

New York City Local Law 144 “Bias Audit” for Burlington Coat Factory for Allocation Analyst

Conducted by DCI Consulting Group (DCI)

Analysis Information

- Summary produced on: November 1, 2023
- Data were based on nationwide applicants who took this assessment between September 30, 2022 to January 1, 2023
- The assessment assigns applicants to one of 3 Tiers (Tier 1 = Strong, Tier 2 = Moderate, Tier 3 = Weak), yielding 2 comparison(s) (Tiers 1 and 2 vs. Tier 3 and Tier 1 vs. Tiers 2 and 3) for analysis

Purpose

The “bias audit” reported here meets the requirements of the New York City (NYC) Local Law 144 that regulates the use of automated employment decision tools (AEDTs) in accordance with the final rules published by the NYC Department of Consumer and Worker Protection (DCWP) on April 6, 2023.

About DCI Consulting Group (DCI)

DCI is a human resources consulting firm headquartered in Washington, D.C. Since 2001, DCI has provided expert solutions to hundreds of organizations on complex issues, with particular emphasis on equal employment opportunity analytics, employee selection and assessment, independent third-party reviews, and litigation support work. DCI's team of Industrial/Organizational Psychologists and Labor Economists are recognized for their applied experience in complex quantitative analytics, adverse impact measurement, pay equity, job analysis, validation research and job-relatedness evaluations, and routinely perform work in the context of affirmative action plans under the jurisdiction of the Department of Labor's Office of Federal Contract Compliance Programs compliance evaluations, Equal Employment Opportunity Commission systemic investigations, and expert witness work on matters related to Title VII, Executive Order 11246, the Age Discrimination in Employment Act, and the Americans with Disabilities Act.

“Bias Audit” Analysis Methodology¹

The assessment used here assigns each applicant for the job to a threshold (e.g., pass/fail or defined bands). In this situation, NYC's Local Law 144 and the rules published by the DWCP stipulate specific analyses that must be conducted. Where an assessment assigns applicants to bands, an 'impact ratio' must be calculated for each demographic group for each threshold separating the bands. Note that NYC specifies this calculation to be the **focal demographic group** selection rate divided by the **comparator demographic group** selection rate. Further, the law states that the demographic groups need to be compared in three specific ways:

1. Gender comparison (i.e., Male, Female).
2. Race/ethnicity comparison (i.e., Hispanic or Latino, White, Black or African American, Native Hawaiian or Pacific Islander, Asian, Native American or Alaska Native, Two or More Races).
3. An intersectional comparison that is the combination of gender and race/ethnicity (e.g., Hispanic or Latino Male, Hispanic or Latino Female, White Male, White Female).

The NYC law impact ratio has been defined by the DCWP's published rules and is calculated as:

$$\text{NYC Law Impact Ratio} = \frac{\textit{selection rate of demographic (focal) group}}{\textit{selection rate of most selected (comparator) demographic group}}$$

The DCWP's published rules specify that impact ratios need not be calculated for groups that “comprise less than 2 percent of the data being used for the ‘bias audit.’” While this rule, taken from the Uniform Guidelines on Employee Selection Procedures (1978), is typically used to safeguard against analyses based on sample sizes that are too small, the 2% rule of thumb alone does not sufficiently preclude conducting analyses on small sample sizes that will yield nonsensical impact ratios. As such, when viewing tables of results in this report, for each comparison being made, the reader should consider the number of individuals in each of the following: 1) focal demographic group above the threshold, 2) focal demographic group below the threshold, 3) comparator demographic group above the threshold, and 4) comparator demographic group below the threshold. If the number of individuals in any of these is small, the impact ratio calculated may be volatile or meaningless. As the number of groups being compared increases (e.g., when considering the gender x race, intersectional analyses), the issues with impact ratio calculations based on small samples become more prevalent and problematic.

Results are presented in tables, each of which provides an indication of the demographic group (i.e., gender, race/ethnicity, or both), the number of applicants that comprise the demographic group, the selection rate for the demographic group, and the NYC law impact ratio. In each analysis table, an impact ratio of 1.00 will indicate the highest selected (comparator) demographic group against which each other (focal) demographic group is compared. If multiple demographic groups have the highest selection rate, these will all have an impact ratio of 1.00. Further, as specified by NYC for this law, each table contains a footnote specifying the number of individuals for whom demographic information is unavailable. Finally, each page containing report tables provides additional notes for the reader to bear in mind when viewing the results.

¹ A number of the requirements specific to NYC Local Law 144 are not aligned to contemporary adverse impact analysis practices (e.g., Morris and Dunleavy, *Adverse impact analysis: Understanding data, statistics, and risk*, 2017). However, these analyses were conducted as stipulated by NYC for the sole purpose of meeting the specific requirements of Local Law 144.

Burlington Coat Factory Bias Audit Analysis for Allocation Analyst

NYC Law Impact Ratios for Gender

Demographic Group	No. of Applicants	Selection Rate for Tiers 1 and 2 vs. Tier 3	Impact Ratio for Tiers 1 and 2 vs. Tier 3		Selection Rate for Tier 1 vs Tiers 2 and 3	Impact Ratio for Tier 1 vs Tiers 2 and 3
Male	373	0.72	1.00		0.34	0.94
Female	327	0.69	0.96		0.35	1.00

Note: There were 14 individuals with unknown or missing gender information; data from these individuals are not included in the calculations for this table.

NYC Law Impact Ratios for Race/Ethnicity

Demographic Group	No. of Applicants	Selection Rate for Tiers 1 and 2 vs. Tier 3	Impact Ratio for Tiers 1 and 2 vs. Tier 3		Selection Rate for Tier 1 vs Tiers 2 and 3	Impact Ratio for Tier 1 vs Tiers 2 and 3
Hispanic or Latino	92	0.62	0.84		0.34	0.62
White	282	0.71	0.96		0.33	0.61
Black or African American	128	0.73	1.00		0.38	0.71
Native Hawaiian or Other Pacific Islander	1	0.00	—		0.00	—
Asian	163	0.74	1.00		0.31	0.58
Native American or Alaska Native	0	—	—		—	—
Two or More Races	24	0.67	0.91		0.54	1.00

Note: There were 24 individuals with unknown or missing race/ethnicity information; data from these individuals are not included in the calculations for this table.

Table Selection Rates (SRs) have been rounded to 2 decimals, however, calculations of Impact Ratios (IRs) are based on the full, un-rounded SRs. Given this, two equal SRs may produce a different IR. For example, if the Comparator Group SR = 0.52136, the Group 1 SR = 0.47486, and the Group 2 SR = 0.46514, then the Group 1 IR = 0.91081 and the Group 2 IR = 0.89217. In the table, these values rounded to 2 decimal places will display as Comparator SR = 0.52, Group 1 SR = 0.47, Group 2 SR = 0.47, Group 1 IR = 0.91, and Group 2 IR = 0.89.

When viewing tables of results in this report, for each comparison being made the reader should consider the number of individuals in each of the following: 1) focal demographic group above the threshold, 2) focal demographic group below the threshold, 3) comparator demographic group above the threshold, and 4) comparator demographic group below the threshold. If the number of individuals in any of these is small, the impact ratio calculated may be volatile or meaningless.

Burlington Coat Factory Bias Audit Analysis for Allocation Analyst
NYC Law Impact Ratios for the Combination of Gender and Race/Ethnicity

Demographic Group	No. of Applicants	Selection Rate for Tiers 1 and 2 vs. Tier 3	Impact Ratio for Tiers 1 and 2 vs. Tier 3		Selection Rate for Tier 1 vs Tiers 2 and 3	Impact Ratio for Tier 1 vs Tiers 2 and 3
Male Hispanic or Latino	54	0.69	0.88		0.39	0.96
Male White	145	0.70	0.90		0.30	0.75
Male Black or African American	59	0.78	1.00		0.41	1.00
Male Native Hawaiian or Other Pacific Islander	0	—	—		—	—
Male Asian	97	0.72	0.93		0.28	0.68
Male Native American or Alaska Native	0	—	—		—	—
Male Two or More Races	14	0.71	—		0.50	—
Female Hispanic or Latino	38	0.53	0.68		0.26	0.65
Female White	134	0.71	0.91		0.35	0.86
Female Black or African American	69	0.70	0.89		0.36	0.89
Female Native Hawaiian or Other Pacific Islander	1	0.00	—		0.00	—
Female Asian	66	0.76	0.97		0.36	0.89
Female Native American or Alaska Native	0	—	—		—	—
Female Two or More Races	10	0.60	—		0.60	—

Note: There were 27 individuals with unknown or missing gender or race/ethnicity information; data from these individuals are not included in the calculations for this table.

Table Selection Rates (SRs) have been rounded to 2 decimals, however, calculations of Impact Ratios (IRs) are based on the full, un-rounded SRs. Given this, two equal SRs may produce a different IR. For example, if the Comparator Group SR = 0.52136, the Group 1 SR = 0.47486, and the Group 2 SR = 0.46514, then the Group 1 IR = 0.91081 and the Group 2 IR = 0.89217. In the table, these values rounded to 2 decimal places will display as Comparator SR = 0.52, Group 1 SR = 0.47, Group 2 SR = 0.47, Group 1 IR = 0.91, and Group 2 IR = 0.89.

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