
Table of Contents

CHAPTER 9: DISPARITY ANALYSIS	9-1
I. STATISTICAL ANALYSIS OF DISPARITY	9-1
A. INTRODUCTION	9-1
B. DISPARITY ANALYSIS.....	9-3
C. DISPARITY ANALYSIS SUMMARY	9-13



List of Tables

TABLE 9.01:	STATISTICAL OUTCOME DESCRIPTIONS.....	9-3
TABLE 9.02:	DISPARITY ANALYSIS: ALL CONTRACTS JANUARY 1, 2008 THROUGH DECEMBER 31, 2010.....	9-5
TABLE 9.03:	DISPARITY ANALYSIS: ALL PRIME CONTRACTS LESS THAN \$500,000 JANUARY 1, 2008 THROUGH DECEMBER 31, 2010.....	9-8
TABLE 9.04:	DISPARITY ANALYSIS: ALL SUBCONTRACTS, JANUARY 1, 2008 THROUGH DECEMBER 31, 2010.....	9-11
TABLE 9.05:	ALL CONTRACTS JANUARY 1, 2008 THROUGH DECEMBER 31, 2010	9-13
TABLE 9.06:	ALL PRIME CONTRACT DOLLARS LESS THAN \$500,000, JANUARY 1, 2008 THROUGH DECEMBER 31, 2010	9-14
TABLE 9.07:	ALL SUBCONTRACT DOLLARS, JANUARY 1, 2008 THROUGH DECEMBER 31, 2010.....	9-15





List of Charts

CHART 9.01:	DISPARITY ANALYSIS: ALL CONTRACTS JANUARY 1, 2008 THROUGH DECEMBER 31, 2010	9-6
CHART 9.02:	DISPARITY ANALYSIS: ALL PRIME CONTRACTS JANUARY 1, 2008 THROUGH DECEMBER 31, 2010	9-9
CHART 9.03:	DISPARITY ANALYSIS: ALL SUBCONTRACTS, JANUARY 1, 2008 THROUGH DECEMBER 31, 2010	9-12



CHAPTER 9: DISPARITY ANALYSIS

I. STATISTICAL ANALYSIS OF DISPARITY

A. Introduction

The objective of a disparity analysis in preparation of a Disadvantaged Business Enterprise (DBE) Overall Goal Setting Report is to determine the availability of willing and able DBEs.¹ The disparity analysis requires the determination of the levels at which DBEs are utilized on Los Angeles County Metropolitan Authority (Metro) contracts. This analysis assumes a fair and equitable system.² Under a fair and equitable system of awarding contracts, the proportion of contract dollars awarded to DBEs should be relatively close to the corresponding proportion of available DBEs³ in the relevant market area. If the ratio of utilized DBE contractors to available DBE contractors is statistically significant, the court in *Western States* held that an inference of discriminatory exclusion can be made. To narrowly tailor the disparity analysis to race-conscious remedies, a statistical test to calculate the probability of observing the empirical disparity ratio or any event which is less probable must be conducted. *Croson* states that an inference of discrimination can be made *prima facie* if the disparity is statistically significant. Under the *Croson* model, non-minority male business enterprises are not subjected to a statistical test.

The first step in conducting the statistical test is to calculate the contract value that each ethnic and gender group is expected to receive. This value is based on each group's availability in the market area or the **expected contract dollars**. The next step computes the difference between each ethnic and gender group's expected contract amount and the **actual dollars** received by each group. Then, the **disparity ratio** is computed by dividing the actual contract amount by the expected contract amount.

¹ The term DBE includes minority and business enterprises.

² When conducting statistical tests, a confidence level must be established as a gauge for the level of certainty that an observed occurrence is not due to chance. It is important to note that a 100 percent confidence level or a level of absolute certainty can never be obtained in statistics. A 95 percent confidence level is considered by the courts to be an acceptable level in determining whether an inference of discrimination can be made. Thus, the data analyzed here was done within the 95 percent confidence level.

³ Availability is defined as the number of ready, willing, and able firms. The methodology for determining willing and able firms is detailed in Chapter 5.



Thus, a disparity ratio of less than one indicates underutilization, while a disparity ratio of 0.8 reveals a significant degree of disparity. To test the significance of a disparity ratio, a P-value must be calculated.⁴ When disparity findings are utilized to formulate race-conscious measures, all disparity ratios less than one are subject to a test of statistical significance. The three methods employed to calculate statistical significance are: a parametric analysis,⁵ a non-parametric analysis,⁶ and a Monte Carlo simulation analysis.

A parametric analysis is most commonly used when the number of contracts is sufficiently large and the variation of the contract dollar amounts is not too large. When the variation in contract dollar amounts is large, a disparity may not be detectable using a parametric analysis. Therefore, a non-parametric analysis would be employed to analyze the contracts ranked by dollar amount. Both parametric and non-parametric analyses are effective due to the central limit theorem, which is strongest when the number of contracts is large and the data are not skewed. When there are too few contracts⁷ or the contract dollar data are skewed, a Monte Carlo simulation is employed. The utility of the Monte Carlo simulation is also dependent on the severity of the disparity when there are too few contracts.

The Monte Carlo simulation utilizes randomization to simulate a distribution for Metro's contracts.⁸ The Monte Carlo simulation randomly awards a contract to an available business in its corresponding industry. The odds that a business will be randomly awarded a contract are equal to the number of businesses available for that work, divided by the total number of businesses available in the contract's industry. For example, the odds that an African American construction business is randomly awarded a construction contract are equal to the African American availability in the construction industry. By conducting multiple trials in the Monte Carlo simulation, the empirical data can be used to test the statistical significance of the distribution of contract awards. The output of the Monte Carlo simulation is the number of trials for which the observed disparity ratio is replicated. Using a minimum of 500,000 trials and a 95 percent confidence level and applying a two-tailed test, the maximum number of simulations that could equal or fall below the observed disparity ratio is 12,500 for a result to be statistically significant.

For parametric and non-parametric analyses, the P-value takes into account the number of contracts, amount of contract dollars, and variation in contract dollars. If the difference between the actual and expected number of contracts and total contract dollars has a

⁴ P-value is a measure of statistical significance.

⁵ Parametric analysis is a statistical examination based on the actual values of the variable. In this case, the parametric analysis consists of the actual dollar values of the contracts.

⁶ Non-parametric analysis is a method to make data more suitable for statistical testing by allowing one variable to be replaced with a new variable that maintains the essential characteristics of the original one. In this case, the contracts are ranked from the smallest to the largest. The dollar value of each contract is replaced with its rank order number.

⁷ Note: a relatively small availability population size decreases the reliability of the statistical results; therefore any availability percentage under one percent cannot be labeled as statistically significant.

⁸ The Monte Carlo simulation analysis can be conducted using contract dollar amounts or contract rankings.



P-value equal to or less than 0.05, the difference is statistically significant.⁹ In the Monte Carlo simulation analysis, the P-value takes into account a combination of the distribution formulated from the empirical data and the contract dollar amounts or contract rank. If the actual contract dollar amount or actual contract rank falls below the fifth percentile of the distribution, it denotes a P-value less than 0.05, which is statistically significant.

Our statistical model applies all three methods simultaneously to each industry. The findings from one of the three methods are reported. If the P-value from any one of the three methods is less than 0.05, the finding is reported in the disparity tables as statistically significant. If the P-value is greater than 0.05 or there are too few available firms, the finding is reported as not statistically significant.

B. Disparity Analysis

A prime contract and subcontract disparity analysis was performed on all contracts awarded between January 1, 2008 and December 31, 2010. As demonstrated in *Chapter 6: Prime and Subcontractor Availability Analysis*, the majority of Metro’s contracts were large.

Thus, a \$500,000 threshold was designated, because at this level there was a demonstrated capacity within the pool of DBEs willing to perform Metro’s contracts.¹⁰ The findings from the three methods employed to calculate the disparity ratio and the test of statistical significance as discussed on page 6-2 are presented in the following sections. The outcomes of the statistical analyses are presented in the disparity ration and P-value columns of the tables. There are ethnic groups where the statistical test cannot be performed due to too few available firms. A description of the statistical outcomes in the disparity tables is presented below in Table 9.01.

Table 9.01: Statistical Outcome Descriptions

P-Value Outcome	Description of P-Value Outcome
< .05 *	The underutilization is statistically significant.
not significant	The analysis is not statistically significant.
---	There are too few available firms to test statistical significance.
**	The statistical test is not performed for the overutilization of DBEs or the underutilization of Non-Minority Males.
< .05 †	The overutilization is statistically significant.



⁹ A statistical test is not performed for Non-Minority Males or when the ratio of utilized to available is greater than one for DBEs.

¹⁰ See *Chapter 5: Prime and Subcontractor Availability Analysis – Section III* for a discussion of DBE capacity.

1. All Contracts

The disparity analysis of all contracts is described below and depicted in Table 9.02 and Chart 9.01. It is important to note that the data used for the disparity analysis for all contracts includes data reported by prime contractors, subcontractors, Metro, and data collected from Metro's project records.

African American Businesses represent 9.44 percent of the available contractors, and received 0.37 percent of the dollars for all contracts.

Asian-Pacific American Businesses represent 9.54 percent of the available contractors, and received 0.45 percent of the dollars for all contracts.

Subcontinent Asian American Businesses represent 1.98 percent of the available contractors, and received 0.12 percent of the dollars for all contracts.

Hispanic American Businesses represent 12.79 percent of the available contractors, and received 8.13 percent of the dollars for all contracts.

Native American Businesses represent 0.78 percent of the available contractors, and received none of the dollars for all contracts. While this group was underutilized, there were too few available firms to determine statistical significance.

Minority Business Enterprises represent 34.53 percent of the available contractors, and received 9.07 percent of the dollars for all contracts.

Caucasian Female Business Enterprises represent 8.49 percent of the available contractors, and received 2.69 percent of the dollars for all contracts.

Disadvantaged Business Enterprises represent 43.02 percent of the available contractors, and received 11.76 percent of the dollars for all contracts.

Non-Disadvantaged Business Enterprises represent 56.98 percent of the available contractors, and received 88.24 percent of the dollars for all contracts.



**Table 9.02: Disparity Analysis: All Contracts
January 1, 2008 through December 31, 2010**

Ethnicity	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio
African Americans	\$1,364,994	0.37%	9.44%	\$35,204,531	-\$33,839,536	0.04
Asian-Pacific Americans	\$1,696,226	0.45%	9.54%	\$35,586,206	-\$33,889,980	0.05
Subcontinent Asian Americans	\$462,913	0.12%	1.98%	\$7,372,638	-\$6,909,725	0.06
Hispanic Americans	\$30,305,828	8.13%	12.79%	\$47,709,533	-\$17,403,706	0.64
Native Americans	\$0	0.00%	0.78%	\$2,916,927	-\$2,916,927	0.00
Caucasian Females	\$10,044,181	2.69%	8.49%	\$31,660,251	-\$21,616,070	0.32
Non-Minority Males	\$329,067,164	88.24%	56.98%	\$212,491,219	\$116,575,945	1.55
TOTAL	\$372,941,306	100.00%	100.00%	\$372,941,306		
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio
Minority Females	\$5,460,182	1.46%	10.14%	\$37,821,015	-\$32,360,832	0.14
Minority Males	\$28,369,778	7.61%	24.39%	\$90,968,821	-\$62,599,042	0.31
Caucasian Females	\$10,044,181	2.69%	8.49%	\$31,660,251	-\$21,616,070	0.32
Non-Minority Males	\$329,067,164	88.24%	56.98%	\$212,491,219	\$116,575,945	1.55
TOTAL	\$372,941,306	100.00%	100.00%	\$372,941,306		
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio
Minority Business Enterprises	\$33,829,961	9.07%	34.53%	\$128,789,835	-\$94,959,875	0.26
Caucasian Female Business Enterprises	\$10,044,181	2.69%	8.49%	\$31,660,251	-\$21,616,070	0.32
Disadvantaged Business Enterprises	\$43,874,142	11.76%	43.02%	\$160,450,087	-\$116,575,945	0.27
Non-Disadvantaged Business Enterprises	\$329,067,164	88.24%	56.98%	\$212,491,219	\$116,575,945	1.55

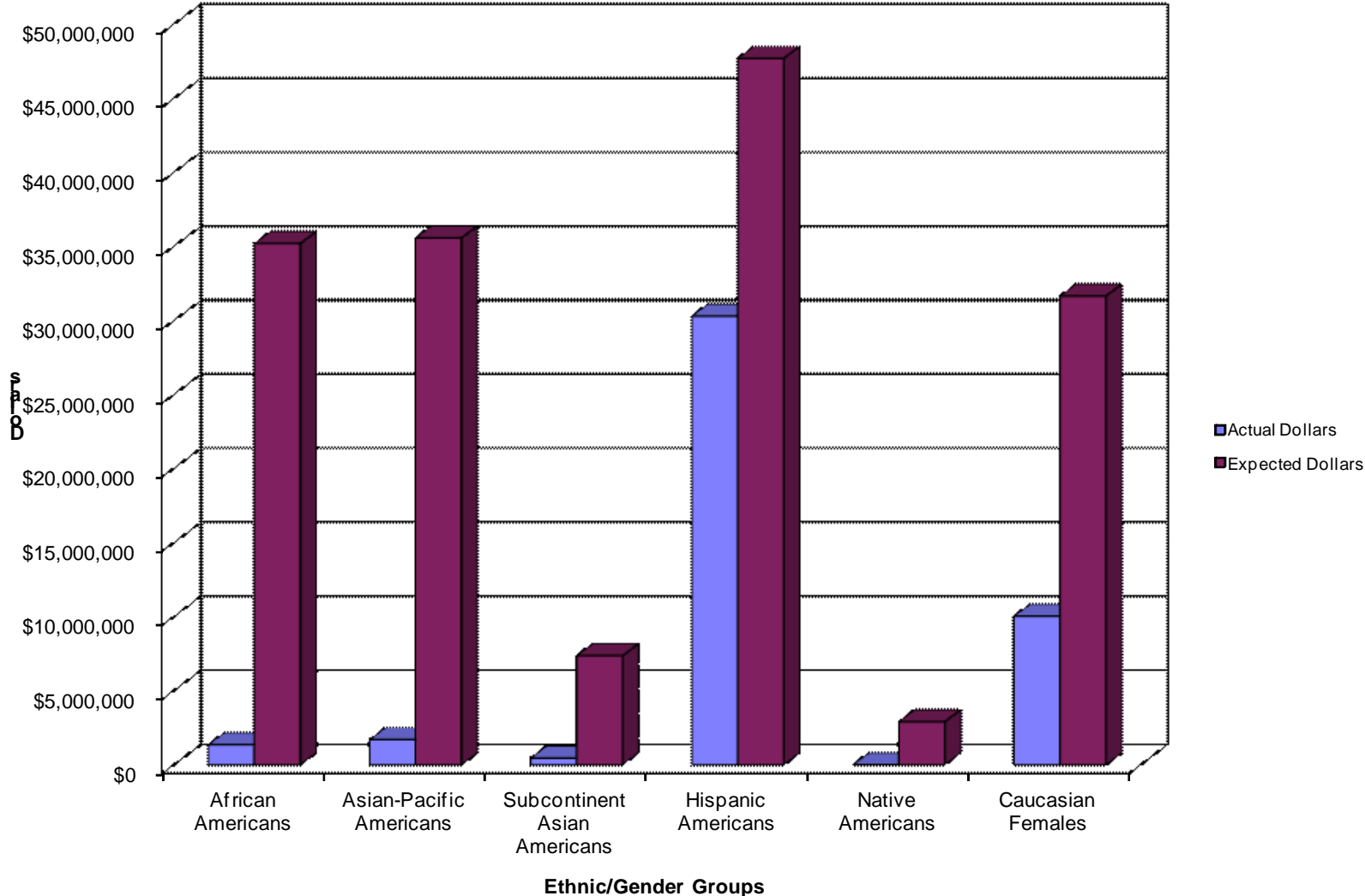
(*) denotes a statistically significant underutilization.

(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

**Chart 9.01: Disparity Analysis: All Contracts
January 1, 2008 through December 31, 2010**



*Mason Tillman Associates, Ltd. March 2013
Los Angeles County Metropolitan Transportation Authority Disparity Study*

2. All Prime Contracts Less than \$500,000

The disparity analysis of all prime contracts valued at less than \$500,000 is described below and depicted in Table 9.03 and Chart 9.02. It is important to note that the data used for the prime contractor disparity analysis includes data reported by Metro and data collected from its project records.

African American Businesses represent 9.38 percent of the available prime contractors, and received 1.58 percent of the dollars for prime contracts valued at less than \$500,000.

Asian-Pacific American Businesses represent 9.32 percent of the available prime contractors, and received 0.53 percent of the dollars for prime contracts valued at less than \$500,000.

Subcontinent Asian American Businesses represent 1.7 percent of the available prime contractors, and received 0.53 percent of the dollars for prime contracts valued at less than \$500,000.

Hispanic American Businesses represent 12.48 percent of the available prime contractors, and received 16.6 percent of the dollars for prime contracts valued at less than \$500,000.

Native American Businesses represent 0.82 percent of the available prime contractors, and received none of the dollars for prime contracts valued at less than \$500,000.

Minority Business Enterprises represent 33.7 percent of the available prime contractors, and received 19.24 percent of the dollars for prime contracts valued at less than \$500,000.

Caucasian Female Business Enterprises represent 8.08 percent of the available prime contractors, and received 8.04 percent of the dollars for prime contracts valued at less than \$500,000.

Disadvantaged Business Enterprises represent 41.78 percent of the available prime contractors, and received 27.27 percent of the dollars for prime contracts valued at less than \$500,000.

Non-Disadvantaged Business Enterprises represent 58.22 percent of the available prime contractors, and received 72.73 percent of the dollars for prime contracts valued at less than \$500,000.



**Table 9.03: Disparity Analysis: All Prime Contracts less than \$500,000
January 1, 2008 through December 31, 2010**

Ethnicity	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio
African Americans	\$145,000	1.58%	9.38%	\$862,313	-\$717,313	0.17
Asian-Pacific Americans	\$48,681	0.53%	9.32%	\$857,257	-\$808,576	0.06
Subcontinent Asian Americans	\$48,619	0.53%	1.70%	\$156,559	-\$107,940	0.31
Hispanic Americans	\$1,526,757	16.60%	12.48%	\$1,147,981	\$378,776	1.33
Native Americans	\$0	0.00%	0.82%	\$75,463	-\$75,463	0.00
Caucasian Females	\$739,073	8.04%	8.08%	\$742,832	-\$3,759	0.99
Non-Minority Males	\$6,688,416	72.73%	58.22%	\$5,354,141	\$1,334,275	1.25
TOTAL	\$9,196,546	100.00%	100.00%	\$9,196,546		
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio
Minority Females	\$640,414	6.96%	9.89%	\$909,954	-\$269,540	0.70
Minority Males	\$1,128,643	12.27%	23.81%	\$2,189,619	-\$1,060,976	0.52
Caucasian Females	\$739,073	8.04%	8.08%	\$742,832	-\$3,759	0.99
Non-Minority Males	\$6,688,416	72.73%	58.22%	\$5,354,141	\$1,334,275	1.25
TOTAL	\$9,196,546	100.00%	100.00%	\$9,196,546		
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio
Minority Business Enterprises	\$1,769,057	19.24%	33.70%	\$3,099,573	-\$1,330,516	0.57
Caucasian Female Business Enterprises	\$739,073	8.04%	8.08%	\$742,832	-\$3,759	0.99
Disadvantaged Business Enterprises	\$2,508,130	27.27%	41.78%	\$3,842,405	-\$1,334,275	0.65
Non-Disadvantaged Business Enterprises	\$6,688,416	72.73%	58.22%	\$5,354,141	\$1,334,275	1.25

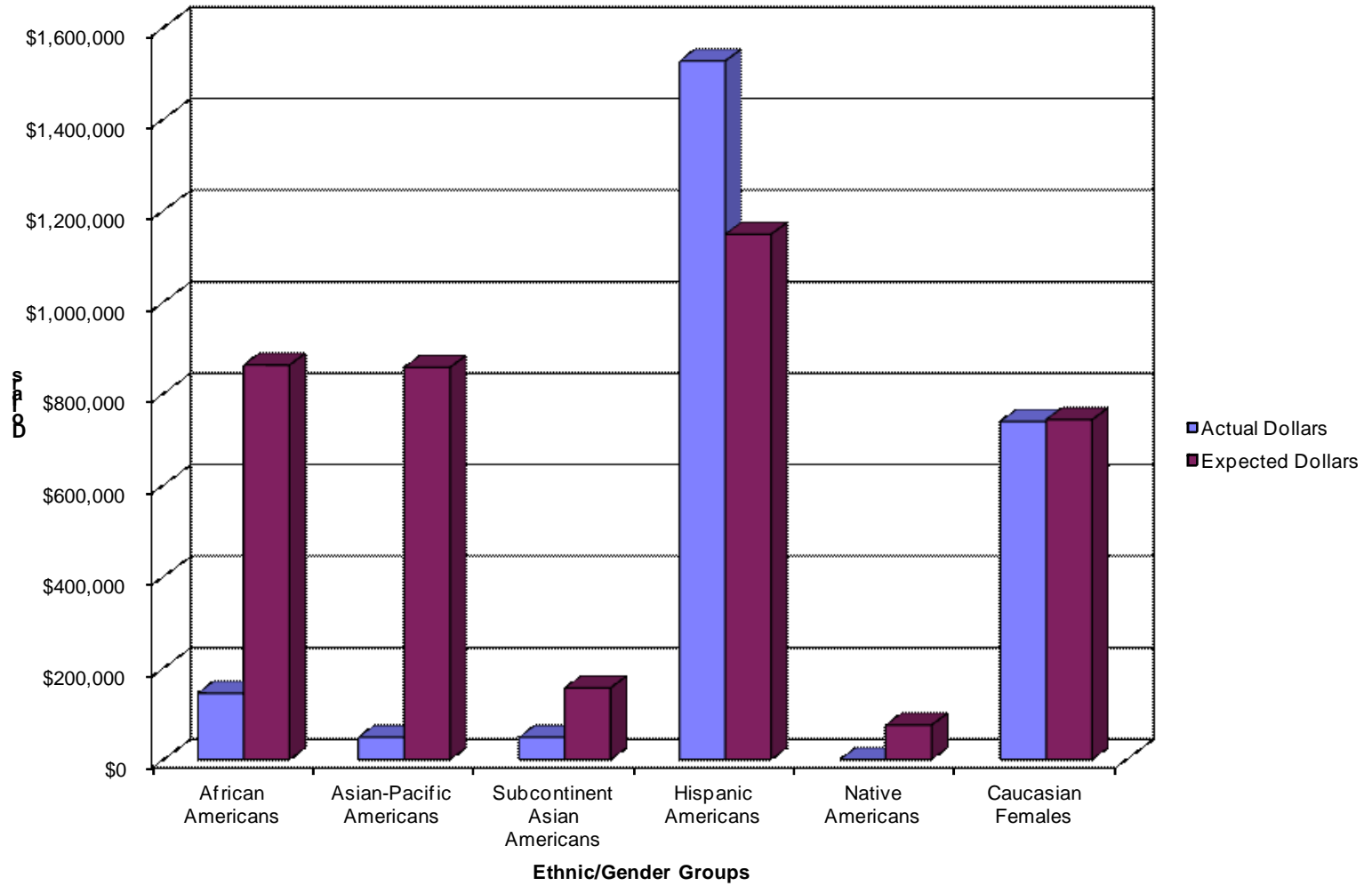
(*) denotes a statistically significant underutilization.

(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

**Chart 9.02: Disparity Analysis: All Prime Contracts
January 1, 2008 through December 31, 2010**



3. All Subcontracts

The disparity analysis of all subcontracts under \$500,000 is described below and depicted in Table 9.04 and Chart 9.03.

African American Businesses represent 9.41 percent of the available subcontractors, and received 1.91 percent of the subcontracts under \$500,000. This underutilization is statistically significant.

Asian-Pacific American Businesses represent 9.17 percent of the available subcontractors, and received 2.59 percent of the dollars for subcontracts under \$500,000. This underutilization is statistically significant.

Subcontinent Asian American Businesses represent 2.14 percent of the available subcontractors, and received 0.65 percent of the dollars for subcontracts under \$500,000. This underutilization is statistically significant.

Hispanic American Businesses represent 17.75 percent of the available subcontractors, and received 10.57 percent of the dollars for subcontracts under \$500,000. This underutilization is statistically significant.

Native American Businesses represent 0.77 percent of the available subcontractors, and received none of the dollars for subcontracts under \$500,000. While this group was underutilized, there were too few available firms to determine statistical significance.

Minority Business Enterprises represent 39.25 percent of the subcontractors, and received 15.73 percent of the dollars for subcontracts under \$500,000. This underutilization is statistically significant.

Caucasian Female Business Enterprises represent 8.5 percent of the available subcontractors, and received 14.61 percent of the dollars for subcontracts under \$500,000. This study does not test statistically the overutilization of minority or gender groups.

Disadvantaged Business Enterprises represent 47.74 percent of available subcontractors, and received 30.33 percent of the dollars for subcontracts under \$500,000. This underutilization is statistically significant.

Non-Disadvantaged Business Enterprises represent 52.26 percent of the available subcontractors, and received 69.67 percent of the dollars for subcontracts under \$500,000. This overutilization is statistically significant.



**Table 9.04: Disparity Analysis: All Subcontracts,
January 1, 2008 through December 31, 2010**

Ethnicity	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$1,219,994	1.91%	9.41%	\$5,997,774	-\$4,777,780	0.20	< .05 *
Asian-Pacific Americans	\$1,647,545	2.59%	9.17%	\$5,844,662	-\$4,197,117	0.28	< .05 *
Subcontinent Asian Americans	\$414,294	0.65%	2.14%	\$1,365,107	-\$950,813	0.30	< .05 *
Hispanic Americans	\$6,736,964	10.57%	17.75%	\$11,307,019	-\$4,570,055	0.60	< .05 *
Native Americans	\$0	0.00%	0.77%	\$488,986	-\$488,986	0.00	----
Caucasian Females	\$9,305,108	14.61%	8.50%	\$5,413,935	\$3,891,173	1.72	**
Non-Minority Males	\$44,385,275	69.67%	52.26%	\$33,291,696	\$11,093,579	1.33	< .05 †
TOTAL	\$63,709,180	100.00%	100.00%	\$63,709,180			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$2,618,595	4.11%	10.26%	\$6,537,653	-\$3,919,058	0.40	< .05 *
Minority Males	\$7,400,201	11.62%	28.98%	\$18,465,895	-\$11,065,694	0.40	< .05 *
Caucasian Females	\$9,305,108	14.61%	8.50%	\$5,413,935	\$3,891,173	1.72	**
Non-Minority Males	\$44,385,275	69.67%	52.26%	\$33,291,696	\$11,093,579	1.33	< .05 †
TOTAL	\$63,709,180	100.00%	100.00%	\$63,709,180			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$10,018,797	15.73%	39.25%	\$25,003,548	-\$14,984,752	0.40	< .05 *
Caucasian Female Business Enterprises	\$9,305,108	14.61%	8.50%	\$5,413,935	\$3,891,173	1.72	**
Disadvantaged Business Enterprises	\$19,323,905	30.33%	47.74%	\$30,417,484	-\$11,093,579	0.64	< .05 *
Non-Disadvantaged Business Enterprises	\$44,385,275	69.67%	52.26%	\$33,291,696	\$11,093,579	1.33	< .05 †

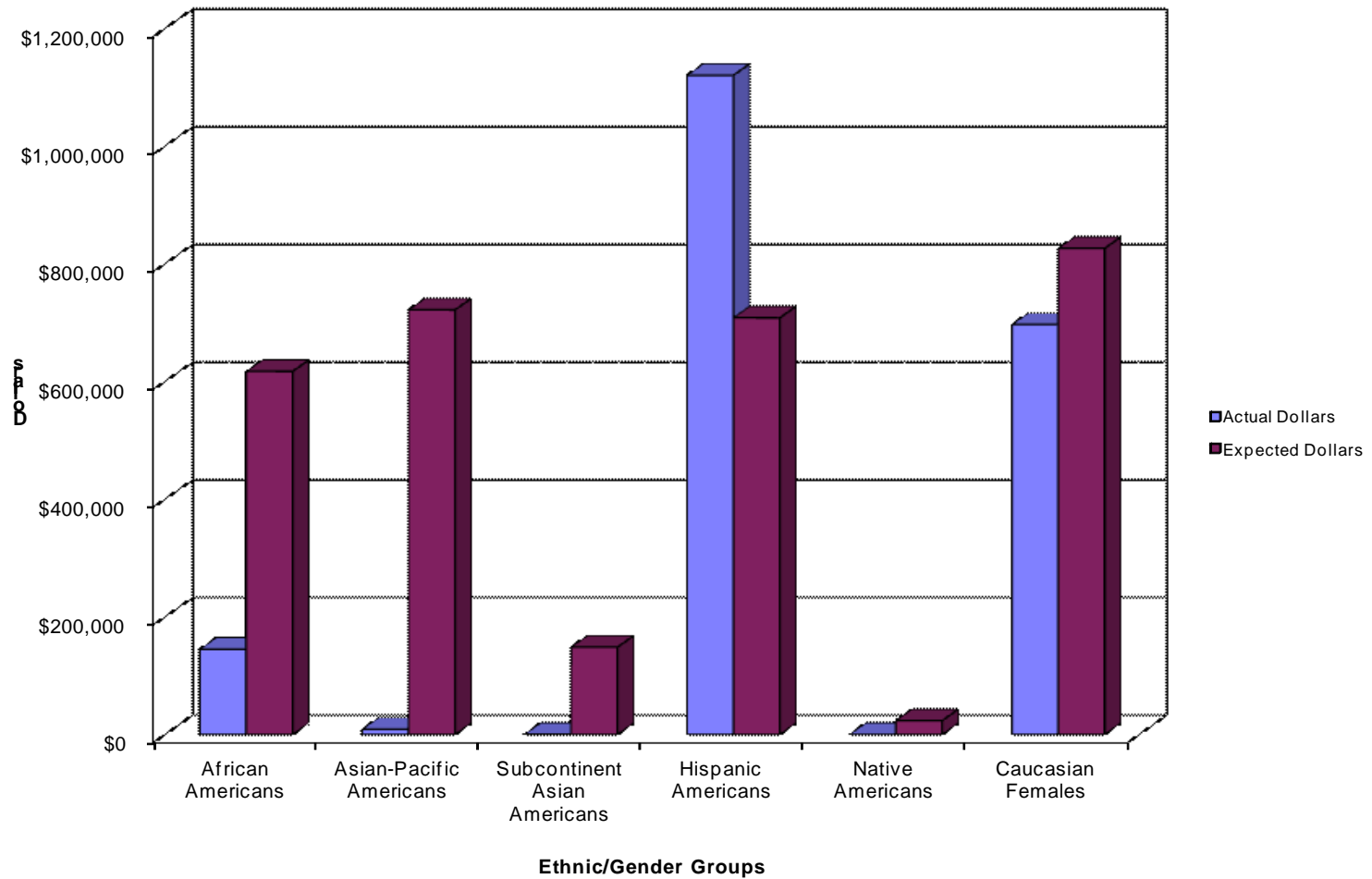
(*) denotes a statistically significant underutilization.

(†) denotes a statistically significant overutilization.

(**) denotes that this study does not test statistically the overutilization of M/WBEs or the underutilization of non-minority males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

**Chart 9.03: Disparity Analysis: All Subcontracts,
January 1, 2008 through December 31, 2010**



C. Disparity Analysis Summary

1. All Contracts

As indicated in Table 9.05, underutilization was found for all ethnic and gender business enterprise contractors for all contracts.

**Table 9.05: All Contracts
January 1, 2008 through December 31, 2010**

Ethnicity/Gender	All Contracts
African Americans	Yes
Asian-Pacific Americans	Yes
Subcontinent Asian Americans	Yes
Hispanic Americans	Yes
Native Americans	Yes
Minority Business Enterprises	Yes
Caucasian Female Business Enterprises	Yes
Disadvantaged Business Enterprises	Yes

Yes = The analysis is statistically significant.

No = The analysis is not statistically significant or there are too few available firms to test statistical significance.



2. All Prime Contracts

As indicated in Table 9.06, underutilization was found for African American, Asian-Pacific American, Subcontinent Asian American, Native American, minority business enterprise, Caucasian female business enterprise, and disadvantaged business enterprise contractors for all prime contracts valued at less than \$500,000.

**Table 9.06: All Prime Contract Dollars Less than \$500,000,
January 1, 2008 through December 31, 2010**

Ethnicity/Gender	Prime Contracts
African Americans	Yes
Asian-Pacific Americans	Yes
Subcontinent Asian Americans	Yes
Hispanic Americans	No
Native Americans	No
Minority Business Enterprises	Yes
Caucasian Female Business Enterprises	Yes
Disadvantaged Business Enterprises	Yes

Yes = The analysis is statistically significant.

No = The analysis is not statistically significant or there are too few available firms to test statistical significance.



3. All Subcontracts

As indicated in Table 9.07 below, disparity was found for African American, Asian-Pacific American, Subcontinent Asian American, Hispanic American, minority business enterprise, and disadvantaged business enterprise subcontractors.

**Table 9.07: All Subcontract Dollars,
January 1, 2008 through December 31, 2010**

Ethnicity/Gender	Subcontracts
African Americans	Yes
Asian-Pacific Americans	Yes
Subcontinent Asian Americans	Yes
Hispanic Americans	Yes
Native Americans	No
Minority Business Enterprises	Yes
Caucasian Female Business Enterprises	No
Disadvantaged Business Enterprises	Yes

Yes = The analysis is statistically significant.

No = The analysis is not statistically significant or there are too few available firms to test statistical significance.

4. Summary of Anecdotal and Private Sector Analyses

The pattern of discriminatory acts illustrated in the anecdotal testimony and private sector regression analysis lend support to the statistical findings. *Coral Construction*, a Ninth Circuit Court of Appeals decision, held that both statistical and anecdotal evidence should be relied upon in establishing systemic discriminatory exclusion in the relevant marketplace as the factual predicate for race-conscious remedies.¹¹ Private sector analysis can also be utilized as an investigation of the discriminatory barriers encountered by minority and women-owned businesses in Metro's market area. The findings in the anecdotal and the private sector regression analyses document the conditions minority and woman-owned businesses in Metro's market area encounter that effect the formation and development of DBE businesses.¹²

¹¹ *Coral Construction Co. v. King County*, 941 F.2d at 919 (9th Cir., 1992).

¹² +*Concrete Works of Colorado v. City and County of Denver*, 321 F.3d 950 (10th Cir. 2003), *petition for cert. denied*, (U.S. Nov. 17, 2003) (No. 02-1673); *Builders Ass'n of Greater Chicago v. City of Chicago*, 298 F.Supp2d 725 (N.D.Ill. 2003).



- Anecdotal Evidence

The anecdotal analysis revealed general market conditions experienced by DBEs attempting to do business with Metro and its prime contractors. Some of the obstacles identified by the interviewees included racial and gender barriers, difficulty with the good old boys network, bid shopping, inadequate lead time to respond to solicitations, prime contractors avoiding DBE program requirements, and barriers to financial resources and bonding.

- Private Sector Analysis

The Regression Analysis of Business Ownership Rates, Business Earnings Disparities, and Loan Approval Levels revealed statistically significant disparities between minority and woman-owned businesses and similarly situated Caucasian male business owners. Consideration was given for race and gender-neutral factors, such as age, education, and creditworthiness, in assessing whether the explanatory factors examined disproportionately affected minorities and females when compared to similarly situated Caucasian Males.

The analyses of the three outcome variables documented racial and gender discrimination that could depress business ownership, business earnings, and business loan approval rates. Such discrimination is a manifestation of economic conditions in the private sector that impede minority and females' efforts to create businesses. An impact of these private sector conditions would be manifested in a lower DBE business formation rate.

