, 3,494 are white; 1,520 are Hispanic or Latino; 1,289 are Black or African American; and 130 are Asian. The median

salary is $77,318. The following ranking title is Supervisor, with 1,030 employees and a median salary of $84,093. The proportion of white employees increases to 60% in this position, while all other race and ethnic groups decrease. Similarly, the highest-ranking position is the title of General Superintendent (DSNY) - 70196, with a median salary of $122,565. The proportion of white employees in this title increases to 73%, while the proportion of all other race and ethnic groups decreases further.

Title Rank by Race for the Sanitation Service Occupation Group
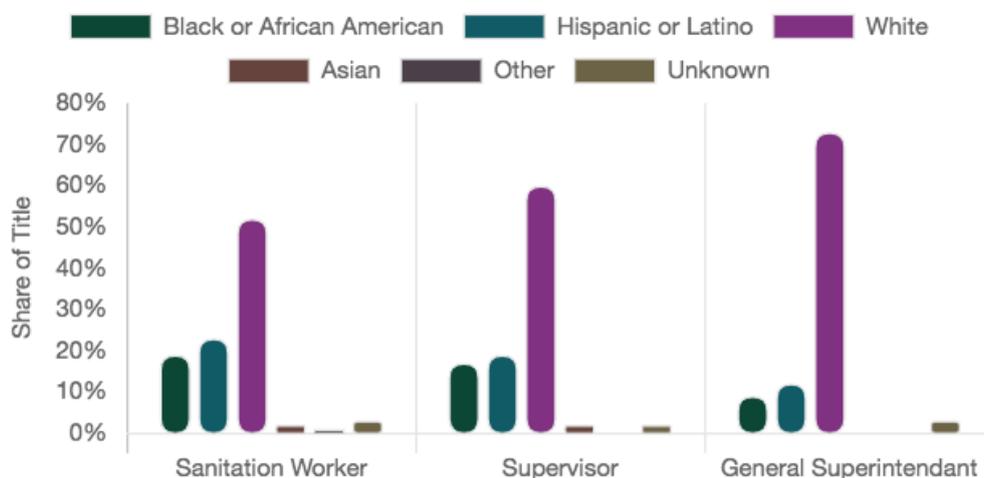
In the NYPD, there are five titles within the "Police Service" occupational group. The entry-level title, Police Officer, includes 23,792 employees and has a median salary of $85,292. Of this group, 38% of employees are white, 26% are Hispanic or Latino, 13% are Black or African American, and 7% are Asian. In the next ranking position, Sergeant, which has a median salary of $109,360 and includes 4,012 individuals, the proportion of white employees increases to 45%, while other groups decrease or stay the same; Black or African American employees remain at 13%, Hispanic or Latino employees decrease to 22%, and Asian employees remain at 7%.

For the title of Lieutenant, which includes 1,407 employees, and has a median salary of $125,531, the proportion of white employees continues to increase to 56%, while Black or African American decreases to 11%, Hispanic or Latino drops to 19%, and Asian remains at 7%. The highest-ranking position (excluding the Chief Surgeon position), Captain, has a median salary of $163,454 and includes 349 individuals. There is an additional increase in the proportion of white employees to 62% and the proportion of Asian employees to 9%, while the proportion of Black or African American employees decreases to 10% and the proportion of Hispanic or Latino employees decreases to 15%.

**Title Rank by Race for the Police Service Occupation Group**
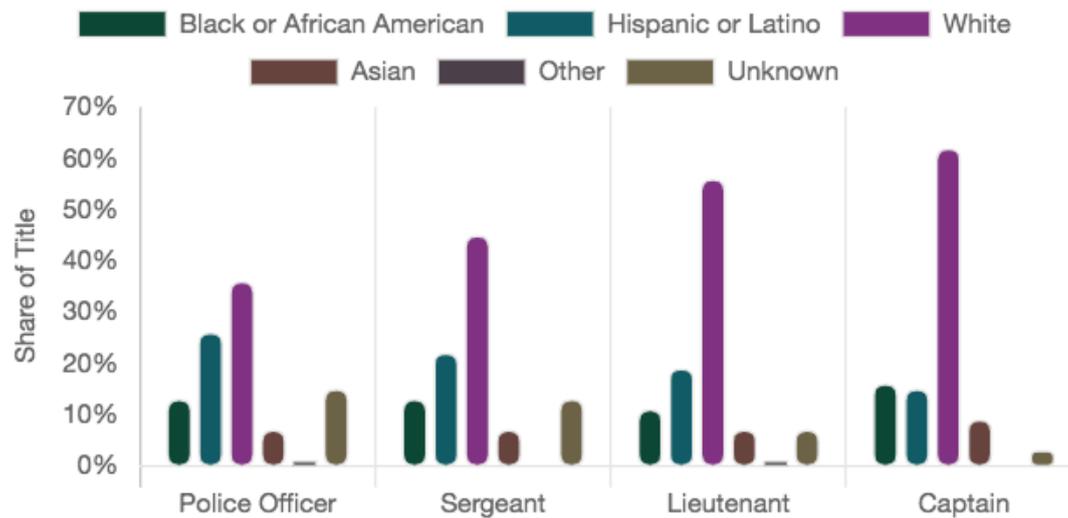
Department of Correction and Department of Probation

To address the pay gap, it is not enough to ensure that individuals in the exact same role are compensated in the same manner; jobs that require similar skills and are performing similar functions should also be compensated comparatively—this is known as "comparable worth."[69] The stark difference in demographics and compensation between probations and corrections officers is well documented,[70] and presents one case that may be ripe for a comparable worth analysis. It is beyond the scope of this report to conduct a full comparable worth analysis to determine if any roles between the two agencies consist of "functionally similar" work or how their pay structures compare; however, it is possible to initially examine their current compensation and demographics.

The two roles, based on their posted job descriptions, seemingly require similar tasks of an employee, although they work in different settings. Probation officers are tasked with "supervising those on probation and providing them with opportunities to move out of the criminal justice system through meaningful education, employment, health services, family engagement, and community participation."[71] Meanwhile, corrections officers are responsible for "supervision, maintain[ing] security within correctional facilities and . . . for the custody, control, care, job training and work performance of inmates of detention and sentenced correctional facilities."[72] The Council's analysis of the available Local Law 18 data cannot determine if these roles represent "functionally similar" work, but the difference in compensation between the two roles is striking.

According to the most recent collective bargaining agreement with the United Probation Officers Association, a new probation officer can expect to make $45,934; this salary will top out at $57,885 after 11 years.[73] In contrast, corrections officers receive a $5,000 pay boost after only 1.5 years and top out at a salary of $85,292 after 5.5 years. This difference is reflected in the payroll data for the entire municipal workforce, where the median base salary for DOC and DOP officers by years of service tops out rapidly and at a much higher value for DOC officers.

DOC & DOP Officer Median Salary and Length of Service
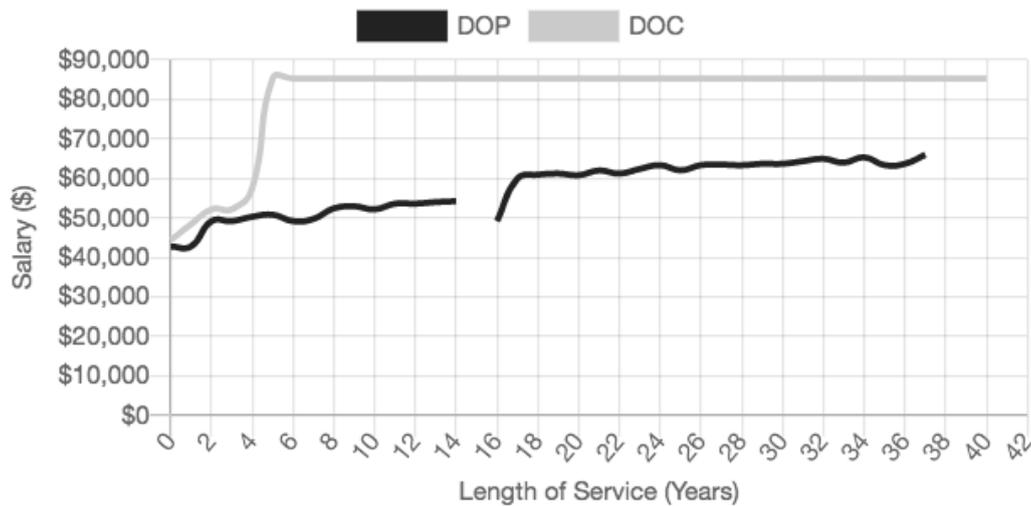
The demographics of individuals employed in the two roles are also vastly different. DOC and DOP have nearly reversed gender breakdowns for their officers; DOC officers are 40% female, while DOP officers are almost 70% female. The gender breakdown does not differ significantly by length of service. Similarly, while DOC Officers are only 35% Black or African American, DOP Officers are 65% Black or African American. It is thus clear from the data that DOP, where officers are paid significantly less than the DOC, has significantly more female and Black or African American Officers.

Agency Breakdown by Race DOC versus DOP
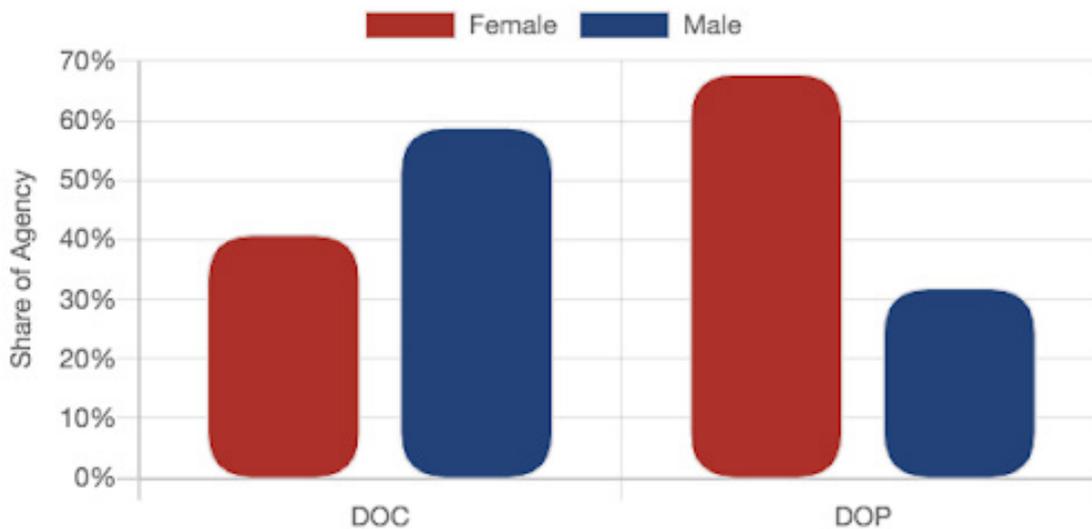
Agency Breakdown by Gender DOC versus DOP
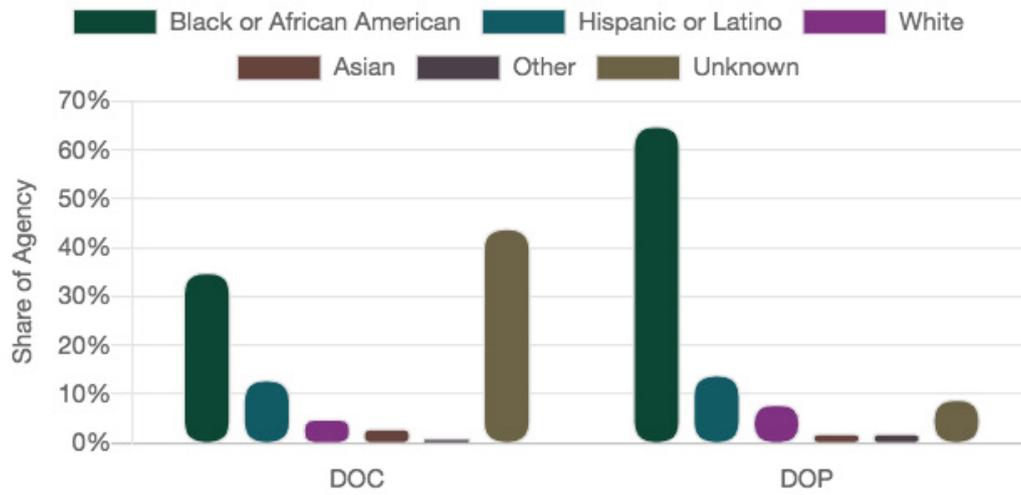
Effect of Education

For the available data, non-white employees make less than white employees across every level of education. For all those individuals who did not indicate an education level, white employees also earned the most. White employees with a bachelor's degree make $66,463 compared to $57,070 for non-white employees with a bachelor's degree, which is a pay differential of $9,393. Interestingly, the gap between the two groups is greater for those with lower levels of education.

Median Salary of White and Non-White Employees by Education Level
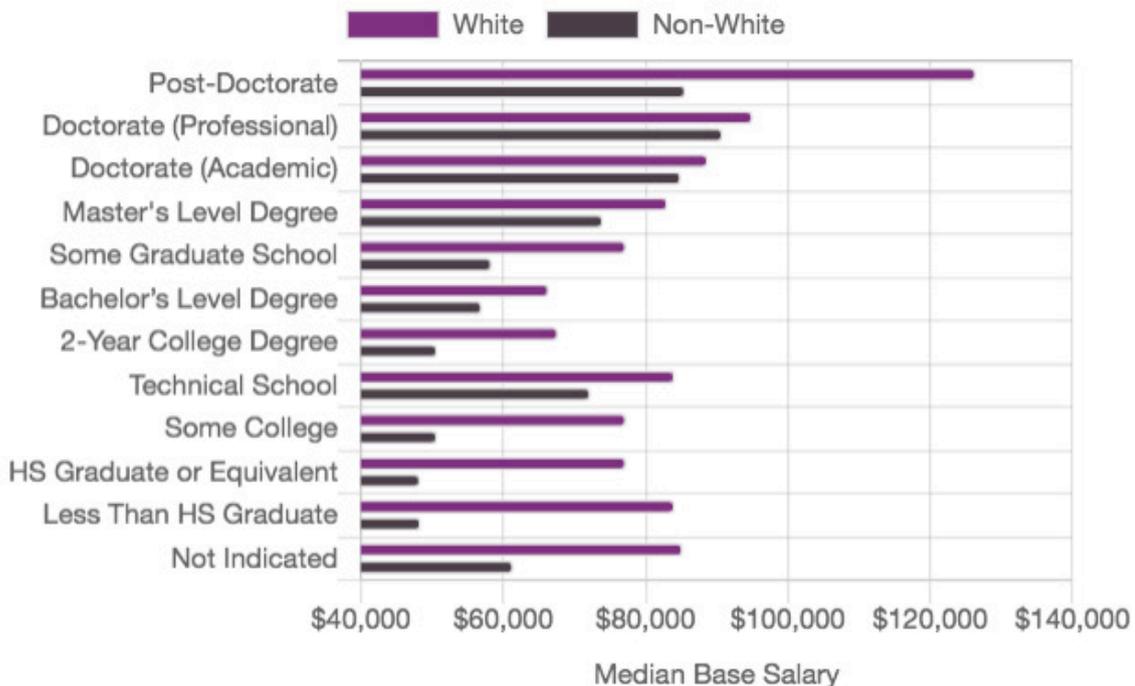
Female employees make less than male employees across every level of education except for Post-Doctorate, for which few employees exist. Male employees with a bachelor's degree make $63,409 compared to $57,070 for female employees, which is a pay differential of $6,339. The gap between the two groups is again greater for those with lower levels of education.

Average Salary of Male and Female Employees by Education Level
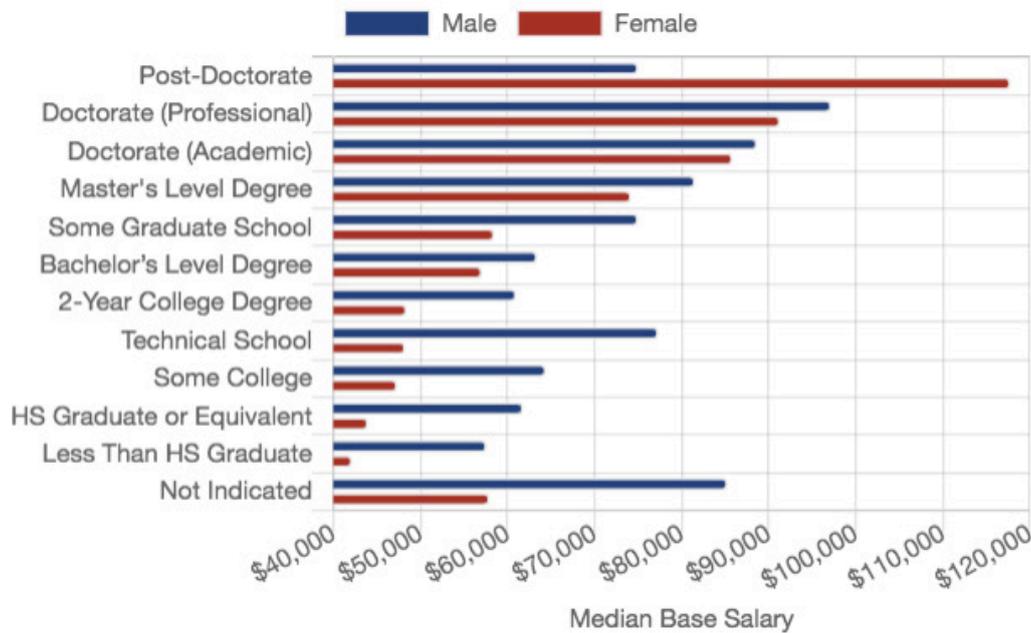
Additional Information and Findings

Despite the information missing from the dataset,[XXXVIII] the Council's analysis was able to yield some insights into the makeup of the municipal workforce. Below are some findings about the municipal workforce citywide, by agency, and by demographic categories.

Citywide Findings

Below are general findings from the dataset. Totals and breakdowns are provided across gender, race and ethnicity, age and years of service, worker classification, provisional status, and salary for full-time employees.

Full-Time Employees: 161,347 Persons	
GENDER	Percent (Count)
Female	40% (64,458)
Male	60% (96,768)
Unknown or Choose Not to Disclose	<1% (121)
RACE/ ETHNICITY	Percent (Count)
White	32% (51,884)

_____
XXXVIII See "Data with Voluntary Fields," *supra* p. 17.

Black or African American	29% (46,897)
Hispanic or Latino	18% (29,161)
Asian	8% (13,138)
Other	1% (1,896)
Ethnicity Unknown or Choose Not to Disclose	11% (18,371)
AGE & YEARS OF SERVICE	Amount (Year)
Median Age	42 Years
Median Years in Position	11 Years
TITLE CLASSIFICATION	Percent (Count)
Competitive	91% (146,752)
Non-Competitive	9% (14,595)
PROVISIONAL STATUS	Percent (Count)
Provisional	6% (10,298)
Not Provisional	94% (151,049)
BASE SALARY	Amount (Dollar)
Median	$67,792

The racial/ethnic representation of the municipal workforce does not reflect the diversity of NYC's entire labor force population.[74] The Hispanic or Latino, Asian, and white populations appear to be slightly underrepresented, while the Black or African American population appears to be overrepresented. The U.S. Census does not include the category "Ethnicity Unknown or Chose Not to Disclose" as an option; however, this group may possibly be captured by the "Other" category. If so, then those with "Ethnicity Unknown or Chose Not to Disclose" are also slightly underrepresented.

Municipal Workforce Race/Ethnicity Representation
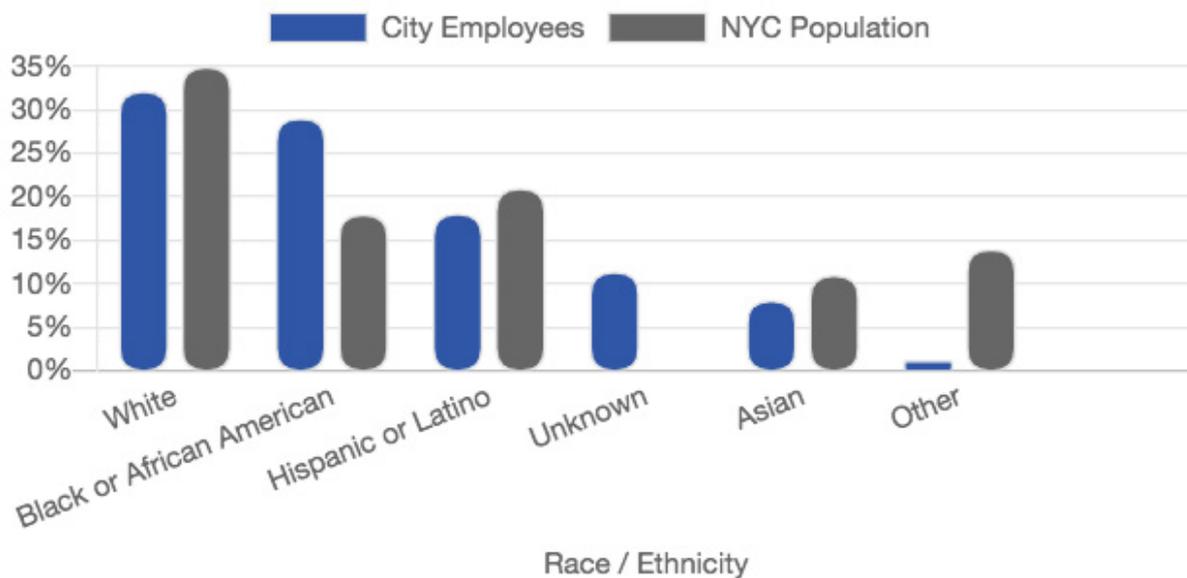
Municipal Workforce Compared to Overall NYC Workforce

Additionally, the analysis found that the municipal workforce's median salary ($67,792) is higher than the overall median salary in NYC ($55,720), with City employees earning $12,000 more.[75]

Agency Findings

Agency Employee Profiles

The table below shows the average or typical employee at each agency, and the service title emblematic of the agency. The table also shows how the race, gender, age, years of service, and salary vary across the typical service titles at each agency. Total indicates the number of employees in that agency holding that title, and percent indicates the fraction of the agency they represent. The most populous job titles were chosen for each agency.

	ACS	BIC	DCA	DCAS	DCLA
	Child Protective Specialist	**Community Associate**	**Community Associate**	**Custodian**	**Community Coordinator**
Total (Percent)	2230 (33%)	28 (36%)	89 (22%)	195 (11%)	15 (27%)
Median Salary	$57,070	$46,006	$46,994	$36,086	$69,826
Median Age	36	26	37	51	41
Median Years of Service	4	2	5	14	4
Race	Black or African American	White	Hispanic or Latino	Black or African American	White (NH)
Gender	Female	Female	Female	Male	Female
	DCP	**DDC**	**DEP**	**DFTA**	**DHS**
	City Planner	**Assistant Civil Engineer**	**Sewage Treatment Worker**	**Community Coordinator**	**Special Officer**
Total (Percent)	88 (29%)	120 (9%)	588 (10%)	69 (23%)	756 (31%)
Median Salary	$80,998	$65,132	$87,195	$64,658	$34,570
Median Age	36	32	48	51	34
Median Years of Service	6	3	11	9	3
Race	White (NH)	Asian (NH)	White (NH)	Black or African American	Black or African American
Gender	Male	Male	Male	Female	Male
	DOB	**DOC**	**DOE***	**DOF**	**DOHMH**
	Inspector (Construction)	**Correction Officer**	**Community Assoc**	**City Tax Auditor**	**City Research Scientist**
Total (Percent)	239 (15%)	9,370 (77%)	2,005 (17%)	339 (18%)	661 (10%)
Median Salary	$61,800	$62,247	$44,887	$64,392	$84,781
Median Age	47	36	49	48	35

Median Years of Service	2	7	10	7	3
Race	White (NH)	Ethnicity Unknown	Hispanic or Latino	Black (NH)	White (NH)
Gender	Male	Male	Female	Female	Female
	DOI	**DOITT**	**DOP**	**DORIS**	**DOT**
	Confidential Investigator	**Call Center Representative**	**Probation Officer**	**Public Records Officer**	**Highway Repairer**
Total (Percent)	89 (40%)	256 (17%)	662 (58%)	9 (15%)	448 (9%)
Median Salary	$57,727	$39,170	$51,860	$51,105	$92,457
Median Age	28	38	46	38	52
Median Years of Service	2	3	10	2	18
Race	White (NH)	Black (NH)	Black (NH)	White (NH)	Black (NH)
Gender	Female	Female	Female	Female	Male
	DSNY	**DVS**	**DYCD**	**FDNY**	**HPD**
	Sanitation Worker	**Community Coordinator**	**Associate Contract Specialist**	**Firefighter**	**Inspector (Housing)**
Total (Percent)	6,674 (67%)	16 (50%)	79 (16%)	8,491 (50%)	281 (12%)
Median Salary	$77,318	$60,906	$68,508	$85,292	$57,341
Median Age	41	37	41	37	53
Median Years of Service	11	2	4	13	5
Race	White (NH)	Black (NH)	Black (NH)	White (NH)	Black (NH)
Gender	Male	Female	Female	Male	Male
	HRA-DSS	**LABOR**	**NYPD**	**OATH**	**PARKS**
	Eligibility Specialist	**Community Associate**	**Police Officer (Recurring Nigh**	**Community Coordinator**	**Community Coordinator**
Total (Percent)	2,401 (18%)	21 (17%)	23,792 (46%)	45 (14%)	430 (13%)
Median Salary	$42,229	$42,799	$85,292	$60,403	$68,530
Median Age	49	33	33	35	35
Median Years of Service	9	2	7	3	5
Race	Black (NH)	Black (NH)	White (NH)	Hispanic or Latino	White (NH)
Gender	Female	Female	Male	Female	Female

	SBS
	Business Promotion Coordinator
Total (Percent)	73 (27%)
Median Salary	$65,466
Median Age	33
Median Years of Service	3
Race	Black (NH)
Gender	Female

*non-pedagogical

Category Findings

Below are general findings across several distinct categories and/or groups of employees within the dataset.

Years of Service

Within the DOP, 50% of employees have had the longest uninterrupted service with the City, compared with all other agencies. Most employees at DVS have the shortest length of service with the City; however, DVS only became an agency in early 2016.[XXXIX]

Longest Serving Agencies	
Agency	**Longest Serving Rank (Over 18 Years)**
DOP	50.1%
Dept of Finance (DOF)	40.5%
Dept of Social Services	39.0%
DFTA	38.2%
OLR	36.5%

| Shortest Serving Agencies	
Agency	**Shortest Serving Rank (Under 4 years)**
DVS	62.5%
Business Integrity Commission	51.3%
Dept of Records & Information Services	50.0%
DHS	45.5%
DCA	44.9%

XXXIX New York City Council, Local Law 113 of 2015 (enacted Dec. 10, 2015), *available at* https://legistar.council.nyc.gov/LegislationDetail. aspx?ID=1739320&GUID=0D5918DB-F678-48A3-8EE5-D6165B32BF62&Options=Advanced&Search=. Prior to Local Law 113, the Department of Veteran's Affairs was the Mayor's Office of Veterans' Affairs.

Median Salary by Gender & Years of Service

When looking at the relationship between median base salary and years of service by gender, female employees start at a slightly higher salary than male employees; however, this changes after 2.5 years, when the salaries of male employees increase at a faster rate than those of female employees. Male employees make around $84,000 after 10 years of service, while female employees make around $66,000 after 10 years.

Because age and years of service are highly related to one another, possible explanations for this difference are similar to the reasons provided above regarding males earning more after the age of 30—primarily increased pay equity in the more recent workforce and labor changes related to motherhood.

Median Salary by Gender & Length of Service
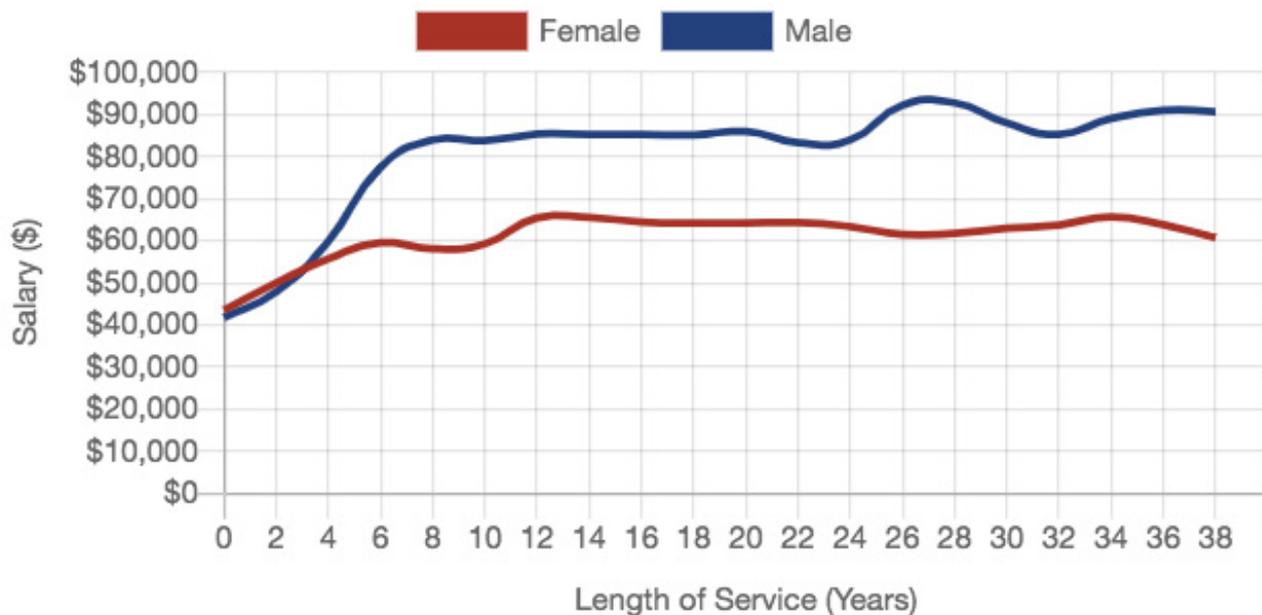
Age

While the municipal workforce as a whole has a median age of 42, the median age of employees at many agencies exceeds this. Below is a chart that shows the median age for each agency. DCP appears to be the agency with the youngest employees on average, with a median age of 37, followed by the NYPD with a median age of 38. DFTA has the oldest workforce on average, with a median age of 53, followed by DOF with a median age of 52.

Even though there are 20 agencies with median ages over the Citywide median of 42, compared to the 10 agencies with median ages below the Citywide median, NYPD's large share of overall employees in the City workforce (32%) keeps the median age much younger. In a case study on the effects of uniformed positions across the NYPD, FDNY, DOC, and DSNY, the City workforce's median age increases to 47 when uniformed positions are excluded.
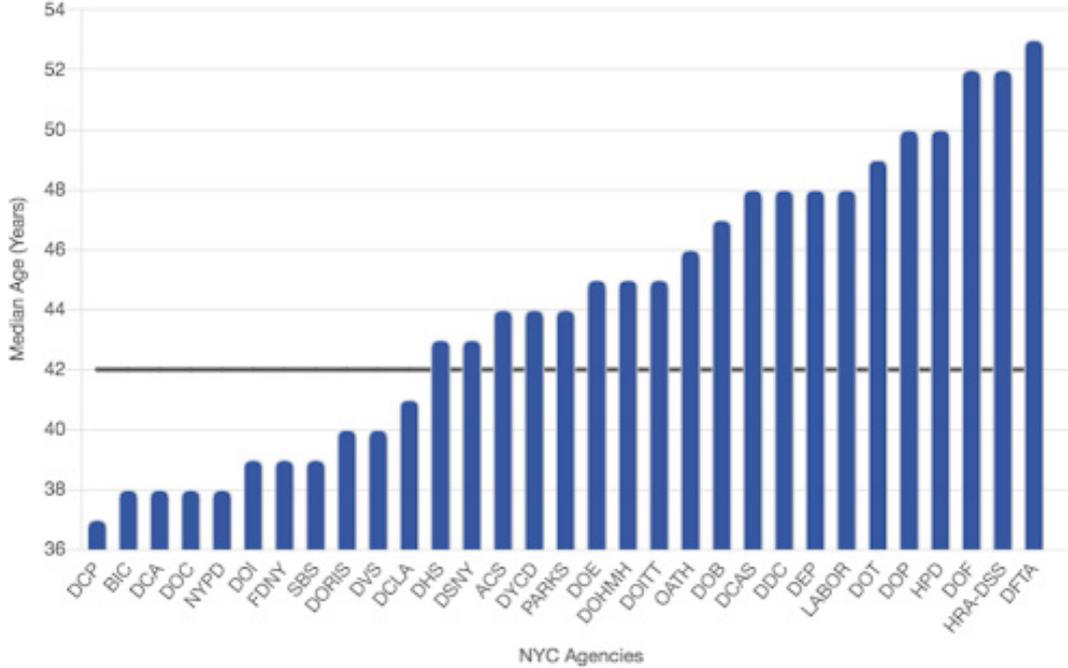
Gender, Race/Ethnicity

Below are findings on the intersection of race/ethnicity and gender. As compared to the overall citywide race/ethnicity breakdowns, there are fewer white and Hispanic or Latino[XL] female employees than male employees and more Black or African American female employees than Black or African American male employees.

Race/Ethnicity	Female (Percent)	Male (Percent)	Total (Percent, Count)
White	7%	25%	32% (51,884)
Black or African American	18%	11%	29% (46,897)
Hispanic or Latino	7%	11%	18% (29,161)
Asian	3%	5%	8% (13,138)
Other	<1%	<1%	1% (1,896)
Ethnicity Unknown or Choose Not to Disclose	4%	7%	11% (18,371)

XL The data reported by the Mayoral Administration pursuant to Local Law 18 was presented as "Hispanic or Latino," regardless of sex or gender. The Council's analysis and this report thus also use that term, to reflect the information exactly as it was provided by the Administration.

Uniformed Employees

Uniformed employees make up 44% of the entire workforce included in the dataset. The NYPD alone is 32% of the entire workforce included in the dataset. Thus, it is important to understand the effect uniformed employees have on the dataset as a whole and the model created to understand the adjusted pay gap.

Uniformed employees are 41% white, and 82% are male; they have a median age of 38 and a median salary of $85,300. In contrast, all other employees are only 25% white, 43% are male, they have a median age of 47, and a median salary of just $60,248. Clearly, the sample of uniformed officers is significantly different from the remainder of the New York City workforce. In fact, when examining distribution of salaries within the New York City workforce, the vast majority of the employees being paid within the range of $85,000-$95,000 dollars are in uniformed titles. That peak in the salary distribution largely disappears when removing uniformed titles from the workforce.

At the civil service title level, for uniformed titles, pay is mostly equal across gender and race/ethnicity. These salaries are set by collective bargaining agreements. The difference emerges when looking at who is being promoted within some of these titles. For additional information, refer to "Occupational Segregation," *supra p. 25*.

Finally, when excluding uniformed officers/employees within the NYPD, FDNY, DSNY, and DOC from the model, there is little effect on the model results. Thus, the adjusted differences that the analysis showed for the difference in pay between different genders and races/ethnicities did not change significantly when all uniformed individuals were excluded from the model. This is expected, as the model was built to account for differences across categories like civil service title.

	Uniformed	Non-Uniformed	Citywide
Employees (Percent, Count)	44% (70,638)	54% (90,709)	100% (161,346)
GENDER (Percent)			
Female	18%	57%	40%
Male	82%	43%	60%
RACE (Percent)			
White	41%	25%	32%
Black or African American	17%	39%	29%
Hispanic or Latino	20%	16%	18%
Asian	5%	11%	8%
Other	1%	2%	1%
Ethnicity Unknown or Choose Not to Disclose	7%	16%	11%
Median Age (Years)	38 Years	47 Years	42 Years
Median Years of Service (Years)	12 Years	11 Years	11 Years
Median Salary (Dollars)	$85,292	$60,248	$67,792

Part-time Employees

While the analysis focused primarily on full-time employees, part-time employees exhibit different trends. Of the 9,524 part-time employees,[XLI] the majority are female and Black or African American or Hispanic or Latino. Most part-time employees were employed either by the Department of Parks and Recreation (34%), NYPD (33%), or DOE (13%).

Part-Time Employees by Agency
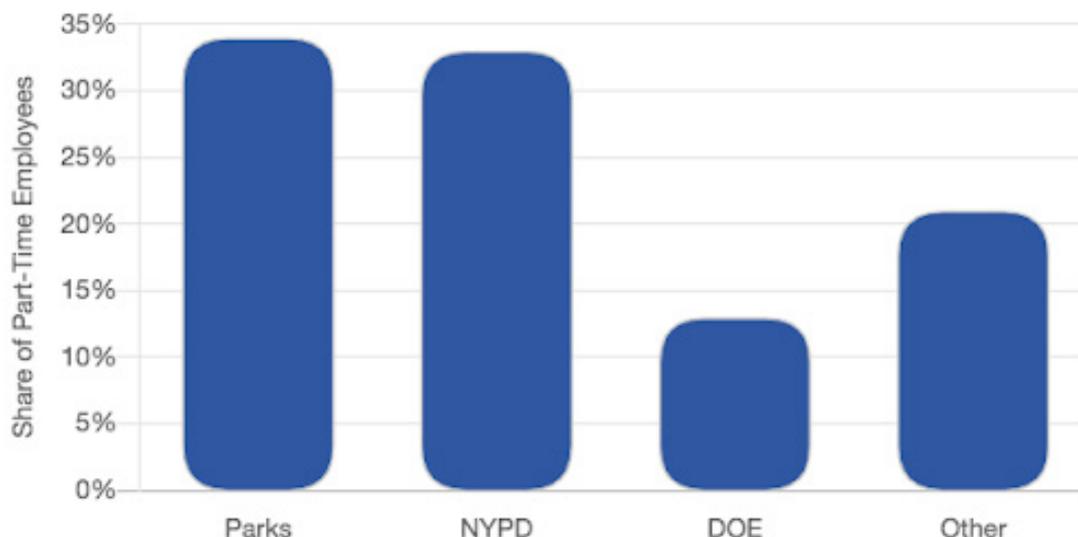
Hourly Pay

The median hourly pay for part-time employees is $14.64. The five lowest-paying part-time civil service titles are Job Training Participant (80633) ($13.80), School Crossing Guard (70205) ($14.60), School Lunch Aide (54503) ($15.10), College Aide (10209) ($15.90), and Chaplain (54610) ($16.20). The five highest-paying part-time civil service titles are City Medical Specialists (53040) ($78.60), DOE Occupational Therapists (51221) ($62.10), Stationary Engineers (91644) ($60.80), DOE Sign Language Interpreters (31046) ($59.00), and Hearing Officers (95937) ($53.90).

Gender

For full-time employees, female employees make up only 40% of the municipal workforce while male employees make up the other 60%.[XLII] For part-time employees, the proportions change, and the workforce becomes predominantly female. Female employees make up 70% of part-time employees while male employees only make up 30%.

XLI Part-time employees included in the analysis followed similar data cleaning as to the full-time analysis. Employees with competitive and non-competitive titles were included. Employees with hourly pay less than $13.00 and whose gender is "Unknown or Choose Not to Disclose" (9 individuals) were excluded.
XLII As discussed, the full DOE workforce was not included in the dataset; according to DCAS's 2018 Workforce Profile report, the DOE employed 173,160 employees, of which 77% were female.

Part-Time versus Full-Time by Gender

Part-Time vs Full-Time by Gender
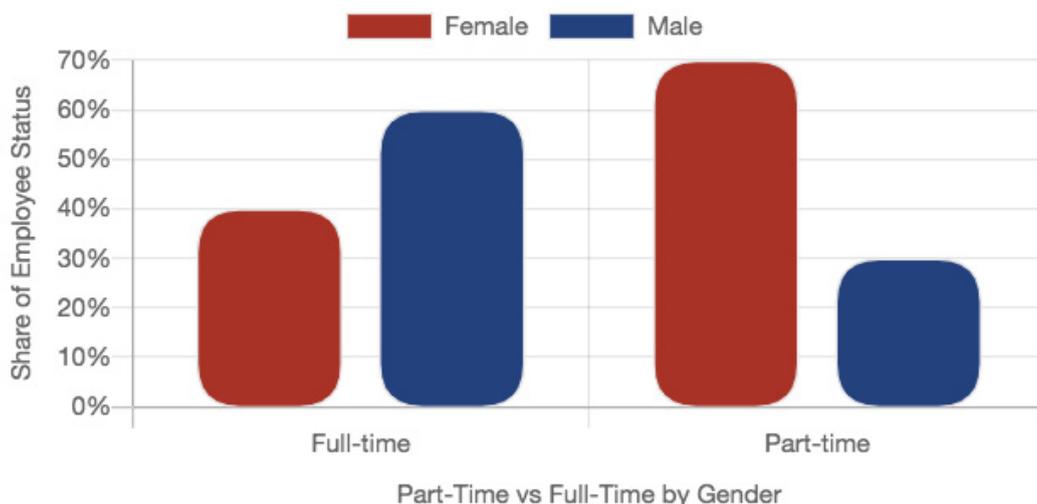
Race/Ethnicity

When comparing the racial/ethnic breakdown between part-time and full-time employees, the biggest difference is within the percentage of Black or African American employees and the percentage of white employees. The percentage of Black or African American employees increases from 29% for full-time employees to 41% for part-time employees. The proportion of white employees decreases, from 32% for full-time to 20% for part-time employees.

Part-Time vs Full-Time by Race/Ethnicity
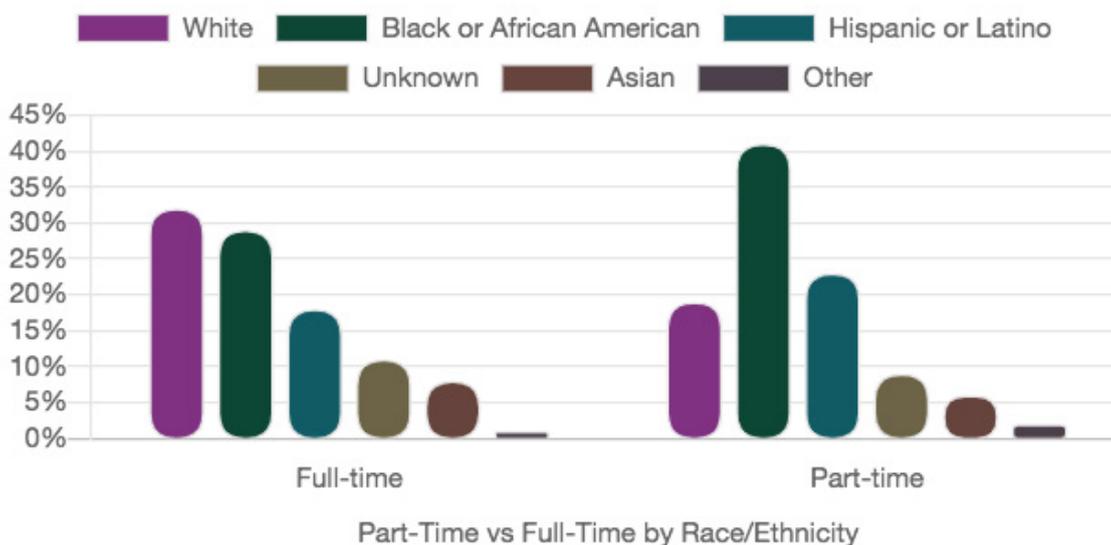
Part-Time vs Full-Time by Race/Ethnicity

RECOMMENDATIONS
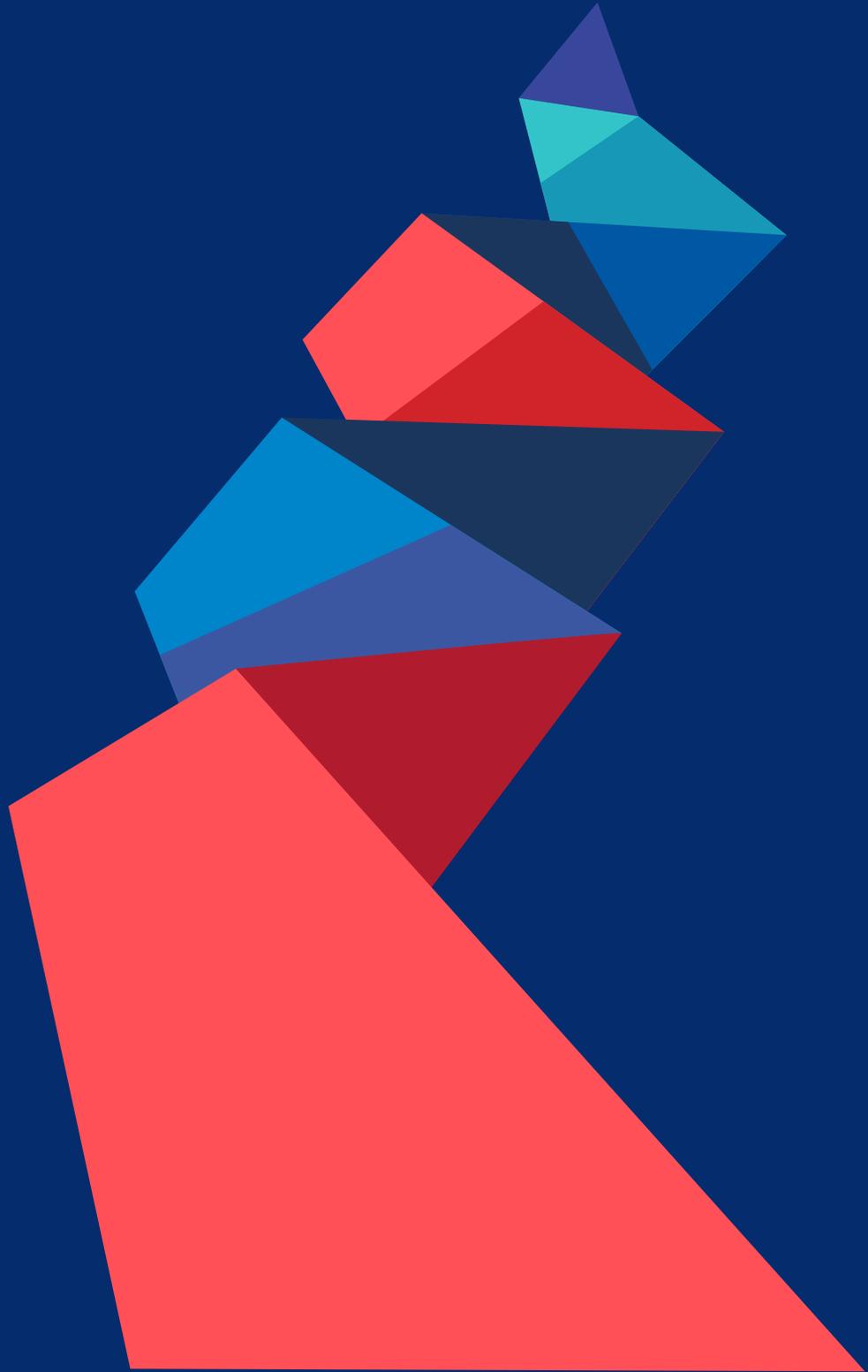
Recommendations

Better data

Currently, Local Law 18 of 2019 requires the Administration to give the Council access to data on demographics, pay, and benefits for a subset of municipal employees in the City. But to better address and analyze the nuances that contribute to pay inequity, the Council needs data on retention, promotion, engagement, recruitment, selection, and development; this will allow for a more complete analysis of pay inequity and may offer deeper insights into strategies to overcome it.

- To allow future analyses to determine changes in pay year over year and provide a more complete picture of the City workforce, including insights into attrition, promotion, advancement, or hindrances in pay equity over time, the Council will consider legislation that clarifies[XLIII] and expands the Pay Equity Law to require the following additional information:
  - o Historical data regarding all prior City employees;
  - o Data on DOE pedagogical employees;
  - o All agencies and employees found in DCAS's NYC Government Workforce Profile Report;[XLIV]
  - o Unique identifier for each employee;[XLV]
  - o Current title entry date;[XLVI]
  - o Entire leave status history, including the date and amount of leave taken and cause of leave (and specifically, whether the leave is related to new parenthood);
  - o Whether a civil service title is a promotional title;[XLVII]
  - o Business title;[XLVIII]
  - o Union status, including unique code, description of the union representing the civil service title, and bargaining unit name;[XLIX]
  - o Overtime and benefits pay;
  - o Whether a civil service title is a uniformed position;[L] and
  - o Minimum education requirement for position and education level attained by employee.[LI]

XLIII The Pay Equity Law passed in 2019 requires the City to report a wide array of information on the municipal workforce. In certain instances, there were disagreements in the interpretation of the law, leading to a discrepancy between what was reported by the City, and the Council's original intent behind the legislation. In other instances, due to technological shortcomings, the data was not reported pursuant to the law.

XLIV The report mandated by the Pay Equity Law includes only 36 agencies, while 72 agencies are reported in the DCAS report, including DOE pedagogues, the New York City Housing Authority, NYC Health + Hospitals, the School Construction Authority, elected bodies, and several boards and commissions.

XLV If the Administration were to provide the required historical data (not currently included in the dataset), a unique identifier that is not personally identifiable would be needed to track employees over time, which would allow for analysis on promotion, attrition and changes in pay.

XLVI In addition to start date of employment with the City, which is currently included in the dataset, the title entry date would provide the start date of the most recent position.

XLVII Knowing which titles are the next title in the career ladder would allow for analysis on employee promotions and make it possible to assess whether there are correlations between certain titles and demographics of employees that have strong career promotion opportunities versus demographics that do not.

XLVIII This data is currently reported, but could be improved by indicating "NA" for employees who do not have a business title. If an employee's business title matches their civil service title, then the business title should be filled with the civil service title.

XLIX Although union information is already available as a separate dataset on the open data portal, adding this information to the Local Law 18 dataset would allow for more efficient analysis on the effect unions may have on pay.

L Whether a job title was a uniformed title was not indicated in the dataset. See "Uniformed Titles" under the "Data, Limitations, and Methodology" section, *infra* p. 16, for details on how the Council performed uniformed analysis in this report.

LI Employees' educational attainment is presently reported in the dataset, but is available only if entered by the employee. The majority of employees did not report their education level.

Job Pipeline and Hiring Practices, and the Civil Service Exam System

The demographics of the municipal workforce, including the occupational segregation that exists, may in part be driven by (i) the job pipeline—who is being trained and prepared to qualify for which municipal jobs—and (ii) existing hiring practices—which aspects of the current application system might be perpetuating occupational segregation. The Civil Service Exam System presents a set of codified paths for job advancement,[76] and the Council's analysis showed that more senior titles, which are more highly-compensated, tend to be held by a higher percentage of males and white individuals. Therefore, understanding who is applying to and taking open competitive and promotional civil service exams and what is contributing to that decision-making process is crucial.

One potential contributing factor to occupational segregation and pay inequity is a skills mismatch between highly paid civil service titles and the specific fields of education obtained by certain demographics. At the national level, for example, while the science, technology, engineering, and math fields are filled with diverse graduates, jobs in the more highly-compensated fields of statistics and mathematics as well as computer science tend to be held by white men.[77] Additional efforts, through education, vocational training, and recruitment, should be employed to encourage a diversification of the pipeline to highly-compensated fields.

Understanding why pipelines may start demographically diverse, while final hires may appear more demographically homogenous, is also vital to understanding this issue. For example, Local Law 49 of 2015 requires the FDNY to report on the gender and race/ethnicity of those taking the open-competitive firefighter civil service examination and promotion to firefighter civil service examination.[78] Data from the December 2020 report shows that fewer Black (56%), Hispanic (63%), Asian (61%), and female (45%) individuals who apply to the open competitive exam end up taking it as compared to their white (71%) and male (66%) peers.[79]

Engaging local communities may help address some of this trend. If the City were to engage with local communities, awareness of such opportunities might be encouraged, and this, in turn, might lead to greater diversity in hires.

Additionally, hiring advertisements that are written in a way that perpetuates stereotypes based on gender or race may discourage a diverse set of applicants. Studies have shown that job postings for careers presently dominated by men tend to use more masculine wording; these postings are less appealing to applicants who are women.[80]

- The Council will consider legislation to require reporting on the race and gender of applicants for the civil service exam and on admission and graduation statistics from agency training programs by expanding Local Law 49 of 2015 to apply to all agencies. This expansion should include:
  - (i) Requiring all agencies to collect demographic information from applicants, in a non-personally identifiable manner, to assess diversity in the applicant pool; and
  - (ii) Requiring admission and graduation statistics from all agency training programs required of successful civil service examinees.

- The City should examine job postings and recruitment materials for municipal jobs to evaluate whether biases exist that may be turning away qualified applicants before they even consider applying.
- The Council will consider legislation that expands Local Law 173 of 2018, which requires information about upcoming civil service exams be distributed to high school students in the year that they are graduating, requiring DOE and DCAS to reach out to students earlier to make them aware of potential future career opportunities in the municipal workforce.
- The Council will consider legislation that requires agencies, in conjunction with DCAS, to perform community outreach at periodic intervals within communities that have very low representation within their agencies.
- The Council will consider legislation aimed at increasing the number of women and non-white employees in agencies demonstrating low levels of diversity. The legislation would require agencies to take actions such as developing a diversity plan, improving facilities, requiring diversity and inclusion training, and enhancing public reporting.
- The Council will consider legislation that requires agencies, in conjunction with DCAS, to analyze the pay data of their current workforce and adjust salaries as necessary to achieve pay equity.

Comparable Worth Analyses

Comparable worth analyses—examining the salaries of jobs that conduct similar work using similar skills and adjusting the salaries if one is underpaid[81]—have been implemented nationally and internationally. Examples of such analyses within the United States and Canada are available at both the city and state levels, although the exact evaluation system varies.[82] Ideally, comparisons should be based not exclusively on exact job function but on positions that are deemed to require "similar skills and experience, responsibilities, working conditions or degrees of effort," as in New Zealand's landmark pay equity legislation.[83] In 2019, New York State passed a similar law requiring "equal pay for substantially similar work" that applies to all private employers.[84]

The Council's analysis contains a case study offering a "preamble" to a comparable worth analysis between two job titles that may have similar responsibilities: DOC and DOP officers.[LII] Within the New York City civil service system, there may be many opportunities to perform additional comparable worth analyses. However, the identification of comparable occupations is beyond the scope of this report, and future analyses may need to rely on the input of experts to determine whether two occupations are suitable for comparative analysis.

In addition to a comparative analysis of individual positions, an analysis of agencies could also prove insightful. Some agencies perform extremely valuable or challenging services for the City, while remaining chronically underfunded. The Council's analysis has shown that there is a link between the gender and racial/ethnic makeup of an agency and the median salary of that agency. For example, ACS, an agency with a high proportion of Black female employees, provides a significantly lower median salary than other agencies. Similarly, unions give employees the ability to collectively demand rights in a more effective manner than individual employees could achieve and arguably help prevent the exploitation of employees.

LII See "Department of Correction and Department of Probation," in "Areas of Further Analysis," *supra p. 46*. The case study compares DOC and DOP officers who perform distinct, yet potentially similar functions but experience largely different compensation structures. DOP officers, who reach a maximum salary that is $20,000 below DOC officers, are more likely to be Black women, and have much higher educational requirements.

For example, Firefighters and EMS workers belong to different unions yet work in the same agency, resulting in vastly different compensation. EMS workers (predominantly women and Hispanic or Latino and Black or African American) have attempted bargaining for higher pay but have not been successful, while the FDNY has not faced the same issues.[85] Union size, employee makeup, and other characteristics are likely to impact bargaining ability.

- The City should identify jobs held primarily by women and/or non-white employees and conduct comparable worth analyses[LIII] to assess whether these positions are compensated equivalently to similar jobs held primarily by men and/or white employees when accounting for non-demographic factors.
- The City should perform an interagency analysis akin to a comparable worth analysis to better understand why agencies with large proportions of female and/or non-white employees have lower median salaries than comparable agencies and propose measures to correct any unexplained discrepancies in wages across agencies.

LIII A comparative worth analysis would examine the salaries of jobs that conduct similar work using similar skills and adjust the salaries if one is underpaid. Heidi I. Hartman, supra fn. xiv.
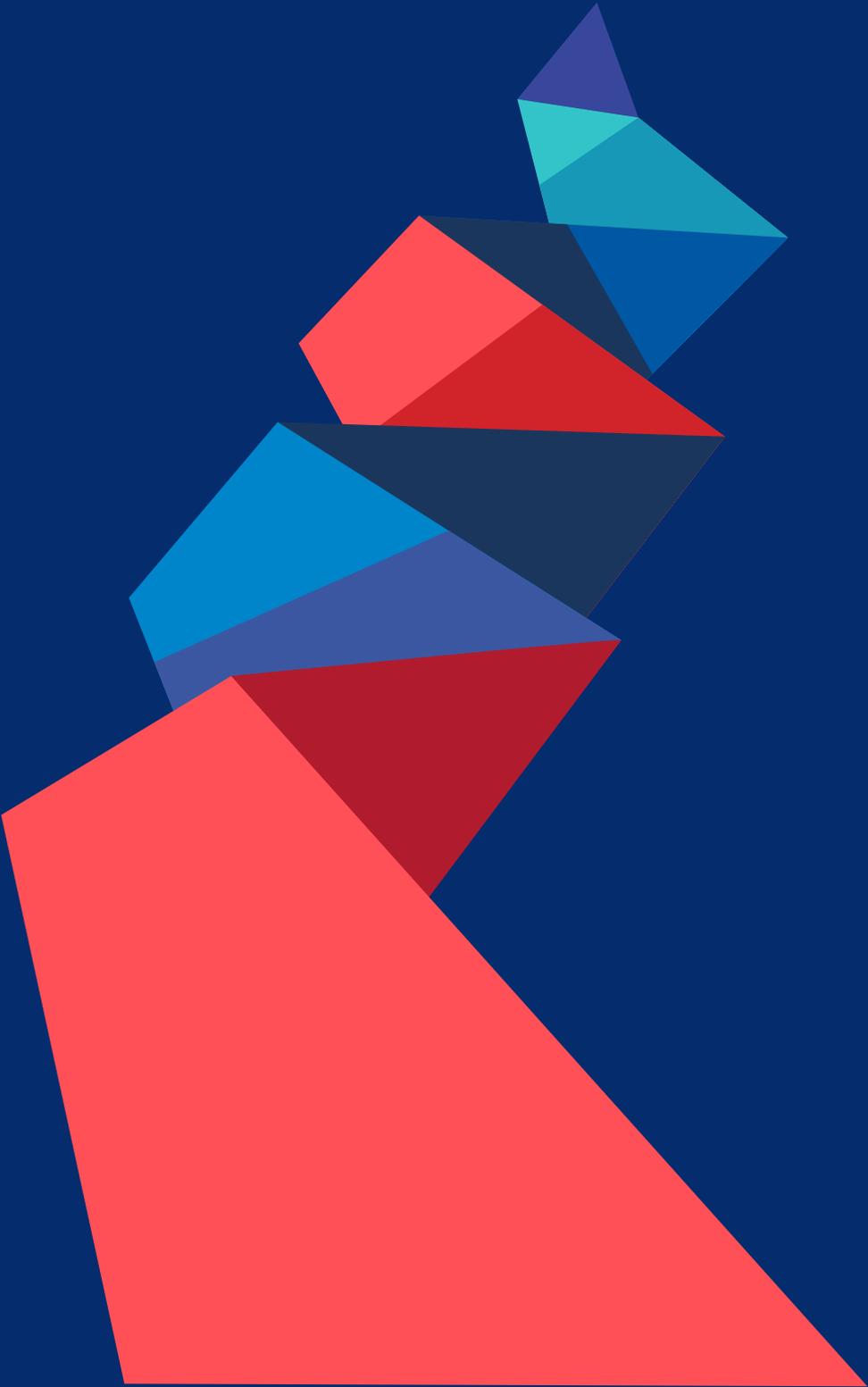
APPENDIX

APPENDIX

Appendix A: Technical details of statistical analysis

Mixed Effects Model

A regression analysis was run to determine the adjusted pay gap between groups. The regression analysis models how salary is affected by an employee's gender, race, and age, after controlling for other variables such as civil service title code and years on the job.

This provides a more nuanced analysis of the pay gap because the model takes into account relevant factors that affect salary simultaneously. If the model finds no adjusted pay gap between two groups, this would suggest that there is no effect on an employee's salary based on their classification into these groups.

The particular analysis used is a linear mixed-effects model. In particular, civil service title codes can exist in multiple agencies while civil service title levels and suffixes are connected to their civil service title codes. The terminology for this is that agency and civil service title code are "crossed" while civil service title level and civil service title suffix are each "nested" underneath civil service title code.

In particular, civil service title codes can exist in multiple agencies while civil service title level and civil service title suffix are connected to their civil service title codes. The terminology for this is that agency and civil service title code are "crossed" while civil service title level and civil service title suffix are each "nested" underneath civil service title code. These four variables are termed "random effects." The other variables in the model are termed "fixed effects."

Model Parameters

Base Salary

The main focus of the analysis is to understand the factors that affect an employee's base salary. Below is a chart of the base salary of full-time NYC employees in the analysis. There are a particularly large number of employees who make around $85,000. Police Officers (46%), Firefighters (19%), and Corrections Officers (16%) make up the majority of this group. The presence of a few high earners on the right (top) of the pay scale skews the data. In other words, the impact of these outliers, who are not representative of the reality for most City employees, will be overrepresented due to having drastically higher salaries than what is otherwise seen throughout the dataset.

Base Salary of Full-Time NYC Employees in The Analysis
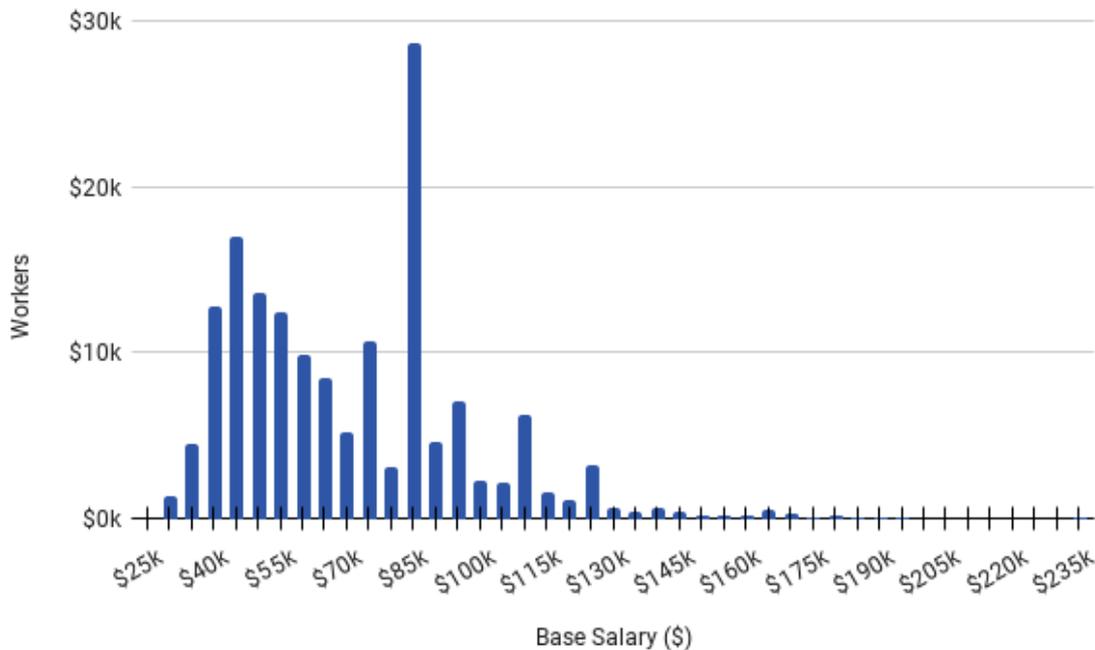
To more accurately model the effect of the variables on salary, base salary is transformed using the natural logarithm[LIV] to address the tail caused by high earners on the right side of the pay scale. The model determines the percent change in salary as opposed to the dollar change in salary. Therefore, the model determines the "cents on the dollar" that, for example, Black or African American employees earn compared to white employees after accounting for all other variables. So, if Black or African American employees earn 98 cents on the dollar compared to equivalent white employees then they earn $49,000 to a while employee salary of $50,000 or $98,000 compared to $100,000. The size of the pay gap depends on the base salary of the job.

Explanatory Variables

To model base salary, the following variables were used:
- Gender
- Race / Ethnicity
- Age (Years Above 18)
- [Age (Years Above 18)]^2
- Length of Service
- [Length of Service]^2
- Managerial
- Agency
- Civil Service Title Code
- Civil Service Title Code: Civil Service Title Level
- Civil Service Title Code: Civil Service Title Suffix

LIV The natural logarithm is a logarithm using 'e' (Euler's number) as a base. It indicates the number of times you would have to multiply e to return the given number. The natural logarithm decreases the impact of high earners by "squeezing together" the higher salaries more than it "squeezes" the lower salaries. The impact on lower salaries is not as pronounced as that on higher salaries.

Title classification, provisional status, personnel status change description, job category, whether an employee was previously employed, DCAS occupational group code, business title, and education were all variables that were considered but not included in the model.

Personnel status change description did not provide enough information since it only included the most recent personnel status change, rather than a history of status changes. A history of personnel status change would be useful to analyze the effect of, for example, the motherhood penalty.

Provisional status and previously employed were not included because there is no reason to believe that they have a significant impact on salary, and are shown to have minimal effect on the model outcome when compared to other variables such as Civil Service Title Code.

Title classifications were filtered to only employees who are in "Competitive" or "Non-Competitive" jobs. Inclusion or exclusion of this variable has minimal effects on the results of the model.

Job category and DCAS Occupational Group Code were not included because they are less specific job classifications than the civil service title code used in the analysis.

Business title was unfortunately not useful since 64% of employee's data was missing for this variable and as previously noted it is not a required field for agency HR offices and is not centralized so could not be used for cross-agency analysis.

As noted above, education could not be used for the model because a high percentage of the data was missing.

Appendix B: Data Considerations

Race and Ethnicity Grouping

The dataset provides a separate race and ethnicity for each employee. However, there is a large amount of missing data for both of those variables, and the absence of data for one variable appears to be related to the absence of data for the other.

Of the 18,371 employees who had an unknown ethnicity or chose not to disclose their ethnicity, the overwhelming majority (16,539, or 90%) also had an unknown race or chose not to disclose their race.

Of the 29,161 Hispanic or Latino employees, the overwhelming majority (26,269, or 90%) had an unknown race or chose not to disclose their race. In comparison, of the 113,815 Non-Hispanic or Latino employees, a very small amount (471 or 0.4%) had an unknown race or chose not to disclose their race.

To reconcile the missing data as well as deal with small numbers of employees in certain ethnicity and race combinations, race and ethnicity were analyzed simultaneously.

This is consistent with recommendations from similar analyses. See, for example, recommendations from the Washington State Department of Public Health and groupings used by the U.S. Bureau of Labor Statistics. The six groupings analyzed are:

Employee Group	Full-Time Employee Count in Analysis (Percent)
Asian (Non-Hispanic or Latino)	13,138 (8%)
Black or African American (Non-Hispanic or Latino)	46,897 (29%)
Hispanic or Latino	29,161 (18%)
Other (Non-Hispanic or Latino)	1,896 (1%
• American Indian or Alaska Native	825 (<1%)
• Native Hawaiian or Pacific Islander	53 (<1%)
• Two or More Races	547 (<1%)
• Unknown or Choose Not to Disclose Race	471 (<1%)
White (Non-Hispanic or Latino)	51,884 (32%)
Ethnicity Unknown or Choose Not to Disclose	18,371 (11%)

Age

The age of the employee is derived from their date of birth. After filtering the dataset to include full-time employees only, there were no employees below the age of 18. For the model, only employees older than 18 years were included.

Appendix C: Variable Definitions

NOTE: The following is from the data dictionary[LV] provided by DCAS with the dataset.

Agency – Name of the agency where the employee works

Start date – The employee's start date with the City. It was used to determine the length of an employee's current tenure with the City. If an employee has a break in service, the start date would be reset. The data would not reflect previous employment time with the City.

Civil Service Title Code – Unique code for each civil service title.

Civil Service Title Name – Description corresponding to the title name. Not unique.

Minimum Salary – Minimum salary for new City employees in the title.

LV A document that helps explain the contents of the data, and defines the terminology used. A similar data dictionary is available to the public on the NYC Open Data Portal in the 'Local Law 18 Pay and Demographics Report - Agency Report Table' dataset, *available at* https://data.cityofnewyork.us/City-Government/Local-Law-18-Pay-and-Demographics-Report-Agency-Re/423i-ukqr.

Maximum Salary – Maximum salary for City employees in the title.

Business Title – Employee business title. It is not a required field for agency HR offices to complete or update in the City's central automated personnel system and may be missing. Additionally, business titles are not centralized and therefore not used in a uniform manner across agencies and should not be used as the basis of cross-agency analysis. Some agencies use civil service titles in lieu of business titles for certain positions. Two agencies may also use the same business title for two wholly different positions with different civil service titles.

Title Classification – Indicates the jurisdictional class of such title as defined by civil service law. Defined as "Competitive", "Non-competitive", "Labor", "Pending classification", "Exempt", "Unclassified Service."

Job Category – EEO-4 Job Category is used by the U.S. Equal Employment Opportunity Commission (EEOC) to classify a group of employees with comparable job responsibilities at comparable levels within an organization. DCAS classifies and maps each civil service title to one of the eight EEO-4 Job Categories as part of its legal mandate to submit EEO-4 reports every two years.

Civil Service Title Suffix – Two-digit code used to indicate when the employee's work schedule or other factors differs from the standard for the title, and the difference impacts the employee's pay or leave. Variable renamed from "Career Level: Title Suffix".

Civil Service Title Level – Specifies the level within a job title that corresponds to an employee's minimum and maximum salary. Variable renamed from "Career Level: Title Level".

Base Salary – The standardized employee base salary, in an annual rate for full-time employees, and in an hourly rate for part-time and seasonal employees.

Salary Pay Band – A pay band representing the minimum and maximum pay range of a specified width that an employee's pay falls in.

DCAS Occupational Group Code – DCAS occupational group code for the employee's title. 0 corresponds with "No occupational group code."

DCAS Occupational Group Name – DCAS occupational group name for the employee's title.

Managerial – Indicates whether an employee is managerial or supervisory based upon their collective bargaining unit.

Highest Education Level – Highest level of education self-identified by employee.

Gender – Gender category self-identified by the employee.

Race – Race category self-identified by the employee.

Ethnicity – Whether the employee is Hispanic or Latino, which is self-identified by the employee.

Date of Birth – Employee's date of birth.

Provisional Status – Indicates whether an employee is provisional or not based on their Employee's civil service status.

Employee Status – Whether an employee is full-time, part-time, or seasonal. Full-time employees work a standard work week in a full-time in a full-time title with a regular annual work schedule whereas part-time employees work fewer than 35 hours per week or are in titles having no standard hours per week or days per year. Seasonal employees such as lifeguards and many park workers may work in either a part-time or full-time capacity.

Personnel Status Change Description – Personnel status change description for the employee, associated with the latest personnel status change that occurred between January 1 and December 31, 2018.

Previously Employed – Whether the employee was previously employed by the City of New York.

Appendix D: Uniform Title Codes

49 unique identified uniformed title codes used in the analysis.

Title Code	Title Name
1002H	ADMINISTRATIVE FIRE PROTECTION
31661	FIRE PROTECTION INSPECTOR
31662	ASSOCIATE FIRE PROTECTION INSP
31840	SUPERVISING BLASTING INSPECTOR
53050	FIRE MEDICAL OFFICER
53051	POLICE SURGEON
53052	EMERGENCY MEDICAL SPECIALIST T
53053	EMERGENCY MEDICAL SPECIALIST-E
53054	EMERGENCY MEDICAL SPECIALIST-P
53055	SUPERVISING EMERGENCY MEDICAL
5305E	SUPERVISING EMERGENCY MEDICAL
70112	SANITATION WORKER
70150	SUPERVISOR (SANITATION)
70196	GENERAL SUPERINTENDENT (SANITATION)
7019A	GENERAL SUPERINTENDENT (SANITATION)
7019B	GENERAL SUPERINTENDENT (SANITATION)
70210	POLICE OFFICER (RECURRING NIGHT)
7021A	POLICE OFFICER D/A DETECTIVE 3
7021B	POLICE OFFICER D/A DETECTIVE 2
7021C	POLICE OFFICER D/A DETECTIVE 1

7021D	POLICE OFFICER, DET. SPECIALIS
70235	SERGEANT (RECURRING NIGHT SHIFT)
7023A	SERGEANT D/A SPECIAL ASSIGNMEN
7023B	SERGEANT D/A SUPERVISOR DETECT
70260	LIEUTENANT (POLICE) (RECUR NS)
70265	CAPTAIN (POLICE SERVICE)(REC N)
7026A	LIEUTENANT D/A SPECIAL ASSIGNM
7026B	LIEUTENANT D/A COMMANDER OF DE
7026D	CAPTAIN D/A DEPUTY INSPECTOR
7026E	CAPTAIN D/A INSPECTOR (REC N/S)
7026F	CAPTAIN D/A DEPUTY CHIEF INSPE
7026G	CAPTAIN DETAILED AS ASSISTANT
70310	FIREFIGHTER
70314	WIPER (UNIFORMED)
70360	LIEUTENANT (FIRE)
70365	CAPTAIN (FIRE)
70370	BATTALION CHIEF
70382	DEPUTY CHIEF(FIRE)
7038A	DEPUTY ASSISTANT CHIEF OF DEPA
7038B	ASSISTANT CHIEF OF DEPARTMENT
70392	FIRE MARSHAL (UNIFORMED)
70393	SUPERVISING FIRE MARSHAL (UNIFORMED)
70410	CORRECTION OFFICER
70467	CAPTAIN (CORRECTION) TED < 11/
70488	WARDEN (CORRECTION)(MGRL ASSIG)
7048B	WARDEN-ASSISTANT DEPUTY WARDEN
7048C	WARDEN-DEPUTY WARDEN
7048D	WARDEN-DEPUTY WARDEN IN COMM T
95039	ASSISTANT COMMISSIONER (FD)

Appendix E: Additional Analysis

Civil Service Titles Held Entirely by Male or Female Employees

Top 30 Civil Service Titles Held Entirely by Male Employees by Median Pay

Title (Code)	Median Salary
Deputy Chief (Fire); Asst. Chief of Dept. (MGL Detail) (7038B)	$234,096
Deputy Chief (Fire); Dep. Asst. Chief of Dept. (MGL Detail) (7038A)	$228,604
Deputy Chief (Fire) (70382)	$181,172
Battalion Chief (70370)	$163,454
Senior Stationary Engineer (91638)	$145,095
Deputy Director of Motor Equipment Maintenance (Sanitation) (95251)	$142,358
Senior Stationary Engineer (Electric) (91639)	$140,439
Administrative Inspector (Buildings) (10073)	$138,338
Superintendent of Water and Sewer Systems (10081)	$135,584
Manager of Radio Repair Operations (8298E)	$133,191
Welder (92355)	$132,964
Environmental Police Officer (Managerial Detail) (7081A)	$130,369
Stationary Engineer (91644)	$127,034
Crane Operator (Any Motive Power Except Steam) (91611)	$125,775
Supervisor of Mechanics (90774)	$124,340
Supervisor of Mechanics (90774)	$124,340
Supervising Fire Marshall (Uniformed) (70393)	$119,596
Supervisor Electrician (91769)	$115,174
Supervisor Electrician (91769)	$115,174
Administrative Inspector (Electrical) (10077)	$114,893
Administrative Printing Services Manager (10096)	$114,235
Certified Database Administrator (13694)	$113,115
Supervisor Communication Electrician (91763)	$112,877
Tractor Operator (91215)	$111,495
Motor Grader Operator (91210)	$111,495
Supervisor Bridge Painter (91871)	$109,711
Electrician (91717)	$106,959
Administrative Inspector (Buildings) (Non Mgrl) (1007A)	$105,406
Certified IT Administrator (Database) (13644)	$104,295
Administrative Fire Protection Inspector (1002H)	$104,295

All Civil Service Titles Held Entirely by Female Employees by Median Pay

Title (Code)	Median Salary
Director of Management Planning (Social Services) (13275)	$140,800
Administrative Public Health Nurse (10032)	$128,425
Deputy Director of Administration (Special Services) (52487)	$100,014
Secretary to the Deputy Chancellor (DOE) (95053)	$84,874
Case Management Nurse (Fire Department) (50959)	$76,555
Public Health/Preventive Medicine Resident (HMH) (06801)	$71,368
Nutrition Consultant (50415)	$69,212
Health Care Program Planner/Analyst (83051)	$54,501
Assistant Coordinating Manager (10236)	$50,828
Investigator Trainee (31101)	$43,520
Assistant Public Health Advisor (Communicable Disease Contr) (51190)	$41,122

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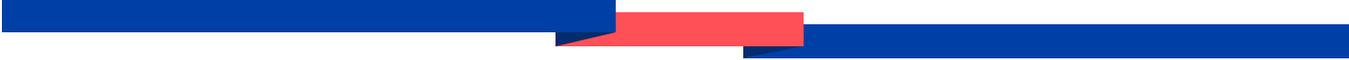
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