



2018 Disparity Study

**Commonwealth of Pennsylvania
Department of General Services**

FINAL REPORT

Final Report

September 28, 2018

2018 Disparity Study

Prepared for

Commonwealth of Pennsylvania Department of General Services

Prepared by

BBC Research & Consulting
1999 Broadway, Suite 2200
Denver, Colorado 80202-9750
303.321.2547 fax 303.399.0448
www.bbcresearch.com
bbc@bbcresearch.com



Table of Contents

ES. Executive Summary

A. Analyses in the Disparity Study	ES-2
B. Availability Analysis Results.....	ES-3
C. Utilization Analysis Results.....	ES-5
D. Disparity Analysis Results.....	ES-8
E. Program Implementation	ES-11

1. Introduction

A. Background	1-2
B. Study Scope	1-3
C. Study Team Members	1-6

2. Legal Analysis

Programs that Rely Only on Race- and Gender-Neutral Measures.....	2-1
Programs that Rely on Race- and Gender-Neutral and Race- and Gender-Conscious Measures	2-1

3. Marketplace Conditions

A. Human Capital.....	3-2
B. Financial Capital	3-8
C. Business Ownership	3-11
D. Business Success	3-14
E. Summary.....	3-16

4. Collection and Analysis of Contract Data

A. Overview of DGS and Other Procurement Agencies’ Responsibilities and Contracting Policies	4-1
B. Collection and Analysis of Contract Data	4-5
C. Collection of Vendor Data	4-7
D. Relevant Geographic Market Area.....	4-8
E. Relevant Types of Work.....	4-8
F. Agency Review Process.....	4-10

5. Availability Analysis

A. Purpose of the Availability Analysis	5-1
B. Potentially Available Businesses	5-1

Table of Contents

C. Businesses in the Availability Database.....	5-3
D. Availability Calculations	5-4
E. Availability Results.....	5-6
6. Utilization Analysis	
Minority- and Woman-owned Businesses	6-1
Veteran-owned Businesses	6-4
Disabled-owned Businesses	6-4
LGBT-owned Businesses.....	6-4
7. Disparity Analysis	
A. Overview	7-1
B. Disparity Analysis Results.....	7-5
Veteran-owned Businesses	7-9
Disabled-owned Businesses	7-9
LGBT-owned Businesses.....	7-9
C. Statistical Significance	7-9
8. Program Measures	
A. Race and Gender-Neutral Measures.....	8-2
B. Race- and Gender-Conscious Measures.....	8-4
C. Other Organizations’ Program Measures.....	8-4
9. Program Implementation	
Consolidation of Programs	9-1
SDB Participation.....	9-1
Statutory Authorization of DGS Programs	9-2
Overall Annual Aspirational Goal	9-2
Subcontract Opportunities.....	9-2
Subcontracting Goals.....	9-3
Certification.....	9-3
Unbundling Large Contracts.....	9-4
Bidding Procedures	9-4
Prime Contract Opportunities	9-4
Prompt Payment Policies	9-4
Contract Management	9-5

Table of Contents

Growth Monitoring9-5
Subcontract Data.....9-5
Networking and Outreach.....9-6

Appendices

- A. Definitions of Terms
- B. Legal Framework and Analysis
- C. Quantitative Analysis of Marketplace Conditions
- D. Qualitative Information about Marketplace Conditions
- E. Availability Analysis Approach
- F. Disparity Tables

CHAPTER ES.

Executive Summary

CHAPTER ES.

Executive Summary

The Commonwealth of Pennsylvania's (The Commonwealth's) Department of General Services (DGS) retained BBC Research & Consulting (BBC) to conduct a *disparity study* to help inform the agency's implementation of the Small Diverse Business (SDB) Program. The primary objective of the SDB Program is to encourage the participation of minority-owned businesses, woman-owned businesses, veteran-owned businesses, service disabled veteran-owned businesses, lesbian/gay/bisexual/transgender (LGBT)-owned businesses, and disabled-owned businesses (referred to collectively as *small diverse businesses* or *SDBs*) in Commonwealth contracting.¹² To do so, the program comprises various measures to encourage the participation of small diverse businesses, including both *race- and gender-neutral* measures and, to a small extent, *race- and gender-conscious* measures. Race-neutral and gender-neutral measures are measures that are designed to encourage the participation of all small businesses in Commonwealth contracting. In contrast, race- and gender-conscious measures are designed specifically to encourage the participation of minority- and woman-owned businesses in Commonwealth contracting.

As part of the disparity study, BBC assessed whether there were any disparities between:

- The percentage of contracting dollars (including subcontract dollars) that different groups of SDBs received on Commonwealth construction, professional services, and goods and support services contracts awarded between July 1, 2011 and June 30, 2016 (i.e., *utilization*); and
- The percentage of construction, professional services, and goods and support services contracting dollars that those businesses might be expected to receive based on their availability to perform specific types and sizes of Commonwealth prime contracts and subcontracts (i.e., *availability*).

The disparity study also examined other quantitative and qualitative information related to:

- The legal framework surrounding DGS's implementation of the SDB Program;
- Local marketplace conditions for different groups of SDBs; and
- Contracting practices and business assistance programs that DGS currently has in place.

DGS could use information from the study to help refine its implementation of the SDB Program, including setting an overall aspirational goal for the participation of small diverse businesses in Commonwealth contracting; determining which program measures to use to encourage the

¹"Woman-owned businesses" refers to non-Hispanic white woman owned businesses. Information and results for minority woman-owned businesses are included along with their corresponding racial/ethnic groups.

²In the context of this report, all references to "Commonwealth contracts" and "Commonwealth contracting" refer to those construction; professional services; and goods and support services prime contracts and subcontracts awarded by an executive or independent agency (except for contracts related to horizontal construction for highways and bridges).

participation of SDBs in Commonwealth contracting; and, if appropriate, determining which racial/ethnic and gender groups, if any, would be eligible to participate in race- and gender-conscious program measures.

BBC summarizes key information from the 2018 Commonwealth of Pennsylvania Disparity Study in five parts:

- A. Analyses in the disparity study;
- B. Availability analysis results;
- C. Utilization analysis results;
- D. Disparity analysis results; and
- E. Program implementation.

A. Analyses in the Disparity Study

Along with measuring disparities between the participation and availability of different groups of diverse businesses in Commonwealth contracts, BBC also examined other quantitative and qualitative information related to DGS's implementation of the SDB Program:

- The study team conducted an analysis of federal regulations, case law, and other information to guide the methodology for the disparity study. The analysis included a review of federal, state, and local requirements related to diverse business programs (see Chapter 2 and Appendix B).
- BBC conducted quantitative analyses of the success of diverse individuals and businesses throughout Pennsylvania, which the study team identified as the *relevant geographic market area* for the disparity study. In addition, the study team collected qualitative information about potential barriers that diverse individuals and businesses face in the local marketplace through in-depth interviews, telephone surveys, public meetings, and written testimony (see Chapter 3, Appendix C, and Appendix D).
- BBC analyzed the percentage of relevant Commonwealth contracting dollars that minority-owned businesses, woman-owned businesses, and other diverse businesses are available to perform. That analysis was based on telephone surveys that the study team completed with nearly 3,500 businesses that work in industries related to the specific types of construction, professional services, and goods and support services contracts that DGS awards (see Chapter 5 and Appendix E).
- BBC analyzed the dollars that minority-owned businesses, woman-owned businesses, and other diverse businesses received on nearly 50,000 Commonwealth construction, professional services, and goods and support services contracts awarded between July 1, 2011 and June 30, 2016 (i.e., the *study period*) (see Chapter 6).
- BBC examined whether there were any disparities between the participation and availability of minority-owned businesses, woman-owned businesses, and other diverse businesses on Commonwealth construction, professional services, and goods and support services contracts awarded during the study period (see Chapter 7).

- BBC reviewed DGS’s current contracting practices, business development programs, and SDB program measures and provided guidance related to additional program options and possible refinements to those practices and measures (see Chapters 8 and 9).

B. Availability Analysis Results

BBC used a *custom census* approach to analyze the availability of diverse businesses that are ready, willing, and able to perform on Commonwealth construction, professional services, and goods and support services prime contracts and subcontracts that DGS awards. BBC’s approach relied on information from extensive surveys that the study team conducted with potentially available businesses located in Pennsylvania that perform work within relevant subindustries. That approach allowed BBC to develop a representative, unbiased, and statistically-valid database of potentially available businesses and estimate the availability of minority-owned businesses, woman-owned businesses, and other diverse businesses in an accurate, statistically-valid manner.

Minority-and woman-owned businesses. BBC examined the availability of minority- and woman-owned businesses for various contracts sets to assess the degree to which they are ready, willing, and able to perform various types of Commonwealth work.

Overall. Figure ES-1 presents overall dollar-weighted availability estimates for minority- and woman-owned businesses by racial/ethnic and gender group for the construction, professional services, and goods and support services prime contracts and subcontracts that DGS awarded between July 1, 2011 and June 30, 2016. Overall, the availability of minority- and woman-owned businesses for those contracts is 22.1 percent. In other words, one would expect minority- and woman-owned businesses to receive 22.1 percent of the contracting dollars that DGS awards based on their availability for that work. Non-Hispanic white woman-owned businesses (10.6%) and Asian American-owned businesses (4.9%) exhibited the highest availability among all groups.

Figure ES-1.
Availability estimates by racial/ethnic and gender group

Note:

Numbers rounded to nearest tenth of 1 percent and thus may not sum exactly to totals.

For more detail and results by group, see Figure F-2 in Appendix F.

Source:

BBC Research & Consulting availability analysis.

Business group	Availability %
Asian American-owned	4.9 %
Black American-owned	4.3 %
Hispanic American-owned	2.0 %
Native American-owned	0.4 %
Non-Hispanic white woman-owned	10.6 %
Total Minority- and Woman-owned	22.1 %

Contract role. Figure ES-2 presents availability estimates for minority- and woman-owned businesses separately for prime contracts and subcontracts. As shown in Figure ES-2, the availability of minority- and woman-owned businesses considered together is comparable between Commonwealth prime contracts (22.2%) and subcontracts (21.4%). The vast majority of contracting dollars that DGS awarded during the study period were associated with prime contracts.

Figure ES-2.
Availability estimates by contract role

Note:

Numbers rounded to nearest tenth of 1 percent and thus may not sum exactly to totals.

For more detail, see Figures F-8 and F-9 in Appendix F.

Source:

BBC Research & Consulting availability analysis.

Business group	Contract role	
	Prime contracts	Subcontracts
Asian American-owned	5.1 %	1.9 %
Black American-owned	4.5 %	1.4 %
Hispanic American-owned	2.1 %	0.5 %
Native American-owned	0.4 %	0.1 %
Non-Hispanic white woman-owned	10.2 %	17.4 %
Total Minority- and Woman-owned	22.2 %	21.4 %

Industry. Figure ES-3 presents availability estimates for minority- and woman-owned businesses for each relevant industry. As shown in Figure ES-3, the availability of minority- and woman-owned businesses considered together is highest for the Commonwealth’s goods and support services contracts (31.1%) and lowest for construction contracts (9.7%).

Figure ES-3.
Availability estimates by industry

Business group	Industry		
	Construction	Professional services	Goods and support services
Asian American-owned	0.1 %	4.8 %	13.5 %
Black American-owned	0.4 %	7.7 %	1.3 %
Hispanic American-owned	1.1 %	0.5 %	7.9 %
Native American-owned	0.0 %	0.6 %	0.3 %
Non-Hispanic white woman-owned	8.1 %	13.0 %	8.0 %
Total Minority- and Woman-owned	9.7 %	26.6 %	31.1 %

Note: Numbers rounded to nearest tenth of 1 percent and thus may not sum exactly to totals.

For more detail and results by group, see Figures F-5, F-6, and F-7 in Appendix F.

Source: BBC Research & Consulting availability analysis.

Veteran-owned businesses. BBC also separately examined the availability of veteran-owned businesses for Commonwealth construction, professional services, and goods and support services contracts. Overall, the availability of veteran-owned businesses for the Commonwealth’s contracts and procurements is 4.6 percent.

Disabled-owned businesses. Similarly, BBC examined the overall availability of disabled-owned businesses for Commonwealth work. The availability analysis indicated that the availability of disabled-owned businesses for the contracts and procurements that DGS awards is 2.5 percent.

LGBT-owned businesses. Finally, BBC also separately examined the availability of LGBT-owned businesses for Commonwealth contracts and procurements. Overall, the availability of LGBT-owned businesses for that work is 1.7 percent.

C. Utilization Analysis Results

BBC measured the participation of minority- and woman-owned businesses and other diverse businesses in Commonwealth contracting in terms of *utilization*—the percentage of dollars that diverse businesses received on Commonwealth prime contracts and subcontracts during the study period.

Minority- and woman-owned businesses. BBC examined the participation of minority- and woman-owned businesses for various sets of contracts that DGS awarded during the study period. The study team assessed the participation of all of those businesses considered together and separately for each relevant racial/ethnic and gender group.

Overall. Figure ES-4 presents the percentage of contracting dollars that minority- and woman-owned businesses considered together received on construction, professional services, and goods and support services contracts and procurements that DGS awarded during the study period (including both prime contracts and subcontracts). As shown in Figure ES-4, overall, minority- and woman-owned businesses considered together received 4.5 percent of the relevant contracting dollars that DGS awarded during the study period. Minority- and woman-owned businesses that were certified as SDBs received 3.3 percent of those dollars. Non-Hispanic white woman-owned businesses (2.5%) and Asian American-owned businesses (1.0%) exhibited higher levels of participation on Commonwealth contracts than all other minority- and woman-owned groups.

Figure ES-4.
Overall utilization results

Note:

Numbers rounded to nearest tenth of 1 percent. Numbers may not add to totals.

For more detail, see Figure F-2 in Appendix F.

Source:

BBC Research & Consulting utilization analysis.

	Utilization %
Minority- and Woman-owned	
Asian American-owned	1.0 %
Black American-owned	0.7 %
Hispanic American-owned	0.2 %
Native American-owned	0.0 %
Non-Hispanic white woman-owned	2.5 %
Total Minority- and Woman-owned	4.5 %
SDBs	
Asian American-owned	1.0 %
Black American-owned	0.6 %
Hispanic American-owned	0.1 %
Native American-owned	0.0 %
Non-Hispanic white woman-owned	1.6 %
Total SDBs	3.3 %

Contract role. Figure ES-5 presents utilization results for minority- and woman-owned businesses separately for prime contracts and subcontracts. As shown in Figure ES-5, the participation of minority- and woman-owned businesses considered together was much higher in Commonwealth subcontracts (30.3%) than in prime contracts (3.0%). However, the vast majority of contracting dollars that the Commonwealth awarded during the study period were associated with prime contracts.

Figure ES-5.
Utilization results by contract role

Numbers rounded to nearest tenth of 1 percent.
Numbers may not add to totals.
For more detail, see Figures F-8 and F-9 in Appendix F.

Source:
BBC Research & Consulting utilization analysis.

Business group	Contract role	
	Prime contracts	Subcontracts
Asian American-owned	0.3 %	12.7 %
Black American-owned	0.6 %	2.3 %
Hispanic American-owned	0.1 %	1.5 %
Native American-owned	0.0 %	0.2 %
Non-Hispanic white woman-owned	1.9 %	13.6 %
Total Minority- and Woman-owned	3.0 %	30.3 %

Industry. Figure ES-6 presents utilization results for minority- and woman-owned businesses by relevant industry: construction, professional services, and goods and services. As shown in Figure ES-6, the participation of minority- and woman-owned businesses considered together was highest in the Commonwealth’s professional services contracts (6.0%) and lowest in goods and support services contracts (2.2%).

Figure ES-6.
Utilization results by relevant industry

Business group	Industry		
	Construction	Professional services	Goods and support services
Asian American-owned	0.5 %	1.6 %	0.2 %
Black American-owned	0.3 %	1.0 %	0.6 %
Hispanic American-owned	0.1 %	0.3 %	0.0 %
Native American-owned	0.0 %	0.1 %	0.0 %
Non-Hispanic white woman-owned	2.4 %	3.0 %	1.4 %
Total Minority- and Woman-owned	3.3 %	6.0 %	2.2 %

Note: Numbers rounded to nearest tenth of 1 percent. Numbers may not add to totals.
For more detail, see Figures F-5, F-6, and F-7 in Appendix F.

Source: BBC Research & Consulting utilization analysis.

Veteran-owned businesses. BBC also separately examined the participation of veteran-owned businesses in Commonwealth construction, professional services, and goods and support services contracts. Overall, the participation of veteran-owned businesses for the Commonwealth’s contracts and procurements was 0.8 percent.

Disabled-owned businesses. Similarly, BBC examined the participation of disabled-owned businesses in Commonwealth work. The utilization analysis indicated that the participation of disabled-owned businesses for the contracts and procurements that DGS awarded during the study period was 0.3 percent.

LGBT-owned businesses. Finally, BBC also separately examined the participation of LGBT-owned businesses for Commonwealth contracts and procurements. Overall, the participation of LGBT-owned businesses for that work was 0.04 percent.

D. Disparity Analysis Results

Although information about the participation of diverse businesses in Commonwealth contracts is useful on its own, it is even more useful when it is compared with the level of participation that might be expected based on those businesses' availability for Commonwealth work. As part of the disparity analysis, BBC compared the participation of diverse businesses in Commonwealth prime contracts and subcontracts with the percentage of contract dollars that those businesses might be expected to receive based on their availability for that work. BBC calculated *disparity indices* for each relevant business group and for various contract sets by dividing percent utilization by percent availability and multiplying by 100. A disparity index of 100 indicates an exact match between participation and availability for a particular group for a particular contract set (referred to as *parity*). A disparity index of less than 100 indicates a disparity between participation and availability. A disparity index of less than 80 indicates a *substantial* disparity between participation and availability.

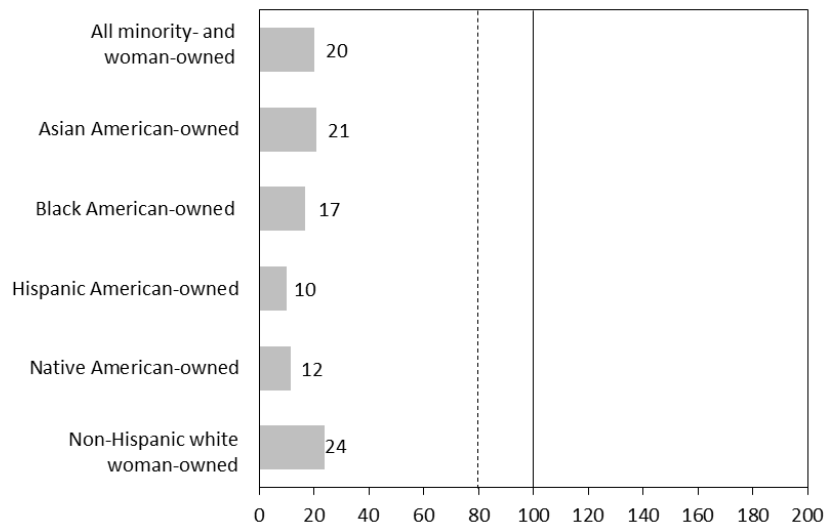
Minority- and woman-owned businesses. BBC examined the availability of minority- and woman-owned businesses for various contracts sets to assess the degree to which they may have been underutilized on various types of Commonwealth work.

Overall results. Figure ES-7 presents disparity indices for minority- and woman-owned businesses for all relevant prime contracts and subcontracts that DGS awarded during the study period. The line down the center of the graph shows a disparity index level of 100, which indicates parity between participation and availability. Disparity indices of less than 100 indicate disparities between participation and availability (i.e., underutilization). For reference, a line is also drawn at a disparity index level of 80, because some courts use 80 as the threshold for what indicates a substantial disparity.

Figure ES-7.
Disparity indices by group

Note:
For more detail, see Figure F-2
in Appendix F.

Source:
BBC Research & Consulting
disparity analysis.



As shown in Figure ES-7, overall, the participation of minority- and woman-owned businesses in contracts that DGS awarded during the study period was substantially lower than what one might expect based on the availability of those businesses for that work. The disparity index of 20 indicates that minority- and woman-owned businesses received approximately \$0.20 for

every dollar that they might be expected to receive based on their availability for the relevant prime contracts and subcontracts that DGS awarded during the study period. Disparity analysis results by individual racial/ethnic and gender group indicated that all relevant groups exhibited substantial disparities on DGS contracts and procurements.

Contract role. Subcontracts tend to be much smaller in size than prime contracts and, as a result, are often more accessible than prime contracts to minority- and woman-owned businesses. Thus, it might be reasonable to expect better outcomes for minority- and woman-owned businesses on subcontracts than prime contracts. Figure ES-8 presents disparity indices for all relevant racial/ethnic and gender groups separately for prime contracts and subcontracts. As shown in Figure ES-8, minority- and woman-owned businesses considered together showed a substantial disparity for prime contracts (disparity index of 13) but not for subcontracts (disparity index of 142). Results for individual groups indicated that:

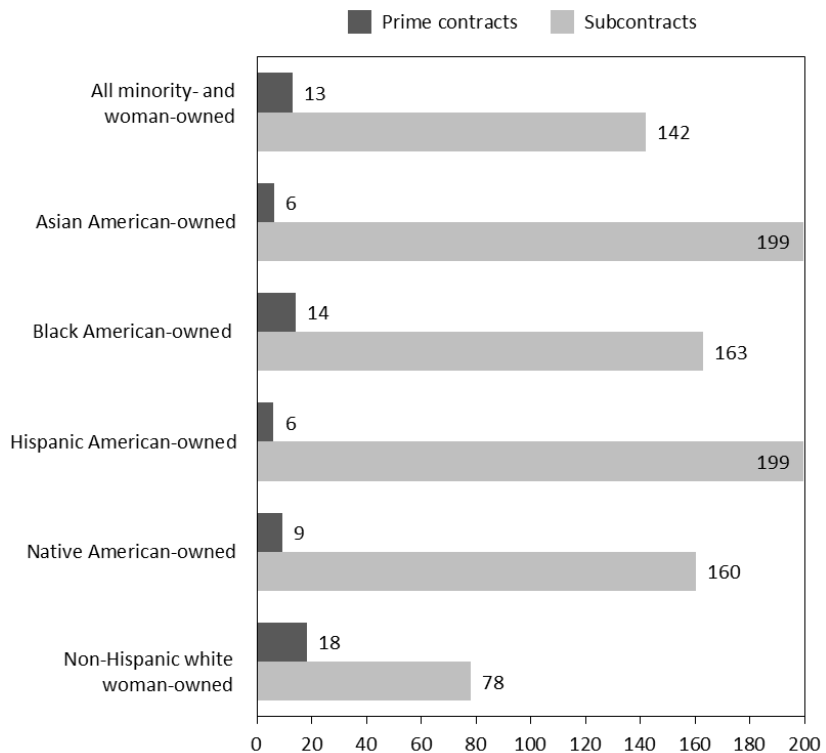
- All groups showed substantial disparities for prime contracts.
- Only non-Hispanic white woman-owned businesses showed a substantial disparity on subcontracts (disparity index of 78).

Note that the vast majority of the dollars that the project team analyzed as part of the disparity study were prime contract dollars.

Figure ES-8.
Disparity indices for
prime contracts and
subcontracts

Note:
 For more detail, see Figures F-8 and F-9 in Appendix F.

Source:
 BBC Research & Consulting
 disparity analysis.



Industry. BBC examined disparity analysis results separately for the Commonwealth’s construction, professional services, and goods and support services contracts. Figure ES-9 presents disparity indices for all relevant groups by contracting area. Minority- and woman-owned businesses considered together showed substantial disparities for construction contracts

(disparity index of 34), professional services contracts (disparity index of 23), and goods and support services contracts (disparity index of 7). Disparity analyses results differed by contracting area and group:

- All groups showed disparities for construction contracts except Asian American-owned businesses (disparity index of 200+).
- All groups showed substantial disparities for professional services contracts.
- All groups showed substantial disparities for goods and support services contracts.

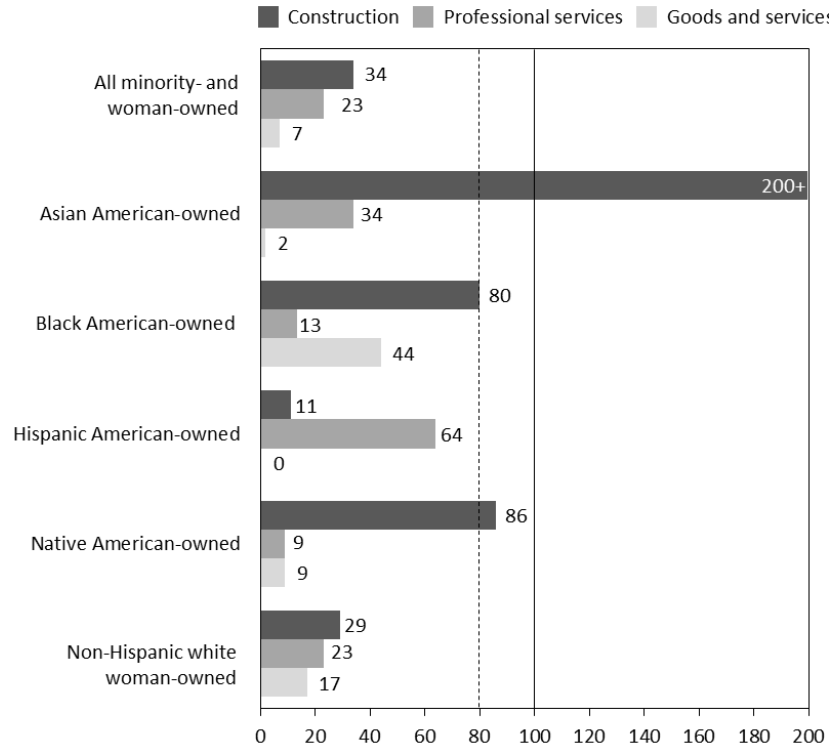
Figure ES-9.
Disparity analysis
results by relevant
industry

Note:

For more detail, see Figures F-5, F-6, and F-7 in Appendix F.

Source:

BBC Research & Consulting disparity analysis.



Veteran-owned businesses. BBC compared participation to availability separately for veteran-owned businesses in Commonwealth contracting. Veteran-owned businesses exhibited a disparity index of 18, indicating that their actual participation in Commonwealth contracting was substantially less than their availability.

Disabled-owned businesses. Similarly, BBC compared participation to availability for disabled-owned businesses in Commonwealth work. The disparity analysis indicated that disabled-owned businesses exhibited a disparity index of 11, indicating that their actual participation in Commonwealth contracting was substantially less than their availability.

LGBT-owned businesses. Finally, BBC compared participation to availability separately for LGBT-owned businesses in Commonwealth work. The disparity analysis indicated that LGBT-owned businesses exhibited a disparity index of 2, indicating that their actual participation in Commonwealth contracting was substantially less than their availability.

E. Program Implementation

Chapters 8 and 9 review information relevant to DGS's implementation of the SDB Program. DGS should review study results and other relevant information in connection with making decisions concerning its implementation of the program. Key considerations and recommendations for potential program refinement are discussed below. In making those considerations, DGS should also assess whether additional resources, changes in internal policy, or changes in state law may be required.

Consolidation of programs. There is substantial confusion regarding the SDB Program, DGS's Small Business (SB) Program, the Pennsylvania Department of Transportation's (PennDOT's) implementation of the Diverse Business (DB) Program, and PennDOT's implementation of the Federal Disadvantaged Business Enterprise (DBE) Program. The Commonwealth might consider ways to work with PennDOT to consolidate the SDB and SB Programs with PennDOT's DB Program. Doing so might help encourage businesses to become certified, adhere to program requirements, and engage with both agencies. It might also reduce the amount of monitoring that DGS and PennDOT must undertake as part of all four programs.

SDB participation. DGS only considers SDB participation when it awards contracts using a *best value* method or a *sealed bid with minimum participation levels* method. However, most Commonwealth contracts are awarded using a *simple sealed bid method*, so DGS usually does not consider the participation of diverse businesses in individual contracting, either as prime contractors or subcontractors. However, DGS is introducing a streamlined *Request for Proposals* process and is working with executive agencies to substantially increase the number of contracts that it awards using a best value method. DGS should continue those and other efforts that allow for more frequent consideration of SDB participation in its contracting.

Overall annual aspirational goal. DGS has set an overall annual aspirational goal for SDB participation in Commonwealth contracting of 10 percent in fiscal year 2017, 20 percent in fiscal year 2018, and 30 percent in fiscal year 2019. DGS should consider adjusting its overall aspirational goal based on information from the study's team availability analysis, which indicates that the overall availability of minority- and woman-owned businesses is 22.1 percent; veteran-owned businesses is 4.6 percent; disabled-owned businesses is 2.5 percent; and lesbian/gay/bisexual/transgender- (LGBT-) owned businesses is 1.7 percent. In addition, results presented in Chapter 3, Appendix C, and Appendix D indicate that various diverse individuals and groups face substantial barriers in human capital, financial capital, business ownership, and business success that might be relevant to DGS's overall annual aspirational goal. DGS should consider that information closely when determining whether to make a further adjustment to its overall annual aspirational goal.

Subcontract opportunities. Overall, minority- and woman-owned businesses did not show disparities on the subcontracts that DGS awarded during the study period. However, subcontracting accounted for a relatively small percentage of the total contracting dollars awarded during the study period. To increase the number of subcontract opportunities, DGS could consider implementing a program that requires prime contractors to subcontract a certain amount of project work as part of their bids and proposals. For specific types of contracts where subcontracting or partnership opportunities might exist, DGS could set a minimum percentage of

work to be subcontracted. Prime contractors would then have to meet or exceed this threshold in order for their bids to be considered responsive.

Subcontracting goals. As part of the SDB and SB Programs, DGS uses subcontracting goals on a small number of individual contracts that it awards to encourage diverse business participation. Prime contractors bidding on those contracts must either meet the goals by making subcontracting commitments to diverse businesses or by requesting *good faith efforts* waivers. If prime contractors do not meet the goals through subcontracting commitments and do not submit acceptable good faith effort waivers, then DGS may reject their bids. Based on disparity analysis results, DGS should consider expanding its use of subcontracting goals. Disparity analysis results indicated that all relevant racial/ethnic and gender groups show substantial disparities on DGS contracts overall; the expanded use of subcontract goals might provide additional subcontracting opportunities for diverse businesses and help address some of those disparities.

Certification. DGS does not currently certify minority- and woman-owned businesses or other diverse businesses itself but instead relies on PennDOT and other organizations to do so. DGS might consider operating its own certification process as part of the SDB Program. Doing so would allow DGS to certify all business groups that are included as part of the program and make efforts to streamline the certification process. Developing a certification process requires new policies and substantial resources. DGS might consider working with PennDOT as well as a consulting firm that specializes in certification processes if it is interested in developing its own certification process. In addition, DGS should consider business size limitations as part of its certification process, particularly relating to revenue and number of employees.

Unbundling large contracts. In general, small diverse businesses exhibited reduced availability for relatively large contracts that DGS awarded during the study period. In addition, as part of in-depth interviews, several diverse businesses reported that the size of contracts often serves as a barrier to their success. DGS has been working to break contract pieces into sizes that are more feasible for small businesses to pursue. The agency should continue making efforts to unbundle prime contracts and even subcontracts. Such measures would result in DGS work being more accessible to small businesses, which in turn might increase opportunities for diverse businesses and result in greater participation in DGS contracting.

Bidding procedures. As part of in-depth interviews and public meetings that the study team conducted, several business owners indicated that Commonwealth bidding procedures were confusing, cumbersome, or not well documented. DGS should consider ways in which it can streamline bidding procedures to reduce burdens for small diverse businesses that are potentially interested in pursuing DGS work. In addition, many business owners commented that prime contractors regularly engage in bid shopping and eliminate or substitute subcontractors from their project teams after contract award. To help prevent such practices, DGS should consider requiring prime contractors to list all major subcontractors and suppliers as part of their bids on Commonwealth contracts and instituting policies that require prime contractors to obtain DGS approval to change any subcontractors or scopes of work after contract award.

Prime contract opportunities. Disparity analysis results indicated substantial disparities for all racial/ethnic and gender groups on the prime contracts that DGS awarded during the study

period. However, minority- and woman-owned businesses showed somewhat better outcomes on small prime contracts than on large prime contracts. DGS should consider establishing a small business set-aside program that would involve DGS setting aside certain small prime contracts exclusively for small business bidding. Doing so would encourage the participation of small diverse businesses, including many minority- and woman-owned businesses. If DGS establishes such a program, it would have to ensure that the program meets all applicable legal standards, including establishing a *rational basis* for the program.

Prompt payment policies. As part of in-depth interviews, several businesses, including many diverse businesses, reported difficulties with receiving payment in a timely manner on Commonwealth contracts, both when they work as prime contractors and subcontractors. Many businesses also commented that having capital on hand is crucial to small business success. DGS should consider reinforcing its prompt payment policies with its procurement staff and prime contractors and could also consider automating payments directly to subcontractors. Doing so might help ensure that both prime contractors and subcontractors receive payment in a timely manner. It may also help ensure that small diverse businesses have enough operating capital to remain successful.

Contract management. DGS currently tracks payments that it makes to vendors in its SAP system but lacks a centralized contract management system that maintains information on the specific contracts to which those payments relate. DGS should consider establishing an effective contract management system because it will help the agency more accurately monitor the participation of diverse businesses on a contract-by-contract basis. In addition, DGS awards grants to various Commonwealth agencies to fund different projects but has not established a process to collect prime contract or subcontract data related to those projects. DGS should also consider establishing a system to collect and maintain those data to further improve the accuracy of its efforts to monitor diverse business participation in Commonwealth contracting.

Subcontract data. DGS does not collect or maintain information on subcontracts related to Commonwealth prime contracts that it awards. DGS should consider collecting comprehensive data on *all* subcontracts, regardless of whether they are performed by diverse businesses. Collecting data on all subcontracts will help ensure that the agency monitors the participation of diverse businesses as accurately as possible. DGS should consider collecting those data as part of bids but also requiring prime contractors to submit data on subcontracts as part of the invoicing process for all contracts and incorporating those data into its data systems. DGS should train relevant department staff to collect and enter subcontract data accurately and consistently.

Business development. DGS should consider continuing and expanding efforts to grow and support small businesses throughout the Commonwealth. As discussed in Chapter 8, DGS and other entities throughout Pennsylvania currently operate a number of programs that provide technical assistance, mentoring, and networking opportunities for entrepreneurs. Data from the quantitative analysis of marketplace conditions (Chapter 3) shows that there are still substantial disparities in business ownership for women, minorities and other diverse individuals. Based on those results, DGS should consider expanding and improving its business development programming and support in order to further catalyze small business formation and success.

CHAPTER 1.

Introduction

CHAPTER 1.

Introduction

The Commonwealth of Pennsylvania's (The Commonwealth) Department of General Services (DGS) supports the business operations of all Commonwealth agencies. As part of its responsibilities, DGS oversees the procurement of necessary goods and services that Commonwealth agencies require to operate effectively and efficiently. One of DGS's functions is to operate the Small Diverse Business (SDB) Program, which is designed to encourage the participation of small minority-owned businesses, woman-owned businesses, veteran-owned businesses, service disabled veteran-owned businesses, lesbian/gay/bisexual/transgender (LGBT)-owned businesses, and disabled-owned businesses (referred to collectively as *small diverse businesses*, or SDBs) in Commonwealth contracting.

DGS retained BBC Research & Consulting (BBC) to conduct a *disparity study* to help evaluate the effectiveness of its implementation of the SDB Program in encouraging the participation of SDBs in Commonwealth contracts and procurements. As part of the disparity study, the study team examined whether there were any disparities between:

- The percentage of contract dollars (including subcontract dollars) that DGS spent with different groups of SDBs during the study period (i.e., *utilization*); and
- The percentage of contract dollars that those businesses might be expected to receive based on their availability to perform specific types and sizes of Commonwealth prime contracts and subcontracts (i.e., *availability*).

The disparity study also provides other quantitative and qualitative information related to:

- The legal framework surrounding DGS's implementation of the SDB Program;
- Local marketplace conditions for different groups of SDBs; and
- Contracting practices and business assistance programs that DGS currently has in place.

There are several reasons why the disparity study will be useful to DGS:

- The disparity study provides an independent review of the participation of SDBs in Commonwealth contracting, which will be valuable to DGS and external stakeholders;
- Information from the disparity study will be useful to DGS as it makes decisions about the SDB Program;
- The disparity study provides insights into how to increase contracting opportunities for SDBs; and
- Organizations that have successfully defended their implementations of programs like the SDB Program in court have typically relied on information from disparity studies.

BBC introduces the Commonwealth Disparity Study in three parts:

- A. Background;
- B. Study scope; and
- C. Study team members.

A. Background

Chapter 21 of Pennsylvania’s Procurement Code lists the Pennsylvania Department of General Services’ duties with regard to providing assistance to small and disadvantaged businesses.¹ Chapter 21 defines a disadvantaged business as “a small business which is owned or controlled by a majority of persons, not limited to members of minority groups, who have been deprived of the opportunity to develop and maintain a competitive position in the economy because of social disadvantages.”

While Chapter 21 requires the Department of General Services to assist small and disadvantaged business, it does not set a specific statutory framework for the Department’s current Small Diverse Business (SDB) program. However, pursuant to the authority set forth in Chapter 21, the Department of General Services implements policies for the administration of its SDB program.² Specifically, its Bureau of Diversity, Inclusion & Small Business Opportunities (BDISBO) is responsible for administering the SDB program. DGS policies establish the criteria and processes for self-certification of small business status and verification of SDB status. DGS’s disadvantaged business program formerly included only Minority Business Enterprises (MBE), and Woman Business Enterprises (WBE). In 2012, Veteran Business Enterprises (VBE) and Service Disabled Veteran Business Enterprises (SDVBE) were added to the program.³ Then, on July 8, 2016, DGS amended its policies changing the program name from the “small disadvantaged” to the “small diverse” business program and included Disability-Owned Business Enterprises (DOBE), and Lesbian, Gay, Bisexual Transgender-Owned Business Enterprises (LGBTBE) within its small diverse business program. Currently, all of these entities (MBE, WBE, VBE, SDVBE, DOBE, and LGBTBE) are collectively referred as “SDBs” and are eligible to participate in the Department of General Services’ small diverse business program.

To be eligible for the Small Diverse Business program, a business must first establish their eligibility as a “Small Business” through a self-certification process with DGS. Businesses seeking status as a Small Diverse Business then must submit proof of ownership to DGS from one of seven approved third-party certifying agencies.

In 2012, the Commonwealth also implemented a Small Business Procurement Initiative (SBPI) designed to promote the use of small businesses in Commonwealth contracting.⁴ Under this

¹ 62 Pa.C.S. §§ 2101-2108.

² The policies are outlined in Chapter 58 of Title 4 of the Pennsylvania Code. <http://www.pabulletin.com/secure/data/vol46/46-28/1169.html>.

³ Act 85 of 2012

⁴ Exec. Order No. 2011-09 (November 21, 2011)

initiative, certain Commonwealth procurements are reserved for competition among DGS self-certified, small businesses only—that is, those businesses with 100 or fewer employees that earn less than the maximum revenue amounts designated by the Department⁵. These procurements focus exclusively on creating prime contracting opportunities for small businesses, and are part of DGS' Small Business (SB) Program.

Race and gender-neutral program measures. In an effort to meet its aspirational SDB goals, DGS uses various *race- and gender-neutral measures* to SDB participation in Commonwealth contracts and procurements. Race- and gender-neutral measures are measures that are designed to encourage the participation of small businesses in an organization's contracting, regardless of the race/ethnicity or gender of businesses' owners. Specific types of race- and gender-neutral measures that DGS uses include:

- Outreach efforts;
- Mentor-protégé program;
- Prompt payment;
- Bidding opportunities reserved for small businesses; and
- Technical assistance.

Details about the specific race- and gender-neutral measures that DGS currently uses are presented in Chapter 8.

Race- and gender-conscious measures. In contrast to race- and gender-neutral measures, *race- and gender-conscious measures* are measures that are specifically designed to encourage the participation of minority- and woman-owned businesses in government contracting (e.g., participation goals for minority- and woman-owned business on individual contracts). DGS does use race- and gender-conscious measures as part of the SDB Program. These measures are focused on increasing the participation of certified SDBs, many of which are minority- and woman owned businesses, and include establishing minimum participation levels (MPLs) for certified SDBs on certain construction contracts.

Using evaluation preferences for SDBs on all best value procurements. Because DGS's use of the above measures includes many minority- and woman-owned businesses, there may be certain legal considerations—including meeting the *strict scrutiny standard of constitutional review*—that the department might consider making in its implementation of the SDB Program. Those legal considerations are described in Chapter 2 and Appendix B.

B. Study Scope

Information from the disparity study will help DGS continue to encourage the participation of SDBs in Commonwealth contracting. In addition, information from the study will help DGS implement the SDB Program in a legally-defensible manner.

⁵ Per Chapter 58 of the Pennsylvania Code, Section § 58.303, the business shall earn less than \$20 million in gross annual revenues (\$25 million in gross annual revenues for those businesses in the information technology sales or information technology service business and \$7 million in gross annual revenues for those businesses performing building design services).

Relevant business groups. In general, BBC focused its analyses on whether barriers or discrimination based on various factors—race/ethnicity, gender identity, sexual preference, military service, or disability—affected the participation of SDBs in Commonwealth contracts and procurements, regardless of whether those businesses were, or could be, certified as such. Analyzing the participation and availability of businesses regardless of SDB certification allowed BBC to assess whether such barriers affect business outcomes independent of certification status. To interpret the core analyses presented in the disparity study, it is useful to understand how the study team defines the various groups of businesses that are the focus of the SDB Program and the disparity study.

Minority- and woman-owned businesses. BBC analyzed business outcomes for minority- and woman-owned businesses, which were defined as businesses owned by Asian Americans, Black Americans, Hispanic Americans, Native Americans, or women of any race/ethnicity. To avoid any double-counting, BBC classified minority woman-owned businesses with their corresponding minority groups. (For example, Black American woman-owned businesses were classified along with businesses owned by Black American men as Black American-owned businesses.) Thus, *woman-owned businesses* in this report refers specifically to non-Hispanic white woman-owned businesses.

Veteran-owned businesses. BBC analyzed business outcomes for veteran-owned businesses, which were defined as businesses that are owned by veterans of the United States military.⁶

Disabled-owned businesses. BBC analyzed business outcomes for disabled-owned businesses, which were defined as businesses that are owned by individuals with physical or mental impairments that substantially limit major life activities.

LGBT-owned businesses. BBC analyzed business outcomes for LGBT-owned businesses, which were defined as businesses that are owned by individuals who identify as lesbian, gay, bisexual, or transgender.

SDBs. SDBs are minority-owned businesses, woman-owned businesses, veteran-owned businesses, service-disabled veteran-owned businesses, disabled-owned businesses, or LGBT-owned businesses that are specifically verified as such through DGS. Businesses that wish to be considered SDBs are required to register and self-certify online with DGS as small businesses. To qualify for SB status, businesses must be independently-owned, for-profit entities with fewer than 100 full-time employees, and revenues that are less than the thresholds that DGS has specified for various industries.⁷ After self-certification, businesses must then verify their status as an SDB by showing proof of relevant certifications through one of seven approved third-party entities.

Majority-owned businesses. Majority-owned businesses are businesses that are owned by non-Hispanic white men who are not veterans, disabled, or members of the LGBT community

⁶ Service-disabled veteran-owned businesses were also considered by BBC in this study, and either fell into the veteran-owned or disabled-owned business categories for disparity analyses.

⁷ <http://www.dgs.pa.gov/Businesses/Small%20Diverse%20Business%20Program/Small-Diverse-Business-Verification/Pages/default.aspx>

Analyses in the disparity study. The disparity study examined whether there are any disparities between the participation and availability of SDBs on Commonwealth contracts. The study focused on construction; professional services; and goods and general services contracts that DGS awarded between July 1, 2011 and June 30, 2016 (i.e., the study period). During the study period, DGS used SDB minimum participation levels, evaluation preferences, reserved bidding processes, and other SDB program measures to award many Commonwealth contracts.

In addition to the core utilization, availability, and disparity analyses, the disparity study also includes:

- A review of legal issues surrounding the implementation of the SDB Program;
- An analysis of local marketplace conditions for disadvantaged individuals and SDBs;
- An assessment of DGS's contracting practices and business assistance programs; and
- Other information for DGS to consider as it refines its implementation of the SDB Program.

That information is organized in the disparity study report in the following manner:

Legal framework and analysis. The study team conducted a detailed analysis of relevant federal regulations, case law, state law, and other information to guide the methodology for the disparity study. The analysis included a review of federal and state requirements concerning the implementation of the SDB Program. The legal framework and analysis for the study is summarized in **Chapter 2** and presented in detail in **Appendix B**.

Marketplace conditions. BBC conducted quantitative analyses of the success of disadvantaged individuals and SDBs in local contracting industries. BBC compared business outcomes for disadvantaged individuals and SDBs to outcomes for majority individuals and majority-owned businesses. In addition, the study team collected qualitative information about potential barriers that SDBs face in Pennsylvania through public meetings and in-depth interviews. Information about marketplace conditions is presented in **Chapter 3, Appendix C, and Appendix D**.

Data collection and analysis. BBC examined data from multiple sources to complete the utilization and availability analyses, including from telephone surveys that the study team conducted with thousands of businesses throughout Pennsylvania. The scope of the study team's data collection and analysis as it pertains to the utilization and availability analyses is presented in **Chapter 4**.

Availability analysis. BBC analyzed the percentage of SDBs that are *ready, willing, and able* to perform on Commonwealth prime contracts and subcontracts. That analysis was based on DGS data and telephone surveys that the study team conducted with thousands of Pennsylvania businesses that work in industries related to the types of contracting dollars that DGS awards. BBC analyzed availability separately for businesses owned by specific disadvantaged groups and for different types of contracts. Results from the availability analysis are presented in **Chapter 5** and **Appendix E**.

Utilization analysis. BBC analyzed dollars that DGS spent with SDBs on contracts that the department awarded during the study period, including information about associated

subcontracts. BBC analyzed utilization separately for businesses owned by specific disadvantaged groups and for different types of contracts. Results from the utilization analysis are presented in **Chapter 6**.

Disparity analysis. BBC examined whether there were any disparities between the utilization of SDBs on contracts that DGS awarded during the study period and the availability of those businesses for that work. BBC analyzed disparity analysis results separately for businesses owned by specific disadvantaged groups and for different types of contracts. The study team also assessed whether any observed disparities were statistically significant. Results from the disparity analysis are presented in **Chapter 7** and **Appendix F**.

Program measures. BBC reviewed the measures that DGS uses to encourage the participation of SDBs and small businesses in Commonwealth contracting as well as measures that other organizations in Pennsylvania use. That information is presented in **Chapter 8**.

Program implementation. BBC reviewed DGS's contracting practices and SDB program measures and provided guidance related to additional program options and changes to current contracting practices. The study team's review and guidance is presented in **Chapter 9**.

C. Study Team Members

The BBC study team was made up of 10 firms that, collectively, possess decades of experience related to conducting disparity studies in connection with state and local business programs.

BBC (prime consultant). BBC is a Denver-based disparity study and economic research firm. BBC had overall responsibility for the study and performed all of the quantitative analyses.

Always Busy Consulting (ABC). ABC is a Black American woman-owned professional services firm based in Pittsburgh, Pennsylvania. ABC conducted in-depth interviews with Pennsylvania businesses as part of the study team's qualitative analyses of marketplace conditions.

Kairos Development Group (Kairos). Kairos is a woman-owned consulting firm based in Philadelphia, Pennsylvania. Kairos conducted in-depth interviews with Pennsylvania businesses as part of the study team's qualitative analyses of marketplace conditions. Kairos is a registered as a small business with DGS's Bureau of Diversity, Inclusion and Small Business Opportunities (BDISBO).

Milligan & Company (Milligan). Milligan is a minority, veteran-owned small business based in Philadelphia, Pennsylvania. Milligan helped collect and compile electronic and hardcopy data related to Commonwealth contracts and procurements. The firm also helped review the Commonwealth's contracting practices, policies, and business programs.

Powell Law. Powell Law is a Black American woman-owned law firm based in Harrisburg, Pennsylvania. Powell Law conducted in-depth interviews with Pennsylvania businesses as part of the study team's qualitative analyses of marketplace conditions. Powell Law is a verified SDB with DGS's Bureau of Diversity, Inclusion and Small Business Opportunities (BDISBO).

Ritzman Law. Ritzman Law is a Black American, veteran, woman-owned general practice law firm based in Harrisburg, Pennsylvania. Ritzman Law reviewed contracting practices and procedures that DGS uses to award contracts; legal issues related to business programs in the state; and various sections of the draft and final disparity study reports. Ritzman Law is a registered as a small business with DGS's Bureau of Diversity, Inclusion and Small Business Opportunities (BDISBO).

National Gay and Lesbian Chamber of Commerce (NGLCC). NGLCC is the largest global nonprofit advocacy organization dedicated to expanding economic opportunities and advancements for LGBT people. NGLCC advised on the study team's research efforts with the LGBT community and helped facilitate community engagement efforts.

Customer Research International (CRI). CRI is a Subcontinent Asian American-owned survey fieldwork firm based in San Marcos, Texas. CRI conducted telephone surveys with thousands of businesses located in Pennsylvania to gather information for the utilization and availability analyses.

Holland & Knight. Holland & Knight is a law firm with offices throughout the country. Holland & Knight conducted the legal analysis that provided the basis for this study.

Keen Independent Research (Keen Independent). Keen Independent is an Arizona-based research firm. Keen Independent helped manage the in-depth interview process as part of the study team's qualitative analyses of marketplace conditions.

CHAPTER 2.

Legal Analysis

CHAPTER 2.

Legal Analysis

The Commonwealth of Pennsylvania's (The Commonwealth's) Department of General Services (DGS) operates the Small Diverse Businesses (SDB) Program to encourage the participation of minority-owned businesses, woman-owned businesses, veteran-owned businesses, service disabled veteran-owned businesses, LGBT-owned businesses, and disabled-owned businesses in Commonwealth contracts and procurements. To do so, DGS relies on a variety of program measures and initiatives, such as establishing minimum participation levels for SDBs on certain construction contracts, evaluation preferences on best value procurements, and reserving certain contracts for small businesses.

Because DGS's use of the above measures includes many minority- and woman-owned businesses, there may be certain legal considerations—including meeting the strict scrutiny standard of constitutional review—the department might consider making in its implementation of the SDB Program. It is instructive to review those standards in case DGS decides that continuing to use such measures is appropriate in the future.

Programs that Rely Only on Race- and Gender-Neutral Measures

Race- and gender-neutral measures are measures that are designed to encourage the participation of small businesses in a government organization's contracting, regardless of the race/ethnicity or gender of businesses' owners. Government organizations that implement contracting programs that rely only on race- and gender-neutral measures to encourage the participation of small businesses regardless of the race/ethnicity or gender of business owners must show a *rational basis* for their programs. Showing a rational basis requires organizations to demonstrate that their contracting programs are rationally related to a legitimate government interest. It is the lowest threshold for evaluating the legality of government contracting programs. When courts review programs that are based on a rational basis, only the most egregious violations lead to programs being deemed unconstitutional.

Programs that Rely on Race- and Gender-Neutral and Race- and Gender-Conscious Measures

The United States Supreme Court has established that contracting programs that include both race- and gender-neutral and *race- and gender-conscious measures* must meet the *strict scrutiny standard of constitutional review*.¹ Race- and gender-conscious measures are measures that are specifically designed to encourage the participation of minority- and woman-owned businesses in government contracting (e.g., participation goals for minority- and woman-owned business on individual contracts). In contrast to a rational basis review, the strict scrutiny standard presents the highest threshold for evaluating the legality of government contracting programs short of

¹ Certain Federal Courts of Appeals apply *intermediate scrutiny* to gender-conscious programs. Appendix B describes intermediate scrutiny in detail.

prohibiting them altogether. The two key United States Supreme Court cases that established the strict scrutiny standard for such programs are:

- The 1989 decision in *City of Richmond v. J.A. Croson Company*, which established the strict scrutiny standard of review for state and local race-conscious programs;² and
- The 1995 decision in *Adarand Constructors, Inc. v. Peña*, which established the strict scrutiny standard of review for federal race-conscious programs.³

Under the strict scrutiny standard, a government organization must show a *compelling governmental interest* to use race- and gender-conscious measures and must ensure that its use of race- and gender-conscious measures is *narrowly tailored*. A program that fails to meet either component is unconstitutional.

Compelling governmental interest. A government organization must demonstrate a *compelling governmental interest* in remedying past identified discrimination in order to implement race- or gender-conscious measures. An organization that uses race- or gender-conscious measures as part of a minority- or woman-owned business program has the initial burden of showing evidence of discrimination—including statistical and anecdotal evidence—that supports the use of such measures. Organizations cannot rely on national statistics of discrimination in an industry to draw conclusions about the prevailing market conditions in their own regions. Rather, they must assess discrimination within their own relevant market areas.⁴ It is not necessary for a government organization itself to have discriminated against minority- or woman-owned businesses for it to act. In *City of Richmond v. J.A. Croson Company*, the Supreme Court found, “if [the organization] could show that it had essentially become a ‘passive participant’ in a system of racial exclusion practiced by elements of the local construction industry ... [i]t could take affirmative steps to dismantle such a system.”

Narrow tailoring. In addition to demonstrating a compelling governmental interest, a government organization must also demonstrate that its use of race- and gender-conscious measures is *narrowly tailored*, including showing:

- The necessity of such measures relative to the efficacy of alternative, race- and gender-neutral measures;
- The degree to which the use of such measures is limited to those groups that actually suffer discrimination in the local marketplace;
- The degree to which the use of such measures is flexible and limited in duration including the availability of waivers and sunset provisions;
- The relationship of any numerical goals to the relevant business marketplace; and

² *City of Richmond v. J.A. Croson Company*, 488 U.S. 469 (1989).

³ *Adarand Constructors, Inc. v. Peña*, 515 U.S. 200 (1995).

⁴ See e.g., *Concrete Works, Inc. v. City and County of Denver* (“Concrete Works I”), 36 F.3d 1513, 1520 (10th Cir. 1994).

- The impact of such measures on the rights of third parties.⁵

Meeting the strict scrutiny standard. Many government organizations have used information from disparity studies as part of determining whether their contracting practices are affected by race- or gender-based discrimination and ensuring that their use of race- and gender-conscious measures is narrowly tailored. Specifically, organizations have assessed evidence of disparities between the participation and availability of minority- and woman-owned businesses for their contracts and procurements. In *City of Richmond v. J.A. Croson Company*, the United States Supreme Court held that, “[w]here there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality’s prime contractors, an inference of discriminatory exclusion could arise.” Lower court decisions since *City of Richmond v. J.A. Croson Company* have held that a compelling governmental interest must be established for each racial/ethnic and gender group to which race- and gender-conscious measures apply.

Many programs have failed to meet the strict scrutiny standard, because they have failed to meet the compelling governmental interest requirement, the narrow tailoring requirement, or both. However, many other programs have met the strict scrutiny standard and courts have deemed them to be constitutional. Appendix B provides detailed discussions of the case law related to those programs.

⁵ See, e.g., *AGC, SDC v. Caltrans*, 713 F.3d at 1198-1199; *Rothe*, 545 F.3d at 1036; *Western States Paving*, 407 F.3d at 993-995; *Sherbrooke Turf*, 345 F.3d at 971; *Adarand VII*, 228 F.3d at 1181; *Eng’g Contractors Ass’n*, 122 F.3d at 927 (internal quotations and citations omitted).

CHAPTER 3.

Marketplace Conditions

CHAPTER 3.

Marketplace Conditions

Historically, there have been myriad legal, economic, and social obstacles that have impeded minorities and women from acquiring the human and financial capital necessary to start and operate successful businesses. Barriers such as slavery, racial oppression, segregation, race-based displacement, and labor market discrimination have produced substantial disparities for minorities and women, the effects of which are still apparent today. Those barriers have limited opportunities for minorities in terms of both education and workplace experience.^{1,2,3,4} Similarly, many women have been restricted to either being homemakers or taking gender-specific jobs with low pay and little chance for advancement.⁵

In the 19th and early 20th centuries, minorities in Pennsylvania faced barriers that were similar to those that minorities faced nationwide. Pennsylvania's Black American population grew considerably, but discriminatory treatment was nonetheless common for minorities in Pennsylvania. Black Americans were forced to live in racially-segregated neighborhoods, send their children to segregated schools, and use separate facilities at area restaurants and cultural institutions. Disparate treatment also extended into the labor market. Although opportunities in the workplace attracted people to Pennsylvania, unemployment rates for Black Americans exceeded those for Non-Hispanic Whites. Black Americans were concentrated in low-wage work in domestic services and general labor with few opportunities for advancement.^{6,7}

In the middle of the 20th century, many legal and workplace reforms opened up new opportunities for minorities and women nationwide. *Brown v. Board of Education*, *The Equal Pay Act*, *The Civil Rights Act*, and *The Women's Educational Equity Act* outlawed many forms of race- and gender-based discrimination. Workplaces adopted formalized personnel policies and implemented programs to diversify their staffs.⁸ Those reforms increased diversity in workplaces and reduced educational and employment disparities for minorities and women^{9, 10, 11, 12} However, despite those improvements, minorities and women continue to face barriers—such as incarceration, residential segregation, and disproportionate family responsibilities—that have made it more difficult to acquire the human and financial capital necessary to start and operate businesses successfully.^{13, 14, 15}

Federal Courts and the United States Congress have considered barriers that minorities; women; and minority- and woman-owned businesses face in a local marketplace as evidence for the existence of race- and gender-based discrimination in that marketplace.^{16, 17, 18} The United States Supreme Court and other federal courts have held that analyses of conditions in a local marketplace for minorities; women; and minority- and woman-owned businesses are instructive in determining whether agencies' implementations of minority- and woman-owned business programs are appropriate and justified. Those analyses help agencies determine whether they are *passively participating* in any race- or gender-based discrimination that makes it more difficult for minority- and woman-owned businesses to successfully compete for their contracts. Passive participation in discrimination means that agencies unintentionally perpetuate race- or

gender-based discrimination simply by operating within discriminatory marketplaces. Many courts have held that passive participation in any race- or gender-based discrimination establishes a *compelling governmental interest* for agencies to take remedial action to address that discrimination.^{19, 20, 21}

The study team conducted quantitative and qualitative analyses to assess whether minorities; women; and minority- and woman-owned businesses face any barriers in the Pennsylvania construction; architecture and engineering; professional services; and goods and services industries. The study team also examined the potential effects that any such barriers have on the formation and success of minority- and woman-owned businesses and on their participation in and availability for Commonwealth contracts that the Department of General Services (DGS) awards. Where data were available, BBC also assessed those affects for people with disabilities, veterans, and veteran-owned businesses.²² The study team examined local marketplace conditions primarily in four areas:

- **Human capital**, to assess whether minorities, women, people with disabilities, and veterans face barriers in education, employment, or gaining managerial experience;
- **Financial capital**, to assess whether minorities, women, people with disabilities, and veterans face barriers in wages, homeownership, personal wealth, or access to financing;
- **Business ownership** to assess whether minorities, women, veterans, and people with disabilities own businesses at rates that are comparable to that of non-Hispanic white men; non-veterans; and all others; and
- **Success of businesses** to assess whether minority-, woman-, and veteran-owned businesses have outcomes that are similar to those of businesses owned by non-Hispanic white men, people without disabilities, and non-veterans.²³

The information in Chapter 3 comes from existing research in the area of race- and gender-based discrimination as well as from primary research that the study team conducted of current marketplace conditions. Data sources include the U.S. Census Bureau, U.S. Consumer Financial Protection Bureau, the U.S. Small Business Administration and the study team’s in-depth interviews with business owners in the PA marketplace.²⁴ Additional quantitative and qualitative analyses of marketplace conditions are presented in Appendix C and Appendix D, respectively.

A. Human Capital

Human capital is the collection of personal knowledge, behavior, experience, and characteristics that make up an individual’s ability to perform and succeed in particular labor markets. Human capital factors such as education, business experience, and managerial experience have been shown to be related to business success.^{25, 26, 27, 28} Any race- or gender-based barriers in those areas may make it more difficult for minorities and women to work in relevant industries and prevent some of them from starting and operating businesses successfully.

Education. Barriers associated with educational attainment may preclude entry or advancement in certain industries, because many occupations require at least a high school diploma, and some occupations—such as occupations in professional services—require at least

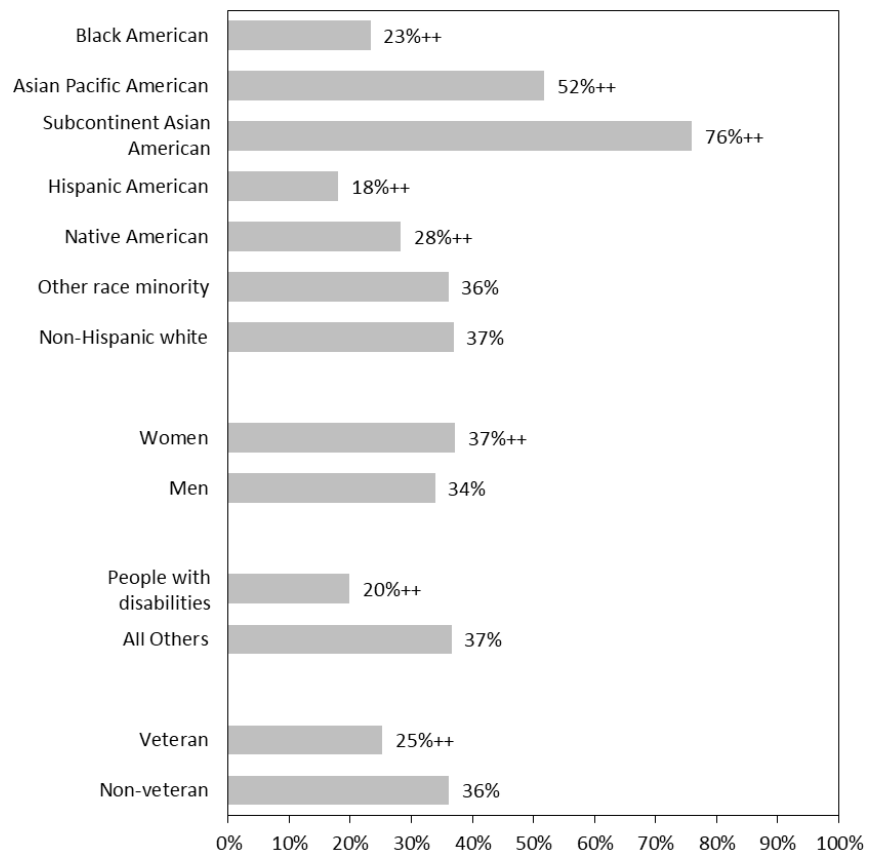
a four-year college degree. In addition, educational attainment is a strong predictor of both income and personal wealth, which are both shown to be related to business formation and success.^{29, 30} Nationally, minorities lag behind non-Hispanic whites in terms of both educational attainment and the quality of education that they receive.^{31, 32} Minorities are far more likely than non-Hispanic whites to attend schools that do not provide access to core classes in science and math.³³ In addition, Black Americans are more than three times more likely than non-Hispanic whites to be expelled or suspended from high school.³⁴ For those and other reasons, minorities are far less likely than non-Hispanic whites to attend college; enroll at highly- or moderately selective four-year institutions; and earn college degrees.³⁵

Educational outcomes for minorities in Pennsylvania are similar to those for minorities nationwide. The study team’s analyses of the Pennsylvania labor force indicate that certain minority groups are far less likely than non-Hispanic whites to earn a college degree. Figure 3-1 presents the percentage of Pennsylvania workers that have earned a four-year college degree by racial/ethnic and gender group, as well as by disability and veteran status. As shown in Figure 3-1, Black American, Hispanic American, and Native American workers in Pennsylvania are substantially less likely than non-Hispanic white workers to have four-year college degrees. In addition, people with disabilities and veterans are less likely than non-disabled people and non-veterans, respectively, to have four-year college degrees.

Figure 3-1.
Percentage of all workers 25 and older with at least a four-year degree, Pennsylvania, 2012-2016

Note:
 ++ Denotes that the difference in proportions between the minority group and non-Hispanic whites (or between women and men; veterans and non-veterans; or persons with disabilities and non-disabled persons) is statistically significant at the 95% confidence level.

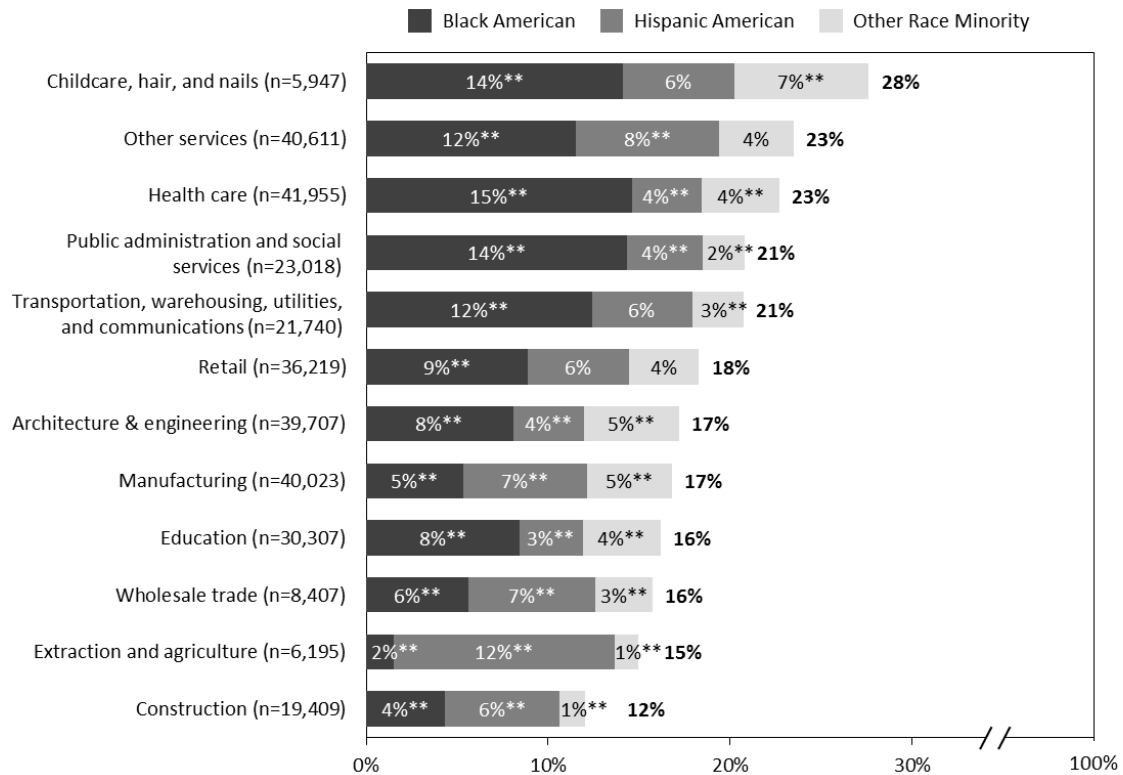
Source:
 BBC Research & Consulting from 2012-2016 ACS 5% Public Use Microdata sample. The raw data extract was obtained through the IPUMS program of the MN Population Center:
<http://usa.ipums.org/usa/>.



Employment and management experience. An important precursor to business ownership and success is acquiring relevant work and management experience. Any barriers that limit minorities, women, and other disadvantaged groups from acquiring that experience could prevent them from starting and operating related businesses in the future.

Employment. On a national level, prior industry experience has been shown to be an important indicator for business ownership and success. However, minorities and women are often unable to acquire relevant work experience. Minorities and women are sometimes discriminated against in hiring decisions, which impedes their entry into the labor market.^{36, 37, 38} When employed, minorities and women are often relegated to peripheral positions in the labor market and to industries that exhibit already high concentrations of minorities or women.^{39, 40, 41, 42, 43} In addition, minorities are incarcerated at a higher rate than non-Hispanic whites in Pennsylvania and nationwide, which contributes to a number of labor difficulties including difficulties finding jobs and relatively slow wage growth.^{44, 45, 46, 47} Figure 3-2 presents the representation of minority workers in various Pennsylvania industries. As shown in Figure 3-2, the industries with the highest representations of minority workers are childcare, hair, and nails; other services; and healthcare. The industries with the lowest representations of minority workers are wholesale trade; extraction and agriculture; and construction.

Figure 3-2.
Percent representation of minorities in various industries in the Pennsylvania, 2012-2016



Note: *,** Denotes that the difference in proportions between minority workers in the specified industry and all industries is statistically significant at the 90% and 95% confidence level, respectively.

The representation of minorities among all Pennsylvania workers is 10% for Black Americans, 6% for Hispanic Americans, 4% for other race minorities, and 20% for all minorities considered together.

Other race minority" includes Subcontinent Asian Americans, Asian Pacific Americans, Native Americans, and other races.

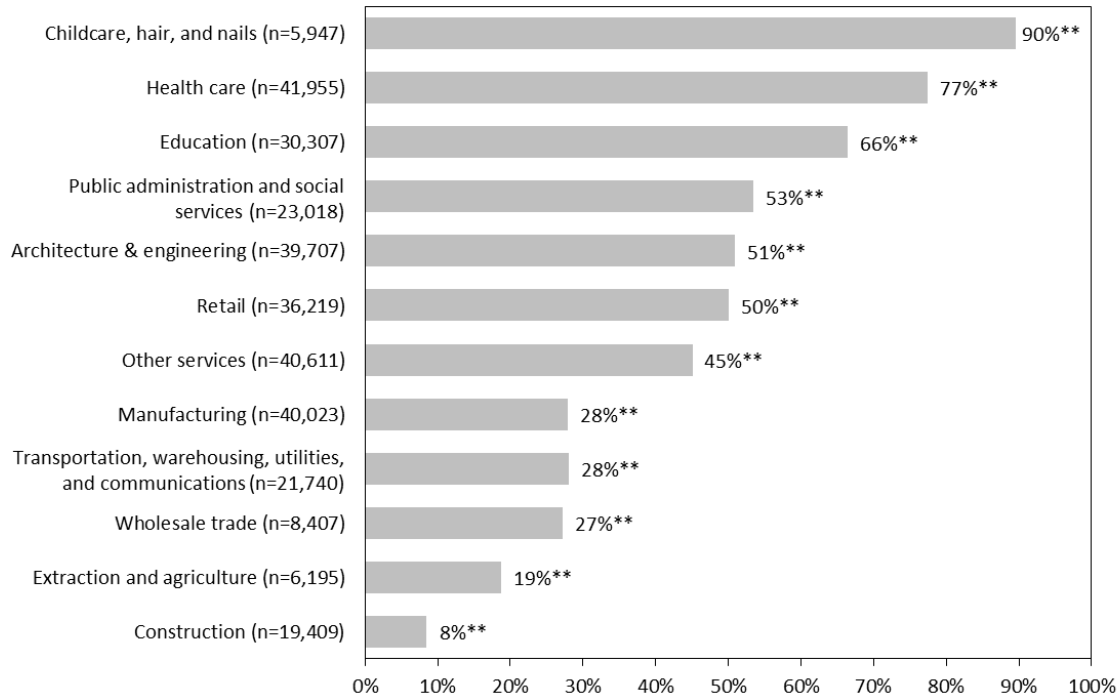
Workers in the finance, insurance, real estate, legal services, accounting, advertising, architecture, management, scientific research, and veterinary services industries were combined to one category of Architecture & Engineering; Workers in the rental and leasing, travel, investigation, waste remediation, arts, entertainment, recreation, accommodations, food services, and select other services were combined into one category of other services; Workers in child day care services, barber shops, beauty salons, nail salons, and other personal services were combined into one category of childcare, hair, and nails.

Source: BBC Research & Consulting from 2012-2016 ACS 5% Public Use Microdata sample. The raw data extract was obtained through the IPUMS program of the MN Population Center: <http://usa.ipums.org/usa/>.

Figure 3-3 presents the representation of woman workers in various Pennsylvania industries. The industries with the highest representations of women workers are childcare, hair, and nails; healthcare; and education. The Pennsylvania industries with the lowest representations of women workers are wholesale trade; extraction and agriculture; and construction.

Figure 3-3.

Percent representation of women in various industries in Pennsylvania, 2012-2016



Note: *, ** Denotes that the difference in proportions between women workers in the specified industry and all industries is statistically significant at the 90% and 95% confidence level, respectively.

The representation of women among all Pennsylvania workers is 48%.

Workers in the finance, insurance, real estate, legal services, accounting, advertising, architecture, management, scientific research, and veterinary services industries were combined to one category of Architecture & Engineering; Workers in the rental and leasing, travel, investigation, waste remediation, arts, entertainment, recreation, accommodations, food services, and select other services were combined into one category of other services; Workers in child day care services, barber shops, beauty salons, nail salons, and other personal services were combined into one category of childcare, hair, and nails.

Source: BBC Research & Consulting from 2012-2016 ACS 5% Public Use Microdata sample. The raw data extract was obtained through the IPUMS program of the MN Population Center: <http://usa.ipums.org/usa/>.

Management experience. Managerial experience is an essential predictor of business success. However, race-and gender-based discrimination remains a persistent obstacle to greater diversity in management positions.^{48, 49, 50} Nationally, minorities and women are far less likely than non-Hispanic white men to work in management positions.^{51, 52} Similar outcomes appear to exist for minorities and women in Pennsylvania. The study team examined the concentration of minorities, women, and other disadvantaged individuals in management positions in the Pennsylvania construction; professional services; architecture and engineering; and goods and general services industries.

Figure 3-4.
Percentage of workers who worked as a manager in each study-related industry, Pennsylvania, 2012-2016

Pennsylvania	Construction	Architecture & Engineering	Professional Services	Goods & Services
Race/ethnicity				
Black American	5.0 % **	1.4 % *	1.5 % **	1.9 % **
Asian Pacific American	13.5 %	2.9 %	2.5 % **	3.9 %
Subcontinent Asian American	4.0 % †	3.6 %	9.1 % **	5.3 %
Hispanic American	3.5 % **	2.8 %	2.1 % **	1.9 % **
Native American	4.7 %	2.3 %	1.6 %	3.5 %
Other Race Minority	0.0 % †	0.0 % †	0.0 %	0.0 %
Non-Hispanic white	7.4 %	4.5 %	6.0 %	3.8 %
Gender				
Women	5.5 % **	2.8 % **	4.1 % **	2.8 % **
Men	7.2 %	5.0 %	6.6 %	4.0 %
Disability Status				
People with disabilities	5.4 % **	4.7 %	2.2 % **	1.6 % **
All Others	7.2 %	4.2 %	5.5 %	3.7 %
Veteran Status				
Veteran	7.7 %	4.2 %	5.7 %	2.5 % **
Non-veteran	7.0 %	4.2 %	5.2 %	3.6 %
All individuals	7.1 %	4.2 %	5.3 %	3.5 %

Note: *, ** Denotes that the difference in proportions between the minority group and non-Hispanic whites (or between women and men) is statistically significant at the 90% and 95% confidence level, respectively.

† Denotes that statistically significant differences in proportions were not reported due to small sample sizes.

Source: BBC Research & Consulting from 2012-2016 ACS 5% Public Use Microdata sample. The raw data extract was obtained through the IPUMS program of the MN Population Center: <http://usa.ipums.org/usa/>.

As shown in Figure 3-4:

- Compared to non-Hispanic whites, smaller percentages of Black Americans and Hispanic Americans work as managers in the Pennsylvania construction industry.
- Compared to non-Hispanic whites, a smaller percentage of Black Americans work as managers in the Pennsylvania architecture and engineering industry.
- Compared to non-Hispanic whites, smaller percentages of Black Americans, Asian Pacific Americans, Subcontinent Asian Americans, and Hispanic Americans work as managers in the Pennsylvania professional services industry.
- Compared to non-Hispanic whites, smaller percentages of Black Americans and Hispanic Americans work as managers in the Pennsylvania goods and services industry.
- Compared to men, a smaller percentage of women work as managers in the Pennsylvania construction; architecture and engineering; professional services; and goods and services industries.
- Compared to all others, a smaller percentage of people with disabilities work as managers in the Pennsylvania construction; professional services; and goods and services industries.

- Compared to non-veterans, a smaller percentage of veterans work as managers in the Pennsylvania goods and services industries.

Intergenerational business experience. Having a family member who owns a business and works in that business is an important predictor of business ownership and business success. Such experiences help entrepreneurs gain access to important opportunity networks; obtain knowledge of best practices and business etiquette; and receive hands-on experience in helping to run businesses. However, at least nationally, minorities have substantially fewer family members who own businesses and both minorities and women have fewer opportunities to be involved with those businesses.^{53, 54} That lack of experience makes it more difficult for minorities and women to subsequently start their own businesses and operate them successfully.

B. Financial Capital

In addition to human capital, financial capital has been shown to be an important indicator of business formation and success.^{55, 56, 57} Individuals can acquire financial capital through many sources including employment wages, personal wealth, homeownership, and financing. If race- or gender-based discrimination exists in those capital markets, minorities and women may have difficulty acquiring the capital necessary to start, operate, or expand businesses.

Wages and income. Wage and income gaps between minorities and non-Hispanic whites and between women and men are well-documented throughout the country, even when researchers have statistically controlled for various factors that are ostensibly unrelated to race and gender.^{58, 59, 60} For example, national income data indicate that, on average, Black Americans and Hispanic Americans have household incomes that are less than two-thirds those of non-Hispanic whites.^{61, 62} Women have also faced consistent wage and income gaps relative to men. Nationally, the median hourly wage of women is still only 84 percent the median hourly wage of men.⁶³ Such disparities make it difficult for minorities and women to use employment wages as a source of business capital.

BBC observed wage gaps in Pennsylvania consistent with gaps that researchers have observed nationally. Figure 3-5 presents mean annual wages for Pennsylvania workers by race/ethnicity; gender; veteran status; and disability status. As shown in Figure 3-5:

- Black Americans, Subcontinent Asian Americans, Hispanic Americans, Native Americans, and other race minorities earn substantially less than non-Hispanic whites.
- Women earn substantially less than men.
- People with disabilities earn substantially less than all others.
- Veterans earn more than non-veterans.

BBC also conducted regression analyses to assess whether wage disparities for minorities and women exist even after accounting for various race- and gender-neutral factors such as age, education, and family status. Those analyses indicated that being Black American, Asian Pacific American, Subcontinent Asian American, Hispanic American, or Native American was associated with substantially lower earnings than being non-Hispanic white, even after accounting for various race-neutral and gender-neutral factors. Similarly, being a woman was associated with

lower earnings than being a man. In addition, being disabled was associated with lower earnings than not being disabled (for details, see Figure C-10 in Appendix C).

Figure 3-5.
Mean annual wages,
Pennsylvania, 2012-2016

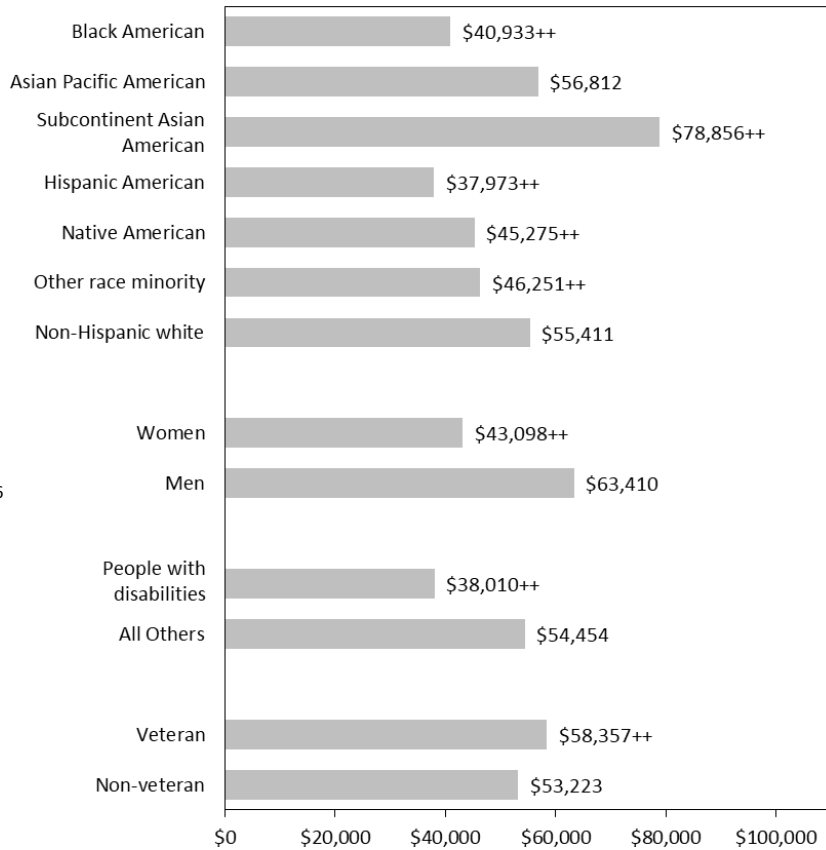
Note:

The sample universe is all non-institutionalized, employed individuals aged 25-64 that are not in school, the military, or self-employed.

++ Denotes statistically significant differences from non-Hispanic whites (for minority groups), from men (for women), from all others (for People with disabilities), or from Non-veterans (for Veterans) at the 95% confidence level.

Source:

BBC Research & Consulting from 2012-2016 ACS 5% Public Use Microdata sample. The raw data extract was obtained through the IPUMS program of the MN Population Center: <http://usa.ipums.org/usa/>.



Personal wealth. Another important potential source of business capital is personal wealth. As with wages and income, there are substantial disparities between minorities and non-Hispanic whites and between women and men in terms of personal wealth.^{64, 65} For example, in 2010, Black Americans and Hispanic Americans across the country exhibited average household net worth that was 5 percent and 1 percent that of non-Hispanic whites, respectively. In Pennsylvania and nationwide, approximately one-quarter of Black Americans and Hispanic Americans are living in poverty, about double the rate for non-Hispanic whites.⁶⁶ Wealth inequalities also exist for women relative to men. For example, nationally, the median wealth of non-married women is approximately one-third that of non-married men.⁶⁷

Homeownership. Homeownership and home equity have been shown to be key sources of business capital.^{68, 69} However, minorities appear to face substantial barriers nationwide in owning homes. For example, Black Americans and Hispanic Americans own homes at less than two-thirds the rate of non-Hispanic whites.⁷⁰ Discrimination is at least partly to blame for those disparities. Research indicates that minorities continue to be given less information on prospective homes and have their purchase offers rejected because of their race.^{71, 72} Minorities who own homes tend to own homes that are worth substantially less than those of non-Hispanic whites and also tend to accrue substantially less equity.^{73, 74} Differences in home values and equity between minorities and non-Hispanic whites can be attributed—at least, in part—to the

depressed property values that tend to exist in neighborhoods with a higher percentage of minority homeowners.^{75, 76}

Minorities appear to face homeownership barriers in Pennsylvania that are similar to those observed nationally. BBC examined homeownership rates in Pennsylvania for relevant racial/ethnic groups. As shown in Figure 3-6, racial minority groups in Pennsylvania exhibit homeownership rates that are significantly lower than that of non-Hispanic whites.

Figure 3-6.
Home Ownership Rates, Pennsylvania, 2012-2016

Note:
The sample universe is all households.
++ Denotes statistically significant differences from non-Hispanic whites at the 95% confidence level.

Source:
BBC Research & Consulting from 2012-2016 ACS 5% Public Use Microdata sample. The raw data extract was obtained through the IPUMS program of the MN Population Center: <http://usa.ipums.org/usa/>.

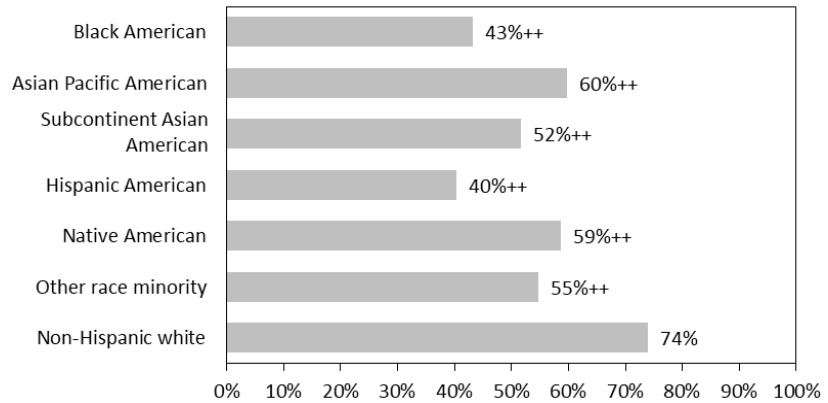
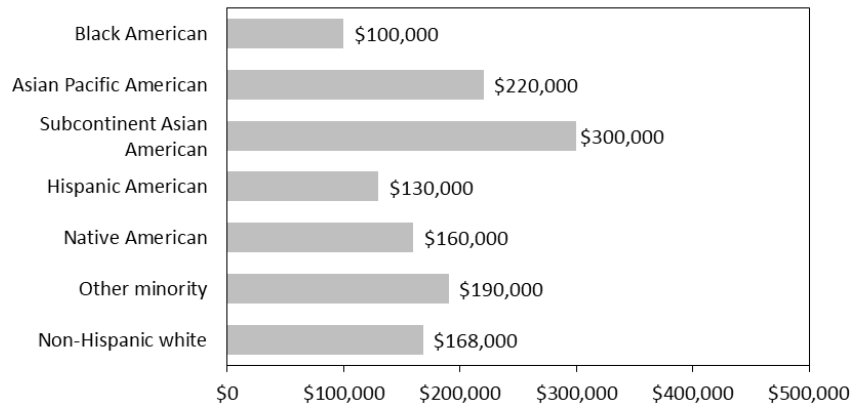


Figure 3-7 presents median home values among homeowners of different racial/ethnic groups in Pennsylvania. Consistent with national trends, Black Americans and Hispanic Americans own homes that, on average, are worth substantially less than those of non-Hispanic whites.

Figure 3-7.
Median home values, Pennsylvania, 2012-2016

Note:
The sample universe is all owner-occupied housing units.

Source:
BBC Research & Consulting from 2012-2016 ACS 5% Public Use Microdata sample. The raw data extract was obtained through the IPUMS program of the MN Population Center: <http://usa.ipums.org/usa/>.



Access to financing. Minorities and women face many barriers in trying to access credit and financing, both for home purchases and for business capital. Researchers have often attributed those barriers to various forms of race- and gender-based discrimination that exist in credit markets.^{77, 78, 79, 80, 81, 82} The study team summarizes results related to difficulties that minorities, women, minority-owned businesses, and woman-owned businesses face in the home credit and business credit markets.

Home credit. Minorities and women continue to face barriers when trying to access credit to purchase homes. Examples of such barriers include discriminatory treatment of minorities and women during the pre-application phase and disproportionate targeting of minority and women

borrowers for subprime home loans.^{83, 84, 85, 86, 87} Race- and gender-based barriers in home credit markets, as well as the recent foreclosure crisis, have led to decreases in homeownership among minorities and women and have eroded their levels of personal wealth.^{88, 89, 90, 91}

To examine how minorities fare in the home credit market relative to non-Hispanic whites, the study team analyzed home loan denial rates for high-income households by race/ethnicity. The study team analyzed those data for Pennsylvania and the United States as a whole. As shown in Figure 3-8, Black Americans, Asian Americans, Hispanic Americans, and Native Americans exhibit higher home loan denial rates than non-Hispanic whites when considering the United States and Pennsylvania in particular. In addition, the study team’s analyses indicate that certain minority groups in Pennsylvania are more likely than non-Hispanic whites to receive subprime mortgages (for details, see Figure C-15 in Appendix C).

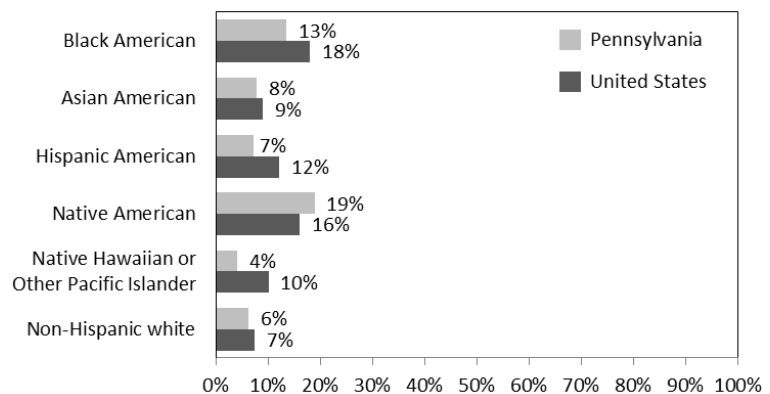
Figure 3-8.
Denial rates of conventional purchase loans for high-income households, Pennsylvania, 2016

Note:

High-income borrowers are those households with 120% or more of the HUD area median family income (MFI).

Source:

FFIEC HMDA data 2007 and 2016. The raw data extract was obtained from the Consumer Financial Protection Bureau HMDA data tool: <http://www.consumerfinance.gov/hmda/explore>.



Business credit. Minority- and woman-owned businesses face substantial difficulties accessing business credit. For example, during loan pre-application meetings, minority-owned businesses are given less information about loan products, are subjected to more credit information requests, and are offered less support than their non-Hispanic white counterparts.⁹² Researchers have shown that Black American-owned businesses and Hispanic American-owned businesses are more likely to forego submitting business loan applications and are more likely to be denied business credit when they seek loans, even after accounting for various race- and gender-neutral factors.^{93, 94, 95} In addition, women are less likely to apply for credit and receive loans of less value when they do.^{96, 97} Without equal access to business capital, minority- and woman-owned businesses must operate with less capital than businesses owned by non-Hispanic white men and must rely more on personal capital.^{98, 99, 100, 101}

C. Business Ownership

Nationally, there has been substantial growth in the number of minority- and woman-owned businesses in recent years. For example, from 2007 to 2012, the number of woman-owned businesses increased by 27 percent, the number of Black American-owned businesses increased by 35 percent, and the number of Hispanic American-owned businesses increased by 46 percent.¹⁰² Despite the progress that minorities and women have made with regard to business ownership, important barriers in starting and operating businesses remain. Black Americans, Hispanic Americans, and women are still less likely to start businesses than non-Hispanic white

men.^{103, 104, 105, 106} In addition, although rates of business ownership have increased among minorities and women, they have been unable to penetrate all industries evenly. Minorities and women disproportionately own businesses in industries that require less human and financial capital to be successful and that already include large concentrations of individuals from disadvantaged groups.^{107, 108, 109} The study team examined rates of business ownership in the Pennsylvania construction; architecture and engineering; professional services; and goods and services industries by race/ethnicity, gender, disability status, and veteran status.

Figure 3-9.
Business ownership rates in study-related industries, Pennsylvania, 2012-2016

Pennsylvania	Construction	Architecture & Engineering	Professional Services	Goods & Services
Race/ethnicity				
Black American	21.5 %	10.4 % **	7.0 % **	1.5 % **
Asian Pacific American	26.8 %	18.0 %	14.3 %	13.8 % **
Subcontinent Asian American	24.8 % †	5.9 % **	5.0 % **	16.7 % **
Hispanic American	16.2 % **	5.8 % **	9.9 % **	2.7 % **
Native American	20.6 %	31.1 %	23.4 %	2.2 % **
Other Race Minority	15.0 % †	0.0 % †	27.3 %	6.3 %
Non-Hispanic white	24.2 %	15.9 %	17.6 %	4.5 %
Gender				
Women	12.6 % **	12.7 % **	12.3 % **	2.8 % **
Men	24.5 %	16.6 %	19.2 %	5.3 %
Disability Status				
People with disabilities	24.1 %	25.2 % **	16.5 %	4.5 %
All Others	23.5 %	14.8 %	15.5 %	4.4 %
Veteran Status				
Veteran	24.9 %	23.6 % **	25.5 % **	5.5 % *
Non-veteran	23.4 %	14.6 %	15.1 %	4.3 %
All individuals	23.5 %	15.3 %	15.5 %	4.4 %

Note: *, ** Denotes that the difference in proportions between the minority group and non-Hispanic whites (or between women and men; people with disabilities and all others; or veterans and non-veterans) is statistically significant at the 95% confidence level.

† Denotes that statistically significant differences in proportions were not reported due to small sample sizes.

Source: BBC Research & Consulting from 2012-2016 ACS 5% Public Use Microdata samples. The raw data extract was obtained through the IPUMS program of the MN Population Center: <http://usa.ipums.org/usa/>.

As shown in Figure 3-9:

- Hispanic Americans exhibit lower rates of business ownership than non-Hispanic whites in the Pennsylvania construction industry.
- Black Americans, Subcontinent Asians Americans, and Hispanic Americans exhibit lower rates of business ownership than non-Hispanic whites in the Pennsylvania architecture and engineering industry.
- Black Americans, Subcontinent Asian Americans, and Hispanic Americans exhibit lower rates of business ownership than non-Hispanic whites in the Pennsylvania professional services industry.

- Black Americans, Asian Pacific Americans, Subcontinent Asian Americans, Hispanic Americans, and Native Americans exhibit lower rates of business ownership than non-Hispanic whites in the Pennsylvania goods and services industry.
- Women exhibit lower rates of business ownership than men in the Pennsylvania construction; architecture and engineering; professional services; and goods and services industries.

BBC also conducted regression analyses to determine whether differences in business ownership rates exist between minorities and non-Hispanic whites and between women and men even after statistically controlling for various factors, such as income, education, and familial status. The study team conducted similar analyses to determine whether differences in business ownership rates exist between people with disabilities and all others and between veterans and non-veterans. The study team conducted those analyses separately for each relevant industry. Figure 3-10 presents the factors that were significantly and independently related to business ownership for each relevant industry.

Figure 3-10.
Statistically significant relationships between race/ethnicity, gender, veteran status, and disability status and business ownership in study-related industries in Pennsylvania, 2012-2016

Source:
 BBC Research & Consulting from 2012-2016 ACS 5% Public Use Microdata samples. The raw data extract was obtained through the IPUMS program of the MN Population Center: <http://usa.ipums.org/usa/>.

Industry and Group	Coefficient
Construction	
Hispanic American	-0.1616
Military Experience	-0.1329
Women	-0.5592
Architecture and Engineering	
Disabled	-0.1797
Hispanic American	-0.4077
Subcontinent Asian American	-0.5469
Women	-0.1134
Professional Services	
Black American	-0.2535
Other minority group	-0.6392
Subcontinent Asian American	-0.6645
Women	-0.2406
Goods and Services	
Black American	-0.2609
Asian Pacific American	-0.6537
Subcontinent Asian American	-0.8044
Military Experience	-0.2095
Women	-0.2843

As shown in Figure 3-10, even after accounting for various relevant factors:

- Being Hispanic American was associated with lower rates of business ownership in the Pennsylvania construction and architecture and engineering industries.
- Being Subcontinent Asian American was associated with lower rates of business ownership in the Pennsylvania architecture and engineering; professional services; and goods and services industries.

- Being Asian Pacific American was associated with lower rates of business ownership in the Pennsylvania goods and services industry.
- Being Black American was associated with lower rates of business ownership in the Pennsylvania professional services industry.
- Having military experience was associated with lower rates of business ownership in the Pennsylvania construction and goods and services industries.
- Having a disability was associated with lower rates of business ownership in the Pennsylvania architecture and engineering industry.
- Being a woman was associated with lower rates of business ownership in Pennsylvania in all study-related industries.

Thus, disparities in business ownership rates between minorities and non-Hispanic whites; women and men; people with disabilities and all others; and veterans and non-veterans are not completely explained by differences in relevant factors such as income, education, and familial status. Disparities in business ownership rates exist for several groups in all relevant industries even after accounting for such factors.

D. Business Success

There is a great deal of research indicating that, nationally, minority- and woman-owned businesses fare worse than businesses owned by non-Hispanic white men. For example, Black Americans, Native Americans, Hispanic Americans, and women exhibit higher rates of moving from business ownership to unemployment than non-Hispanic whites and men. In addition, minority- and woman-owned businesses have been shown to be less successful than businesses owned by non-Hispanic whites and men using a number of different indicators such as profits, closure rates, and business size.^{110, 111, 112} The study team examined data on business closure, business receipts, and business owner earnings to further explore the success of minority- and woman-owned businesses in Pennsylvania.

Business closure. The study team examined the rates of closure among Pennsylvania businesses by the race/ethnicity and gender of the owners. Figure 3-11 presents those results. As shown in Figure 3-11, Black American-owned businesses, Asian American-owned businesses, and Hispanic American-owned businesses in Pennsylvania appear to close at higher rates than non-Hispanic white-owned businesses. In addition, woman-owned businesses in Pennsylvania appear to close at higher rates than businesses owned by men. Increased rates of business closure among minority- and woman-owned businesses may have important effects on their availability for government contracts in Pennsylvania.

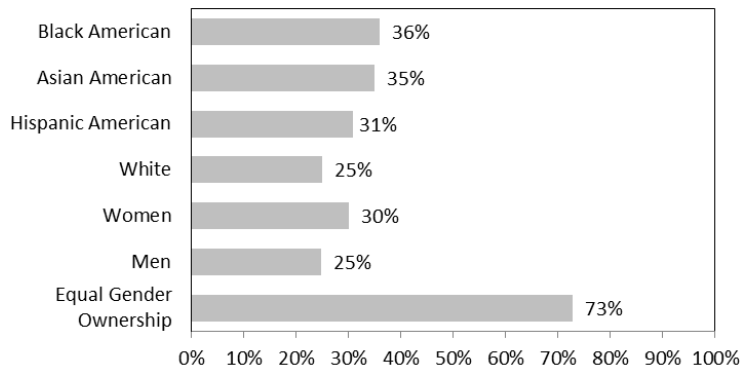
Figure 3-11.
Rates of business closure,
Pennsylvania, 2002-2006

Note:

Data include only non-publicly held businesses.

Equal Gender Ownership refers to those businesses for which ownership is split evenly between women and men.

Statistical significance of these results cannot be determined, because sample sizes were not reported.



Source:

Lowrey, Ying. 2010. "Race/Ethnicity and Establishment Dynamics, 2002-2006." U.S. Small Business Administration Office of Advocacy. Washington D.C..

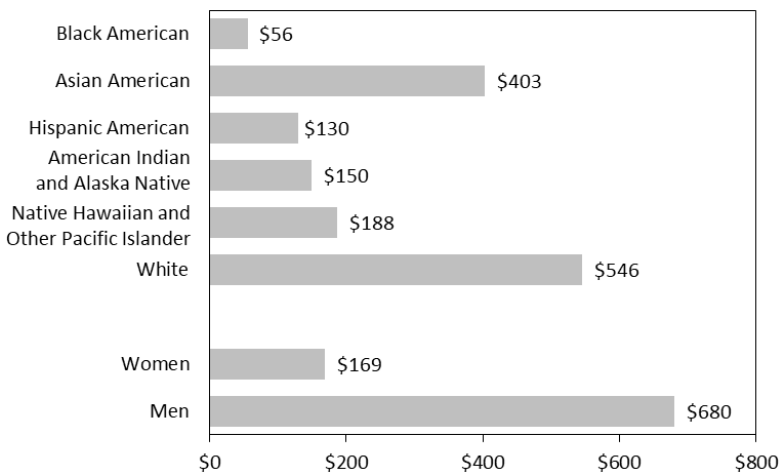
Lowrey, Ying. 2014. "Gender and Establishment Dynamics, 2002-2006." U.S. Small Business Administration Office of Advocacy. Washington D.C.

Business receipts. BBC also examined data on business receipts to assess whether minority- and woman-owned businesses in Pennsylvania earn as much as businesses owned by non-Hispanic whites or business owned by men, respectively. Figure 3-12 shows mean annual receipts for Pennsylvania business by the race/ethnicity and gender of owners. Those results indicate that, in 2012, all relevant minority groups in Pennsylvania showed lower mean annual business receipts than businesses owned by non-Hispanic whites. In addition, woman-owned businesses in Pennsylvania showed lower mean annual business receipts than businesses owned by men.

Figure 3-12.
Mean annual business
receipts (in thousands),
Pennsylvania, 2012

Note:

Includes employer and non-employer firms. Does not include publicly-traded companies or other firms not classifiable by race/ethnicity and gender.



Source:

2012 Survey of Business Owners, part of the U.S. Census Bureau's 2012 Economic Census.

Business owner earnings. The study team analyzed business owner earnings to assess whether minorities and women in Pennsylvania earn as much from the businesses that they own as non-Hispanic whites and men do. As shown in Figure 3-13, Black Americans, Hispanic Americans, and Native Americans earned less on average from their businesses than non-Hispanic whites earned from their businesses. In addition, women in Pennsylvania earned less from their businesses than men earned from their businesses. BBC also assessed whether people with disabilities earn as much from their businesses as all others and whether veterans earn as much from their businesses as non-veterans. As shown in Figure 3-13, people with disabilities

earned less from their businesses than all others and veterans actually earned more from their businesses than non-veterans. BBC also conducted regression analyses to determine whether earnings disparities in Pennsylvania exist even after statistically controlling for various relevant factors such as age, education, and family status. The results of those analyses indicated that being a Black American woman, or having a disability was associated with substantially lower business owner earnings in Pennsylvania (for details, see Figure C-32 in Appendix C).

Figure 3-13.
Mean annual
business owner
earnings,
Pennsylvania, 2012-
2016

Note:

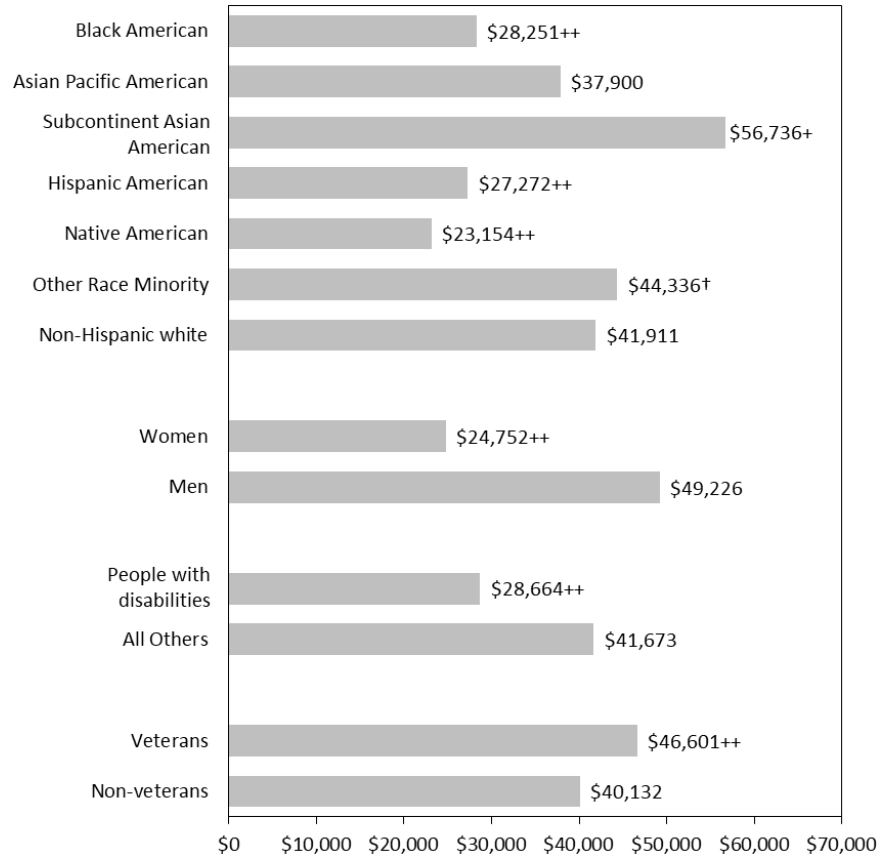
The sample universe is business owners age 16 and over who reported positive earnings. All amounts in 2016 dollars.

++ Denotes statistically significant differences from non-Hispanic whites (for minority groups) or from men (for women) at the 95% confidence level.

† Denotes that statistically significant differences were not reported due to small sample sizes.

Source:

BBC Research & Consulting from 2012-2016 ACS 5% Public Use Microdata sample. The raw data extract was obtained through the IPUMS program of the MN Population Center:
<http://usa.ipums.org/usa/>.



E. Summary

BBC’s analyses of marketplace conditions indicate that minorities, women, people with disabilities, veterans, minority-owned businesses, woman-owned businesses, disabled-owned businesses,¹¹³ and veteran-owned businesses face substantial barriers nationwide and in Pennsylvania. Existing research, as well as primary research that the study team conducted, indicate that disparities exist in terms of acquiring human capital, accruing financial capital, owning businesses, and operating successful businesses. In many cases, there is evidence that those disparities exist even after accounting for various relevant factors such as age, income, education, and familial status. There is also evidence that many disparities are due—at least, in part—to discrimination.

Barriers in the marketplace likely have important effects on the ability of minorities, women, people with disabilities, and veterans to start businesses in relevant Pennsylvania industries—construction; architecture and engineering; professional services; and goods and services—and operate those businesses successfully. Any difficulties that those groups face in starting and

operating businesses may reduce their availability for government agency work and may also reduce the degree to which they are able to successfully compete for government contracts. In addition, the existence of barriers in the Pennsylvania marketplace indicates that government agencies in the state are passively participating in discrimination that makes it more difficult for certain businesses to successfully compete for their contracts. Many courts have held that passive participation in any discrimination establishes a compelling governmental interest for agencies to take remedial action to address such discrimination.

¹Haney-López, Ian. 2006. *White by Law: The Legal Construction of Race*. New York: NYU Press.

²Woodward, Comer Vann. 1955. *The Strange Career of Jim Crow*. Oxford: Oxford University Press.

³Prucha, Francis Paul. 1986. *The Great Father: The United States Government and the American Indians*. Lincoln: University of Nebraska Press.

⁴Lee, Erika. 2003. *At America's Gates: Chinese Immigration During the Exclusion Era, 1882-1943*. Chapel Hill, NC: University of North Carolina Press.

⁵Goldin, Claudia. 2006. "The Quiet Revolution That Transformed Women's Employment, Education, and Family." *The American Economic Review* 96(2):1-21.

⁶Douglas, Davison. 2005. *Jim Crow Moves North: The Battle over Northern School Segregation, 1865-1954*. Cambridge University Press.

⁷Franklin, V.P. *The Education of Black Philadelphia: The Social and Educational History of a Minority Community, 1900-1950*. Philadelphia: University of Pennsylvania Press, 1979.

⁸Dobbin, Frank. 2009. *Inventing Equal Opportunity*. Princeton: Princeton University Press.

⁹Holzer, Harry and David Neumark. 2000. "Assessing Affirmative Action." *Journal of Economic Literature* 38(3):483-568

¹⁰Kalev, Alexandra, Frank Dobbin, and Erin Kelly. 2006. "Best Practices or Best Guesses? Assessing the Efficacy of Corporate Affirmative Action and Diversity Policies." *American Sociological Review* 71(4):589-617.

¹¹Kao, Grace and Jennifer S. Thompson. 2003. "Racial and Ethnic Stratification in Educational Achievement and Attainment." *Annual Review of Sociology* 29(1):417-42.

¹²DiPrete, Thomas A. and Claudia Buchmann. 2013. *The Rise of Women: The Growing Gender Gap in Education and What It Means for American Schools*. New York: Russell Sage Foundation.

¹³Travis, Jeremy, Bruce Western, and Steve Redburn. 2014. *The Growth of Incarceration in the United States: Exploring Causes and Consequences*. National Research Council. Washington D.C.: Division of Behavioral and Social Sciences and Education. Retrieved January 6, 2015 (http://www.nap.edu/booksearch.php?booksearch=1&record_id=18613&term=Black&chapter=33-69).

¹⁴Charles, Camille Zubrinsky. 2003. "The Dynamics of Racial Residential Segregation." *Annual Review of Sociology* 29:167-207.

¹⁵Bianchi, Suzanne M., Liana C. Sayer, Melissa A. Milkie, and John P. Robinson. 2012. "Housework: Who Did, Does or Will Do It, and How Much Does It Matter?" *Social Forces* 91(1):55-63.

¹⁶*Adarand VII*, 228 F.3d at 1167- 76; *see also Western States Paving*, 407 F.3d at 992 (Congress "explicitly relied upon" the Department of Justice study that "documented the discriminatory hurdles that minorities must overcome to secure federally funded contracts"); *Midwest Fence Corp. v. U.S. DOT, Illinois DOT, et al.*, 2015 WL 1396376, *appeal pending*.

¹⁷*Adarand VII*, 228 F.3d. at 1168-70; *Western States Paving*, 407 F.3d at 992; *see DynaLantic*, 885 F.Supp.2d 237; *Midwest Fence Corp. v. U.S. DOT, Illinois DOT, et al.*, 2015 WL 1396376, *appeal pending*; *Geyer Signal*, 2014 WL 130909297 at *14.

¹⁸*Adarand VII* at 1170-72; *see DynaLantic*, 885 F.Supp.2d 237; *Geyer Signal*, 2014 WL 1309092 at *14.

¹⁹*City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989).

²⁰*Concrete Works of Colo., Inc. v. City and County of Denver*, 36 F.3d 1513, 1524 (10th Cir. 1994).

²¹*Rothe Development Corp v. U.S. Dept of Defense*, 545 F.3d 1023, 1041.

²²Veterans and veteran-owned businesses include service-disabled veterans.

²³The LGBT population is not included in the marketplace analyses presented here because the U.S. Census Bureau and the other federal agencies whose data is cited here do not currently collect information about this segment of the population.

-
- ²⁴ Because this chapter relies on external data sources such as the U.S. Census Bureau, the analyses presented in this chapter do not always overlap with the disparity study period: July 1, 2011 through June 30, 2016.
- ²⁵ Fairlie, Robert W. and Alicia M. Robb. 2007. "Why Are Black-Owned Businesses Less Successful than White-Owned Businesses? The Role of Families, Inheritances, and Business Human Capital." *Journal of Labor Economics* 25(2):289–323.
- ²⁶ Fairlie, Robert W. and Alicia M. Robb. 2008. *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States*. Cambridge, Mass.: MIT Press.
- ²⁷ Fairlie, Robert W. and Alicia M. Robb. 2009. "Gender Differences in Business Performance: Evidence From the Characteristics of Business Owners Survey." *Small Business Economics* 33(4):375–95.
- ²⁸ Hout, Michael and Harvey Rosen. 2000. "Self-Employment, Family Background, and Race." *Journal of Human Resources* 35(4):670–92.
- ²⁹ Emmons, William R. and Bryan J. Noeth. 2015. *Why Didn't Higher Education Protect Hispanic and Black Wealth?* St. Louis, MO: Center for Household Financial Stability. Retrieved August 20, 2015 (https://www.stlouisfed.org/~media/Publications/In%20the%20Balance/Images/Issue_12/ITB_August_2015.pdf).
- ³⁰ Shapiro, Thomas, Tatjana Meschede, and Sam Osoro. 2013. *The Roots of the Widening Racial Wealth Gap: Explaining the Black-White Economic Divide*. Waltham, MA: Institute on Assets and Social Policy. Retrieved January 2, 2015 (<http://iasp.brandeis.edu/pdfs/Author/shapiro-thomas-m/racialwealthgapbrief.pdf>).
- ³¹ National Center for Education Statistics. 2010. *Status and Trends in the Education of Racial and Ethnic Minorities*. National Center for Education Statistics. Retrieved January 20, 2015 (<http://nces.ed.gov/pubs2010/2010015/tables.asp>).
- ³² Kao, Grace and Jennifer S. Thompson. 2003. "Racial and Ethnic Stratification in Educational Achievement and Attainment." *Annual Review of Sociology* 29(1):417–42.
- ³³ U.S. Department of Education Office for Civil Rights. 2014a. *College and Career Readiness*. Washington D.C.: U.S. Department of Education. Retrieved January 3, 2015 (<http://www2.ed.gov/about/offices/list/ocr/docs/crdc-college-and-career-readiness-snapshot.pdf>).
- ³⁴ U.S. Department of Education Office for Civil Rights. 2014b. *School Discipline, Restraint, and Seclusion Highlights*. Washington D.C.: U.S. Department of Education. Retrieved January 3, 2015 (<http://ocrdata.ed.gov/Downloads/CRDC-School-Discipline-Snapshot.pdf>).
- ³⁵ Bozkick, Robert and Erich Lauff. 2007. *Education Longitudinal Study of 2002 (ELS:2002): A First Look at the Initial Postsecondary Experiences of the High School Sophomore Class of 2002*. National Center for Education Statistics. Retrieved January 20, 2015 (<http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2008308>).
- ³⁶ Correll, Shelley J., Stephen Benard, and In Paik. 2007. "Getting a Job: Is There a Motherhood Penalty?" *American Journal of Sociology* 112(5):1297–1339.
- ³⁷ Pager, Devah, Bruce Western, and Bart Bonikowski. 2009. "Discrimination in a Low-Wage Labor Market A Field Experiment." *American Sociological Review* 74(5):777–99.
- ³⁸ Bertrand, Marianne and Sendhil Mullainathan. 2004. "Are Emily and Greg More Employable Than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination." *American Economic Review* 94(4):991–1013.
- ³⁹ Scheider, Jessica and Elise Gould. 2016. "'Women's Work' and the Gender Pay Gap: How Discrimination, Societal Norms, and Other Forces affect Women's Occupational Choices." Washington D.C.: Economic Policy Institute. Retrieved July 25, 2016 (<http://www.epi.org/publication/womens-work-and-the-gender-pay-gap-how-discrimination-societal-norms-and-other-forces-affect-womens-occupational-choices-and-their-pay/>).
- ⁴⁰ Beck, E. M., Patrick M. Horan, and Charles M. Tolbert II. 1980. "Industrial Segmentation and Labor Market Discrimination." *Social Problems* 28(2):113–30.
- ⁴¹ Catanzarite, Lisa. 2003. "Race-Gender Composition and Occupational Pay Degradation." *Social Problems* 50(1):14–37.
- ⁴² Cohen, Philip N. and Matt L. Huffman. 2003. "Occupational Segregation and the Devaluation of Women's Work across U.S. Labor Markets." *Social Forces* 81(3):881–908.
- ⁴³ Huffman, Matt L. and Philip N. Cohen. 2004. "Racial Wage Inequality: Job Segregation and Devaluation across U.S. Labor Markets." *American Journal of Sociology* 109(4):902–36.
- ⁴⁴ Travis, Jeremy, Bruce Western, and Steve Redburn. 2014. *The Growth of Incarceration in the United States: Exploring Causes and Consequences*. National Research Council. Washington D.C.: Division of Behavioral and Social Sciences and Education. Retrieved January 6, 2015 (http://www.nap.edu/booksearch.php?booksearch=1&record_id=18613&term=Black&chapter=33-69).

-
- ⁴⁵ Sakala, Leah. 2014. *Breaking Down Mass Incarceration in the 2010 Census: State-by-State Incarceration Rates by Race/Ethnicity*. Northampton, MA: Prison Policy Initiative. Retrieved May 9, 2018 (<http://www.prisonpolicy.org/reports/rates.html>).
- ⁴⁶ Pager, Devah. 2003. "The Mark of a Criminal Record." *American Journal of Sociology* 108(5):937–75.
- ⁴⁷ Western, Bruce and Becky Pettit. 2010. "Incarceration & Social Inequality." *Daedalus* 139(3):8–19.
- ⁴⁸ Wilson, George and Debra Branch McBrier. 2005. "Race and Loss of Privilege: African American/White Differences in the Determinants of Job Layoffs From Upper-Tier Occupations." *Sociological Forum* 20(2):301–21.
- ⁴⁹ Roscigno, Vincent J., Lisette M. Garcia, and Donna Bobbitt-Zeher. "Social Closure and Processes of Race/Sex Employment Discrimination." *The Annals of the American Academy of Political and Social Science* 609 (1): 16–48.
- ⁵⁰ Roscigno, Vincent J. Lisa M. Williams, and Reginald A. Byron. 2012. "Workplace Racial Discrimination and Middle Class Vulnerability." *American Behavioral Scientist* 56(5):696–710.
- ⁵¹ Smith, Ryan A. 2002. "Race, Gender, and Authority in the Workplace: Theory and Research." *Annual Review of Sociology* 28:509–42.
- ⁵² Wilson, George. 1997. "Pathways to Power: Racial Differences in the Determinants of Job Authority." *Social Problems* 44(1):38–54.
- ⁵³ Hout, Michael and Harvey Rosen. 2000. "Self-Employment, Family Background, and Race." *Journal of Human Resources* 35(4):670–92.
- ⁵⁴ Fairlie, Robert W. and Alicia M. Robb. 2007. "Why Are Black-Owned Businesses Less Successful than White-Owned Businesses? The Role of Families, Inheritances, and Business Human Capital." *Journal of Labor Economics* 25(2):289–323.
- ⁵⁵ Robb, Alicia and Robert Fairlie. 2007. "Access to Financial Capital among U.S. Businesses: The Case of African American Firms." *The Annals of the American Academy of Political and Social Science* 613(1):47–72.
- ⁵⁶ Fairlie, Robert W. and Harry A. Krashinsky. 2012. "Liquidity Constraints, Household Wealth, and Entrepreneurship Revisited." *Review of Income & Wealth* 58(2):279–306.
- ⁵⁷ Bahn, Kate, Regina Willensky, and Annie McGrew. 2016. *A Progressive Agenda for Inclusive and Diverse Entrepreneurship*. Washington D.C.: Center for American Progress. Retrieved December 1, 2016 (<https://www.americanprogress.org/issues/economy/reports/2016/10/13/146019/a-progressive-agenda-for-inclusive-and-diverse-entrepreneurship/>).
- ⁵⁸ Cha, Youngjoo and Kim A. Weeden. 2014. "Overwork and the Slow Convergence in the Gender Gap in Wages." *American Sociological Review* 79(3):457–84.
- ⁵⁹ McCall, Leslie. 2001. "Sources of Racial Wage Inequality in Metropolitan Labor Markets: Racial, Ethnic, and Gender Differences." *American Sociological Review* 66(4):520–41.
- ⁶⁰ Tomaskovic-Devey, Donald. 1993b. "The Gender and Race Composition of Jobs and the Male/Female, White/Black Pay Gaps." *Social Forces* 72(1):45–76.
- ⁶¹ Economic Policy Institute. 2012a. *African Americans*. Washington D.C.: Economic Policy Institute. Retrieved January 20, 2015 (<http://stateofworkingamerica.org/files/book/factsheets/african-americans.pdf>).
- ⁶² Economic Policy Institute. 2012b. *Latinos*. Washington D.C.: Economic Policy Institute. Retrieved January 20, 2015 (<http://www.stateofworkingamerica.org/fact-sheets/latinos/>).
- ⁶³ Economic Policy Institute. 2012c. *Women*. Washington D.C.: Economic Policy Institute. Retrieved January 20, 2015 (<http://www.stateofworkingamerica.org/fact-sheets/women/>).
- ⁶⁴ Shapiro, Thomas, Tatjana Meschede, and Sam Osoro. 2013. *The Roots of the Widening Racial Wealth Gap: Explaining the Black-White Economic Divide*. Waltham, MA: Institute on Assets and Social Policy. Retrieved January 2, 2015 (<http://iasp.brandeis.edu/pdfs/Author/shapiro-thomas-m/racialwealthgapbrief.pdf>).
- ⁶⁵ Sullivan, Laura, Tatjana Meschede, Lars Dietrich, Thomas Shapiro, Amy Traub, Catherine Ruetschlin, and Tamara Draut. 2015. *The Racial Wealth Gap: Why Policy Matters*. New York: Demos. Retrieved August 28, 2015 (http://www.demos.org/sites/default/files/publications/RacialWealthGap_1.pdf).
- ⁶⁶ Kaiser Health Foundation. 2015. "Poverty by Race/Ethnicity." Retrieved May 9, 2018 (<http://kff.org/other/state-indicator/poverty-rate-by-raceethnicity/>).
- ⁶⁷ Chang, Mariko Lin. 2010. *Shortchanged: Why Women Have Less Wealth and What Can Be Done About It*. Oxford: Oxford University Press.
- ⁶⁸ Berger, Allen N. and Gregory F. Udell. 1998. "The Economics of Small Business Finance: The Roles of Private Equity and Debt Markets in the Financial Growth Cycle." *Journal of Banking & Finance* 22(6–8):613–73.

-
- ⁶⁹ Fairlie, Robert W. and Harry A. Krashinsky. 2012. "Liquidity Constraints, Household Wealth, and Entrepreneurship Revisited." *Review of Income & Wealth* 58(2):279–306.
- ⁷⁰ U. S. Census Bureau. 2013a. "American Community Survey 2013 1 Year Estimates." Retrieved January 20, 2015 (<http://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>).
- ⁷¹ Turner, Margery Austen, Rob Santos, and Diane K. Levy, Doug Wissoker, Claudia Aranda, and Rob Pitingolo. 2013. *Housing Discrimination Against Racial and Ethnic Minorities 2012*. Washington, D.C.: U.S. Department of Housing and Urban Development. Retrieved January 2, 2015 (http://www.huduser.org/portal/publications/fairhsg/hsg_discrimination_2012.html).
- ⁷² Roscigno, Vincent J., Diana L. Karafin, and Griff Tester. 2009. "The Complexities and Processes of Racial Housing Discrimination." *Social Problems* 56(1): 49–69.
- ⁷³ Kochhar, Rakesh and Richard Fry. 2014. "Wealth Inequality Has Widened along Racial, Ethnic Lines since End of Great Recession." *Pew Research Center*. Retrieved December 29, 2014 (<http://www.pewresearch.org/fact-tank/2014/12/12/racial-wealth-gaps-great-recession/>).
- ⁷⁴ Burd-Sharps, Sarah and Rebecca Rasch. 2015. *Impact of the US Housing Crisis on the Racial Wealth Gap Across Generations*. Brooklyn, NY: Social Science Research Council. Retrieved June 23, 2015. (<http://www.ssrc.org/publications/view/129CDF74-1F11-E511-940A-005056AB4B80/>).
- ⁷⁵ Charles, Camille Zubrinsky. 2003. "The Dynamics of Racial Residential Segregation." *Annual Review of Sociology* 29:167–207.
- ⁷⁶ Shapiro, Thomas, Tatjana Meschede, and Sam Osoro. 2013. *The Roots of the Widening Racial Wealth Gap: Explaining the Black-White Economic Divide*. Waltham, MA: Institute on Assets and Social Policy. Retrieved January 2, 2015 (<http://iasp.brandeis.edu/pdfs/Author/shapiro-thomas-m/racialwealthgapbrief.pdf>).
- ⁷⁷ Blanchard, Lloyd, Bo Zhao, and John Yinger. 2008. "Do Lenders Discriminate Against Minority and Woman Entrepreneurs?" *Journal of Urban Economics* 63(2):467–97.
- ⁷⁸ Cavalluzzo, Ken S., Linda C. Cavalluzzo, and John D. Wolken. 2002. "Competition, Small Business Financing, and Discrimination: Evidence from a New Survey." *The Journal of Business* 75(4):641–79.
- ⁷⁹ Cavalluzzo, Ken and John Wolken. 2005. "Small Business Loan Turndowns, Personal Wealth, and Discrimination." *The Journal of Business* 78(6):2153–78.
- ⁸⁰ Gruenstein Bocian, Debbie, Wei Li, Carolina Reid, and Robert G. Quercia. 2011. *Lost Ground, 2011: Disparities in Mortgage Lending and Foreclosures*. Washington D.C.: Center for Responsible Lending. Retrieved January 21, 2015
- ⁸¹ Mijid, Naranchimeg and Alexandra Bernasek. 2013. "Gender and the Credit Rationing of Small Businesses." *The Social Science Journal* 50(1):55–65.
- ⁸² Ross, Stephen L. and John Yinger. 2002. *The Color of Credit: Mortgage Discrimination, Research Methodology, and Fair-Lending Enforcement*. Cambridge, MA: MIT Press.
- ⁸³ Ross, Stephen L., Margery Austin Turner, Erin Godfrey, and Robin R. Smith. 2008. "Mortgage Lending in Chicago and Los Angeles: A Paired Testing Study of the Pre-Application Process." *Journal of Urban Economics* 63(3):902–19.
- ⁸⁴ Dymski, Gary, Jesus Hernandez, and Lisa Mohanty. 2013. "Race, Gender, Power, and the US Subprime Mortgage and Foreclosure Crisis: A Meso Analysis." *Feminist Economics* 19(3):124–51.
- ⁸⁵ Fishbein, Allen J. and Patrick Woodall. 2006. *Women are Prime Targets Subprime: Women Are Disproportionately Represented in High-Cost Mortgage Market*. Washington D.C.: Consumer Federation of America. Retrieved January 5, 2015 (http://policylinkcontent.s3.amazonaws.com/WomenPrimeTargetsSubprimeLending_CFA_0.pdf).
- ⁸⁶ Williams, Richard, Reynold Nesiba, and Eileen Diaz McConnell. 2005. "The Changing Face of Inequality in Home Mortgage Lending." *Social Problems* 52(2):181–208.
- ⁸⁷ Wyly, Elvin and C. S. Ponder. 2011. "Gender, Age, and Race in Subprime America." *Housing Policy Debate* 21(4):529–64.
- ⁸⁸ Baker, Amy Castro. 2011. *Tearing Down the Wealth of Women*. New York: Women's Media Center. Retrieved January 5, 2015 (<http://www.womensmediacenter.com/feature/entry/tearing-down-the-wealth-of-women>).
- ⁸⁹ Baker, Amy Castro. 2014. "Eroding the Wealth of Women: Gender and the Subprime Foreclosure Crisis." *Social Service Review* 88(1):59–91.
- ⁹⁰ Rugh, Jacob S. and Douglas S. Massey. 2010. "Racial Segregation and the American Foreclosure Crisis." *American Sociological Review* 75(5):629–51.
- ⁹¹ Burd-Sharps, Sarah and Rebecca Rasch. 2015. *Impact of the US Housing Crisis on the Racial Wealth Gap Across Generations*. Brooklyn, NY: Social Science Research Council. Retrieved June 23, 2015. (<http://www.ssrc.org/publications/view/129CDF74-1F11-E511-940A-005056AB4B80/>).
-

-
- ⁹² Bone, Sterling A., Glenn L. Christensen, and Jerome D. Williams. 2014. "Rejected, Shackled, and Alone: The Impact of Systematic Restricted Choice on Minority Consumers' Construction of Self." *Journal of Consumer Research* 41(2): 451-474.
- ⁹³ Blanchard, Lloyd, Bo Zhao, and John Yinger. 2008. "Do Lenders Discriminate Against Minority and Woman Entrepreneurs?" *Journal of Urban Economics* 63(2):467-97.
- ⁹⁴ Blanchflower, David G., Phillip B. Levine, and David J. Zimmerman. 2003. "Discrimination in the Small Business Credit Market." *The Review of Economics and Statistics* 85(4):930-43.
- ⁹⁵ Bates, Timothy and Alicia Robb. 2016. "Impacts of Owner Race and Geographic Context on Access to Small Business Financing." *Economic Development Quarterly* 30(2): 159-170.
- ⁹⁶ Mijid, Naranchimeg and Alexandra Bernasek. 2013. "Gender and the Credit Rationing of Small Businesses." *The Social Science Journal* 50(1):55-65.
- ⁹⁷ Treichel, Monica Zimmerman and Jonathan A. Scott. 2006. "Women-Owned Businesses and Access to Bank Credit: Evidence from Three Surveys Since 1987." *Venture Capital* 8(1):51-67.
- ⁹⁸ Coleman, Susan and Alicia Robb. 2009. "A Comparison of New Firm Financing by Gender: Evidence from the Kauffman Firm Survey Data." *Small Business Economics* 33(4):397-411.
- ⁹⁹ Robb, Alicia and Robert Fairlie. 2007. "Access to Financial Capital among U.S. Businesses: The Case of African American Firms." *The Annals of the American Academy of Political and Social Science* 613(1):47-72.
- ¹⁰⁰ Robb, Alicia, Susan Coleman, and Dane Stangler. 2014. Sources of Economic Hope: Women's Entrepreneurship. Kansas City, KS: Ewing Marion Kauffman Foundation. Retrieved November 3, 2016 (<http://www.kauffman.org/what-we-do/research/2014/11/sources-of-economic-hope-womens-entrepreneurship>).
- ¹⁰¹ Robb, Alicia. 2013. *Access to Capital among Young Firms, Minority-owned Firms, Woman-owned Firms, and High-tech Firms*. Washington D.C.: Small Business Administration Office of Advocacy. Retrieved January 5, 2015 ([https://www.sba.gov/sites/default/files/files/rs403tot\(2\).pdf](https://www.sba.gov/sites/default/files/files/rs403tot(2).pdf)).
- ¹⁰² Public Information Office. 2015. Number of Minority- and Woman-Owned Firms Each Increases by More Than 2 Million Nationally. Washington D.C.: United States Census Bureau. Retrieved November 11, 2016 (<http://www.census.gov/newsroom/press-releases/2015/cb15-209.html>)
- ¹⁰³ Fairlie, Robert W. and Alicia M. Robb. 2009b. "Gender Differences in Business Performance: Evidence from the Characteristics of Business Owners Survey." *Small Business Economics* 33(4):375-95.
- ¹⁰⁴ Fairlie, Robert W. 2006. "Entrepreneurship among Disadvantaged Groups: Women, Minorities, and the Less Educated." Pp. 437-75 in *The Life Cycle of Entrepreneurial Ventures*, edited by Simon Parker. Springer Science & Business Media.
- ¹⁰⁵ Fairlie, Robert W. and Alicia M. Robb. 2008. *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States*. Cambridge, Mass.: MIT Press.
- ¹⁰⁶ Bahn, Kate, Regina Willensky, and Annie McGrew. 2016. *A Progressive Agenda for Inclusive and Diverse Entrepreneurship*. Washington D.C.: Center for American Progress. Retrieved December 1, 2016 (<https://www.americanprogress.org/issues/economy/reports/2016/10/13/146019/a-progressive-agenda-for-inclusive-and-diverse-entrepreneurship/>).
- ¹⁰⁷ Budig, Michelle J. 2006b. "Intersections on the Road to Self-Employment: Gender, Family and Occupational Class." *Social Forces* 84(4):2223-39.
- ¹⁰⁸ Lofstrom, Magnus and Timothy Bates. 2013. "African Americans' Pursuit of Self-Employment." *Small Business Economics* 40(1):73-86.
- ¹⁰⁹ Bahn, Kate, Regina Willensky, and Annie McGrew. 2016. *A Progressive Agenda for Inclusive and Diverse Entrepreneurship*. Washington D.C.: Center for American Progress. Retrieved December 1, 2016 (<https://www.americanprogress.org/issues/economy/reports/2016/10/13/146019/a-progressive-agenda-for-inclusive-and-diverse-entrepreneurship/>).
- ¹¹⁰ Fairlie, Robert W. and Alicia M. Robb. 2008. *Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States*. Cambridge, Mass.: MIT Press.
- ¹¹¹ Coleman, Susan and Alicia Robb. 2009. "A Comparison of New Firm Financing by Gender: Evidence from the Kauffman Firm Survey Data." *Small Business Economics* 33(4):397-411.
- ¹¹² Robb, Alicia M. and John Watson. 2012. "Gender Differences in Firm Performance: Evidence from New Ventures in the United States." *Journal of Business Venturing* 27(5):544-58.
- ¹¹³ The LGBT population is not included in the marketplace analyses presented here because the U.S. Census Bureau and other federal agencies do not currently collect information about this specific segment of the population.

CHAPTER 4.

Collection and Analysis of Contract Data

CHAPTER 4.

Collection and Analysis of Contract Data

Chapter 4 provides an overview of the policies that the Commonwealth of Pennsylvania’s (the Commonwealth’s) Department of General Services (DGS) uses to award contracts; the contracts that the study team analyzed as part of the disparity study; and the process that the study team used to collect relevant prime contract and subcontract data.¹ Chapter 4 is organized into six parts:

- A. Overview of procurement organization, responsibility, and contracting policies;
- B. Collection and analysis of contract data;
- C. Collection of vendor data;
- D. Relevant geographic market area;
- E. Relevant types of work; and
- F. Agency review process.

A. Overview of DGS and Other Procurement Agencies’ Responsibilities and Contracting Policies

DGS is responsible for formulating procurement policy governing the procurement, management, control, and disposal of supplies, services, and construction for executive and independent agencies in the Commonwealth in accordance with 62 Pa.C.S. § 301(a). “Executive agencies” include the Governor and the departments, boards, commissions, authorities, and other officers and agencies of the Commonwealth. “Independent agencies” are boards, commissions and other agencies and officers of the Commonwealth which are not subject to the policy supervision and control of the Governor.^{2,3} Figure 4-1 outlines the procurement responsibilities of DGS and other Commonwealth agencies as set forth in the PA Procurement Code.

¹ The terms “contract” and “procurement” are used interchangeably in this report unless otherwise noted.

² Definitions per 62 Pa.C.S. § 103.

³ DGS does not manage contracts or procurements for the Pennsylvania Department of Transportation (PennDOT)’s federally-funded road projects, services for independent agencies, or supplies and services for state-affiliated agencies that are not subject to DGS’s policies but are subject to the Procurement Code.

Figure 4-1.
Procurement organization and responsibility per the Pennsylvania Procurement Code

	Supplies		Services		Construction	
	Policy	Procurement	Policy	Procurement	Policy	Procurement
Executive Agencies	§301(a) and §311	§301(a) except as delegated by DGS §321(i); and §514 and exceptions §301(c)(2)(3) and (4)	§301(a) and §311	§301(a) except as delegated by DGS §321(1) and §514	§301(a) and §311	§301(a) except as delegated by DGS §321(1) and §514 and exceptions §301(c)(1)
Independent Agencies	§301(a) and §311	§301(a) except as delegated by DGS §321(i); and §514 and exceptions §301(c)(2)(3) and (4)	§301(a) and §311	§301(b)	§301(a) and §311	§301(a) except as delegated by DGS §321(1) and §514
Row Offices	§301(a) and §311	§301(a) except as delegated by DGS §321(i); and §514 and exceptions §301(c)(2)(3) (4)and (5)	§301(c) (5)	§301(c)(5)	§301(a) and §311	§301(a) except as delegated by DGS §321(1) and §514
State Affiliated Agencies (SAE)	§301(d)	§301(d)	§301(d)	§301(d)	§301(d)	§301(d)

- DGS sets policy
- DGS procures
- Other agency sets policy and/or procures

Source: PA Procurement Handbook.

DGS has the ability to delegate its authority over the procurement process. If DGS delegates that authority to another agency, then DGS signs a memorandum of understanding with that agency that guides its procurement or DGS provides written approval of the delegation to that agency.

The Commonwealth enters into contracts using various procurement methods, including contracts, purchase orders, purchasing cards, and leases, which are collectively referred to as “Commonwealth contracts or Commonwealth contracting.” The Commonwealth’s contracting methods are referred to in this report as “procurement types” and include the following:

Invitations for Bids. Under the Commonwealth’s Invitations for Bids (IFBs) process, contracts are awarded to the responsive and responsible bidder with the lowest price. IFBs are used for supplies, services, information technology, construction, and construction-related services

procurements. The Commonwealth’s IFB process for supplies, services, and information technology currently does not include any consideration of SDB participation.

For Commonwealth construction and construction-related services IFBs, the Department establishes a general minimum participation level (MPL) for construction contractor utilization of SDB contractors, manufacturers, and suppliers for general construction, HVAC, plumbing, and electrical work. Since fiscal year 2012, the MPL has been 7.5 percent. Prime contractors who receive project awards can either “opt in” and meet the MPL or make “good faith efforts” to include SDB participation by providing evidence of unsuccessful attempts to obtain SDB subcontractors.⁴

Requests for Proposals. Under the Commonwealth’s Requests for Proposals (RFP) process, contracts are awarded based upon best overall value to the Commonwealth. The Commonwealth uses RFPs to procure supplies, services, Information Technology services, construction, and construction-related services. The Commonwealth’s RFP process allows for direct consideration of SDB participation as a criterion for award. The issuing office and BDISBO (the Bureau of Diversity, Inclusion, and Small Business Opportunities) work together to evaluate each proposal based on the following scoring methodology:

- Technical merit and cost (totaling 80% of points);
- Small Diverse Business participation (20% of points); and
- Domestic workforce (3% of points).

The procurement is awarded to the supplier that has the highest total score. The agency then uploads copies of the purchase order or contract to the Pennsylvania Treasury e-contracts library. BDISBO works with the prime contractor throughout the contract to ensure that small diverse business commitments are met and notifies the agency if the prime has not met their commitments.

Invitation to Qualify. The Invitation to Qualify (ITQ) is the name given to certain multiple-award contracts issued by the Commonwealth pursuant to Section 517 of the Procurement Code.⁵ The ITQ Process is a two-step process used by the Commonwealth to procure various services for Commonwealth agencies. The first step is a pre-qualification process that is used to qualify suppliers for specific services described in the ITQ. To qualify for an ITQ contract, a supplier must meet the requirements prescribed in each ITQ solicitation. Each submittal is evaluated and suppliers meeting the minimum scoring criteria are qualified and placed on a statewide contract with other qualified suppliers. The second step is a Request for Quotes (RFQ) in which agencies with specific requirements request price quotations from the qualified suppliers. An RFQ may be solicited through an IFB or RFP-type process, depending upon the

⁴ The requirements for the “opt in” or “good faith effort” options are outlined in Administrative Procedure No. 15, which is available at the following link: [http://www.dgs.pa.gov/Businesses/Design-and-Construction/Construction/Documents/Construction%20Documents/Administrative%20Procedures%20September%202013%20Edition%20\(10%202014\).pdf](http://www.dgs.pa.gov/Businesses/Design-and-Construction/Construction/Documents/Construction%20Documents/Administrative%20Procedures%20September%202013%20Edition%20(10%202014).pdf).

⁵ See 62 Pa.C.S. § 517.

dollar amount of the contract. If an RFQ is solicited through an RFP-type process, SDB participation is scored in the same manner as a stand-alone RFP. For an RFQ that is solicited through an IFB-type process, there is currently no consideration of SDB participation, except for certain subcategories of Information Technology services.

Solicitation for Proposals. The Commonwealth awards Real Estate leases through a Solicitation for Proposals (SFP) process, which takes into account numerous factors including the suitability of the potential lease location and costs. The SFP process does not fall under the scope of the Procurement Code. The procedures for using an SFP are set by policy and contained solely in the SFP document itself. The Commonwealth's SFP process currently does not include any consideration of SDB participation.

Small no-bid procurements. Currently, Commonwealth agencies may make purchases consisting of \$10,000 or less without utilizing a formal method of procurement. Agencies commonly use a Purchasing Card or P-Card for these types of purchases. Commonwealth agencies wishing to buy goods or services of that size are instructed to solicit price quotes from suppliers and select a supplier based on the quotes that they receive. While there is currently no consideration of SDB participation in purchases made with Purchasing Cards, agencies are encouraged to include small and small diverse businesses in the price quotation solicitation process. Agencies are required to maintain written records—such as a receipt or invoice—of the purchase.

Sole source procurements. DGS authorizes agencies to purchase goods noncompetitively from a sole supplier if the desired goods and services meet all of the following conditions:

- They are not part of a current Statewide Requirements Contract;
- They are not DGS Bureau of Supplies and Surplus Operations warehouse items;
- They are not worth more than \$10,000; and
- They are only available from a single supplier.

If a goods or services purchase meets those conditions, the agency must complete the Source Justification Form and submit it to DGS and the Bureau of Procurement (BOP). DGS and BOP post the Source Justification Form (BOP-001) on the DGS website for a 10-day public commenting period. After the 10-day period ends, DGS reviews any comments and decides if they will approve the sole source request. If DGS approves a sole source purchasing request for goods, DGS must submit the GSPUR-17 form and all accompanying purchase documentation for review and approval to the Secretary of General Services, DGS Legal Counsel, and the Board of Commissioners of Public Grounds and Buildings (BOC). DGS must submit the required documentation to the BOC 10 days prior to their next board meeting. If the board approves the request, DGS issues a purchase order or contract to the supplier for the procurement.

Emergency procurements. DGS authorizes agencies to use a non-competitive procurement process to purchase goods and services in the event of an emergency that threatens the public health or safety of Commonwealth citizens or employees. DGS suggests that agencies solicit two price quotes from suppliers via telephone, email, or fax. The agency then submits the information for the lowest responsible bid to DGS using the Emergency Procurement Approval

Form. If DGS approves the request, the agency and DGS work together to issue an emergency purchase order to purchase the goods or services. Per Commonwealth records retention policy, the agency must maintain a record of each emergency procurement that it issues. DGS authorizes agencies to use a non-competitive procurement process for construction in the event of an emergency that threatens the public health, welfare, or safety, or circumstances outside the control of an agency that create an urgency of need which does not permit the delay involved in using a formal, competitive method of procurement. Agencies submit their determination explaining the basis for the emergency to DGS for its review and approval. DGS suggests that agencies solicit two price quotes from contractors. The agency then issues an emergency purchase order or emergency construction contract. Per Commonwealth records retention policy, the agency must maintain a record of each emergency procurement that it issues.

Small business design and construction procurements. During the time frame of the Disparity Study, design and construction procurements worth more than \$10,000 and less than \$300,000 were procured through the small business design and construction program.⁶ Agencies were required to submit an Agency Work Request to DGS and a Survey Cost Estimate, which included a description of the project and an estimated cost. An agency could give DGS the authority to hire a small design firm to calculate the Survey Cost Estimate and provide design services on the project. If an agency did so, DGS selected a small design firm for the work, considering various criteria, including past distribution of work, technical capabilities, geographic proximity, and personnel capacity. If DGS approved the Agency Work Request, it administered the selection of a contractor to perform construction services using an IFB process. As part of the process, DGS issued a Notice to Bidders on the eMarketplace and DGS Public Works websites that announced the time and location of the public bid opening. All bids that DGS received were opened at the designated time and location. The procurement was awarded to the lowest responsible bidder.

B. Collection and Analysis of Contract Data

BBC Research & Consulting (BBC) collected contracting and vendor data from DGS's Bureau of Procurement and the Pennsylvania Treasury to serve as the basis for key disparity study analyses, including the utilization, availability, and disparity analyses. The study team collected the most comprehensive set of data that was available on prime contracts and subcontracts that the Commonwealth awarded during the study period (i.e., July 1, 2011 through June 30, 2016). BBC sought data that included information about prime contractors and subcontractors, regardless of the race/ethnicity and gender of their owners or their statuses as small disadvantaged businesses. The study team collected data on construction; professional services; and goods and support services prime contracts and subcontracts that DGS awarded during the study period. The study team's analyses included contracts and procurements worth \$10,000 or more.⁷

⁶ Beginning in August 2016, DGS began using the Job Order Contracting Program in lieu of the small business design and construction program.

⁷ Procurements of \$10,000 or more accounted for more than 96 percent of all in-scope Commonwealth contract and procurement dollars during the study period.

Prime contract data collection. DGS and the Pennsylvania Treasury provided the study team with electronic data on construction; professional services; and goods and support services prime contracts from their SAP data system, eMarketplace program, and Contracts E-library. BBC collected the following information about each relevant construction; professional services; and goods and support services prime contract awarded during the study period:

- Purchase order or contract number;
- Description of work;
- Award date;
- Award amount (including change orders and amendments);
- Amount paid-to-date;
- Originating Commonwealth agency;
- Prime contractor name; and
- Prime contractor identification number.

DGS advised the study team on how to interpret the provided data including how to identify unique bid opportunities and, as appropriate, how to aggregate related procurement dollar amounts.

Subcontract data collection. DGS does not maintain comprehensive subcontractor information, so the study team conducted surveys with prime contractors to collect information on subcontracts that were associated with the DGS contracts on which they worked during the study period. BBC sent out surveys to request subcontract data from prime contractors that worked on DGS construction and professional services contracts worth at least \$100,000. BBC collected the following information about each relevant subcontract as part of the survey process:

- Associated prime contract number;
- Amount paid on the subcontract as of June 30, 2016;
- Amount awarded on the subcontract;
- Description of work; and
- Subcontractor name.

BBC initially sent surveys to 560 prime contractors to collect subcontractor data on 2,188 contracts. Those contracts accounted for approximately \$12.87 billion of DGS's contracting dollars during the study period.⁸ After the first round of surveys, BBC sent a follow-up round of surveys to all prime contractors that had not yet responded. After the follow-up round of surveys, DGS contacted the 30 remaining unresponsive prime contractors with the highest

⁸ BBC conducted subcontractor outreach using contract data from the Pennsylvania Treasury Department. In some cases, contract amounts specified by the Treasury Department overstated the actual contract award amount.

valued contracts. Through the survey effort, BBC collected subcontract data for more than \$2.74 billion, or 21 percent, of those contract dollars.

Contracts included in study analyses. BBC collected information on 46,517 prime contracts and 2,752 associated subcontracts that DGS awarded during the study period in the areas of construction; professional services; and goods and support services. Those contracts accounted for approximately \$10.77 billion of DGS contracting dollars during the study period. Figure 4-2 presents dollars by relevant contracting area for the prime contracts and subcontracts that the study team included in its analyses.

Figure 4-2.
Number of DGS contracts included in the study

Note:
Numbers rounded to nearest dollar and thus may not sum exactly to totals.

Source:
BBC Research & Consulting from DGS contract data.

Contract Type	Number of Contract Elements	Dollars (Millions)
Construction	10,509	\$3,341
Professional services	15,527	\$5,539
Goods and support services	23,233	\$1,890
Total	49,269	\$10,770

Prime contract and subcontract amounts. For each contract included in the study team’s analyses, BBC examined the dollars that DGS paid to each prime contractor as of June 30, 2016 and the dollars that the prime contractor paid to any subcontractors.⁹ If a contract included subcontracts, the study team calculated subcontract amounts as the total amount paid to each subcontractor during the study period. BBC then calculated the prime contract amount as the total amount paid during the study period less the sum of dollars paid to all subcontractors. If a contract did not include any subcontracts, the study team attributed the entire amount paid during the study period to the prime contractor.

C. Collection of Vendor Data

DGS maintains a vendor database with data on all vendors who have performed work on Commonwealth contracts. The study team compiled the following information on businesses that participated in DGS construction; professional services; and goods and support services contracts and procurements during the study period:

- Business name;
- Addresses and phone numbers;
- Ownership status (i.e., whether each business was minority- or woman-owned);
- Ethnicity of ownership (if minority-owned);
- Small disadvantaged business certification status;
- Primary line of work;

⁹ BBC used the amount paid to prime contractors and subcontractors during the study period in all cases that it was available. In the small number of cases where the amount paid was not available, BBC used the amount awarded to prime contractors and subcontractors.

- Business size;
- Year of establishment; and
- Additional contact information.

BBC relied on a variety of sources for that information, including:

- DGS contract and vendor data;
- PennDOT United Certification Program Disadvantaged Business Enterprise list;
- Commonwealth of Pennsylvania SDB certification list;
- City of Philadelphia Office of Economic Opportunity certification list;
- Small Business Administration certification and ownership lists, including 8(a) HUBZone and self-certification lists;
- Dun & Bradstreet (D&B) business listings and other business information sources;
- Telephone surveys that the study team conducted with business owners and managers as part of the utilization and availability analyses;
- Business websites; and
- Reviews that DGS conducted of study information.

D. Relevant Geographic Market Area

The study team used DGS’s contracting and vendor data to help determine the relevant geographic market area—the geographical area in which the agency spends the substantial majority of its contracting dollars—for the study. The study team’s analysis showed that 88 percent of DGS’s construction; professional services; and goods and support services contracting dollars during the study period went to businesses with locations in Pennsylvania, indicating that Pennsylvania should be considered the relevant geographic market area for the study. BBC’s analyses—including the availability analysis and quantitative analyses of marketplace conditions—focused on Pennsylvania.

E. Relevant Types of Work

For each prime contract and subcontract, the study team determined the *subindustry* that best characterized the business’s primary line of work (e.g., heavy construction). BBC identified subindustries based on DGS contract data; telephone surveys that BBC conducted with prime contractors and subcontractors; business certification lists; D&B business listings; and other sources. BBC developed subindustries based in part on 8-digit D&B industry classification codes. Figure 4-3 presents the dollars that the study team examined in the various construction; professional services; and goods and support services subindustries that BBC included in its analyses.

The study team combined related subindustries that accounted for relatively small percentages of total contracting dollars into five “other” subindustries—“other construction services,” “other construction materials,” “other professional services,” “other goods,” and “other support services.” For example, the contracting dollars that DGS awarded to contractors for “customized

clothing and apparel” represented less than 1 percent of the total DGS contract dollars that BBC examined in the study. BBC combined “customized clothing and apparel” with other goods subindustries that also accounted for relatively small percentages of total contracting dollars and that were relatively dissimilar to other subindustries into the “other goods” subindustry.

Figure 4-3.
DGS contract dollars by subindustry

Industry	Total (in Millions)	Industry	Total (in Millions)
Construction		Professional Services (continued)	
Structural steel and building construction	\$993	Real estate management	\$210
Heavy construction	\$619	Legal services	\$172
Plumbing and HVAC	\$450	Architectural and design services	\$100
Electrical work	\$210	Scientific and market research	\$77
Excavation	\$153	Medical consulting	\$60
Concrete and related products	\$131	Medical providers	\$45
Other construction services	\$116	Finance and accounting	\$40
Water, sewer, and utility lines	\$84	Testing services	\$12
Other construction materials	\$82	Other professional services	\$10
Landscape services	\$75	Surveying and mapmaking	\$5
Heavy construction equipment	\$63	Total professional services	\$5,539
Dam and marine construction	\$58	Goods and Support Services	
Electrical equipment and supplies	\$53	Food products, wholesale and retail	\$374
Concrete work	\$43	Computer systems and services	\$359
Structural metals	\$41	Automobiles	\$219
Trucking, hauling and storage	\$39	Printing, copying, and mailing	\$160
Roofing	\$38	Communications equipment	\$109
Industrial equipment and machinery	\$33	Petroleum and petroleum products	\$105
Masonry, drywall and stonework	\$22	Other services	\$100
Painting	\$15	Other goods	\$92
Fencing, guardrails and signs	\$13	Safety equipment	\$78
Flagging services	\$5	Office equipment	\$73
Wrecking and demolition work	\$3	Farm and garden equipment and supplies	\$49
Railroad construction	\$1	Security guard services	\$42
Total construction	\$3,341	Security services	\$40
Professional Services		Office supplies	\$34
Business services and consulting	\$2,093	Vehicle parts and supplies	\$20
IT and data services	\$1,079	Industrial chemicals	\$13
Engineering	\$436	Cleaning and janitorial services	\$11
Construction management	\$322	Uniforms and apparel	\$11
Advertising, marketing and public relations	\$315	Cleaning and janitorial supplies	\$0.6
Environmental services and transportation planning	\$282	Total goods and support services	\$1,890
Human resources and job training services	\$281	Total	\$10,770

Note: Numbers rounded to nearest dollar and thus may not sum exactly to totals.

Source: BBC Research & Consulting from DGS contract data.

There were also contracts that were categorized in various subindustries that BBC did not include as part of its analyses, because they are not typically analyzed as part of disparity studies. BBC did not include contracts in its analyses that:

- Were classified in subindustries that reflected *national markets* (i.e., subindustries that are dominated by large national or international businesses) or were classified in subindustries for which DGS awarded the majority of contracting dollars to businesses located outside of Pennsylvania (\$1.5 billion of associated contract dollars);¹⁰
- Were classified in subindustries that are not typically included in a disparity study and also accounted for small proportions of DGS's contracting dollars (\$1.4 billion of associated contract dollars);¹¹ or
- Could not be classified into a particular subindustry (\$329 million of associated contract dollars).

BBC also did not include in its analyses payments made by DGS or other Commonwealth agencies to other government agencies, nonprofit organizations, banks or individuals (\$122 billion of associated contract dollars).

F. Agency Review Process

DGS reviewed BBC's prime contract and subcontract data several times during the study process. The BBC study team met with DGS staff to review the data collection process, information that the study team gathered, and summary results. DGS staff also reviewed contract and vendor information. BBC incorporated DGS's feedback in the final contract and vendor data that the study team used as part of the disparity study.

¹⁰ Examples of such industries include computers; banking; and insurance.

¹¹ Examples of industries not typically included in a disparity study include retail stores, health care providers, and farms.

CHAPTER 5.

Availability Analysis

CHAPTER 5.

Availability Analysis

BBC Research & Consulting (BBC) analyzed the availability of minority-owned businesses, woman-owned businesses, veteran-owned businesses, service-disabled veteran-owned, lesbian/gay/bisexual/transgender (LGBT)-owned businesses, and disabled-owned businesses (referred to collectively as *small diverse businesses*) that are ready, willing, and able to perform on Commonwealth of Pennsylvania (Commonwealth) construction; professional services; and goods and support services prime contracts and subcontracts.¹ Chapter 5 describes the availability analysis in five parts:

- A. Purpose of the availability analysis;
- B. Potentially available businesses;
- C. Availability database;
- D. Availability calculations; and
- E. Availability results.

Appendix E provides supporting information related to the availability analysis.

A. Purpose of the Availability Analysis

BBC examined the availability of diverse businesses for Commonwealth prime contracts and subcontracts to inform the Department of General Services' (DGS') implementation of the Small Diverse Business (SDB) Program and to use as inputs in the disparity analysis.² In the disparity analysis, BBC compared the percentage of Commonwealth contract dollars that went to diverse businesses during the study period (i.e., participation, or *utilization*) to the percentage of dollars that one might expect those businesses to receive based on their availability for specific types and sizes of Commonwealth prime contracts and subcontracts. The study period included contracts that DGS awarded between July 1, 2011 and June 30, 2016. Comparisons between participation and availability allowed BBC to determine whether any certain business groups were underutilized during the study period relative to their availability for Commonwealth work (for details, see Chapter 7).

B. Potentially Available Businesses

BBC's availability analysis focused on specific areas of work (i.e., subindustries) related to the relevant types of contracts and procurements that DGS awarded during the study period. BBC began the availability analysis by identifying the specific subindustries in which DGS spends the

¹ "Woman-owned businesses" refers to non-Hispanic white woman owned businesses. Information and results for minority woman-owned businesses are included along with their corresponding racial/ethnic groups.

² For disparity study analyses, BBC measured the availability and utilization of all diverse businesses regardless of size and revenue.

majority of its contracting dollars (for details, see Chapter 4) as well as the geographic areas in which the majority of the businesses with which DGS spends those contracting dollars are located (i.e., the *relevant geographic market area*).³

BBC then conducted extensive surveys to develop a representative, unbiased, and statistically-valid database of potentially available businesses located in the relevant geographic market area that perform work within relevant subindustries. That method of examining availability is referred to as a *custom census* and has been accepted in federal court as the preferred methodology for conducting availability analyses. The objective of the availability survey was not to collect information from each and every relevant business that is operating in the local marketplace. It was to collect information from an unbiased subset of the business population that appropriately represents the entire business population operating in Pennsylvania. That approach allowed BBC to estimate the availability of diverse businesses in an accurate, statistically-valid manner.

Overview of availability surveys. The study team conducted telephone surveys with business owners and managers to identify local businesses that are potentially available for Commonwealth prime contracts and subcontracts.⁴ BBC began the survey process by compiling a comprehensive and unbiased *phone book* of all businesses—regardless of ownership—that perform work in relevant industries and have a location within the relevant geographic market area. BBC developed that phone book based on information from a variety of data sources, including Dun & Bradstreet (D&B) Marketplace and DGS’ vendor registration list. BBC collected information about all business establishments listed under 8-digit work specialization codes that were most related to the contracts that DGS awarded during the study period. BBC obtained listings on 28,507 local businesses that do work related to those work specializations. BBC did not have working phone numbers for 3,506 of those businesses but attempted availability surveys with the remaining 25,001 business establishments.

Availability survey information. BBC worked with Customer Research International to conduct telephone surveys with the owners or managers of the identified business establishments. Survey questions covered many topics about each business including:

- Status as a private business (as opposed to a public agency or nonprofit organization);
- Status as a subsidiary or branch of another company;
- Primary lines of work;
- Interest in performing work for the Commonwealth and other government agencies;
- Interest in performing work as a prime contractor or as a subcontractor;
- Largest prime contract or subcontract bid on or performed in the previous five years;
- Race/ethnicity and gender of the owners;

³ BBC identified the relevant geographic market area for the disparity study as Pennsylvania.

⁴ The study team offered business representatives the option of completing surveys via fax or e-mail if they preferred not to complete surveys via telephone.

- Veteran status of the owners;
- Disability status of the owners; and
- LGBT status of the owners.

Potentially available businesses. BBC considered businesses to be potentially available for Commonwealth prime contracts or subcontracts if they reported having a location in the relevant geographic market area and reported possessing *all* of the following characteristics:

- Being a private sector business (as opposed to a government organization nonprofit organization);
- Having performed work relevant to Commonwealth construction; professional services; or goods and support services contracting;
- Having bid on or performed construction; professional services; or goods and support services prime contracts or subcontracts in either the public or private sector in the relevant geographic market area in the past five years; and
- Being interested in work for the Commonwealth or other government agencies.

BBC also considered the following information about businesses to determine if they were potentially available for specific prime contracts and subcontracts that DGS awards:

- The role in which they work (i.e., as a prime contractor, subcontractor, or both); and
- The largest contract on which they bid or performed in the past five years.

C. Businesses in the Availability Database

After conducting availability surveys with thousands of local businesses, BBC developed a database of information about businesses that are potentially available for Commonwealth construction; professional services; and goods and support services contracts and procurements. Information from the database allowed BBC to accurately assess the availability of businesses that are ready, willing, and able to perform work for the Commonwealth. Figure 5-1 presents the percentage of businesses in the *availability database* that were minority-, woman-, veteran-, disabled-, and LGBT-owned. The study team’s analysis included 1,872 businesses that are potentially available for specific Commonwealth construction; professional services; and goods and support services contracts and procurements that DGS awards. As shown in Figure 5-1, of those businesses:

- 26.4 percent were minority- or woman-owned;
- 7.7 percent were veteran-owned;
- 2.2 percent were disabled-owned; and
- 1 percent were LGBT-owned.

The information in Figure 5-1 reflects a simple *head count* of businesses with no analysis of their availability for specific Commonwealth contracts. Thus, it represents only a first step toward analyzing the availability of small disadvantaged businesses for Commonwealth work.

Figure 5-1.
Percentage of businesses in the availability database that were minority-, woman-, veteran-, disabled, and LGBT-owned

Note:

Numbers rounded to nearest tenth of 1 percent and thus may not sum exactly to totals.

Source:

BBC Research & Consulting availability analysis.

Business group	Availability %
Asian American-owned	2.1 %
Black American-owned	3.9 %
Hispanic American-owned	1.5 %
Native American-owned	0.5 %
Non-Hispanic white woman-owned	18.3 %
Total Minority- and Woman-owned	26.4 %
Veteran-owned	7.7 %
Disabled-owned	2.2 %
LGBT-owned	1.0 %

D. Availability Calculations

BBC analyzed information from the availability database to develop dollar-weighted estimates of the availability of diverse businesses for Commonwealth work awarded by DGS. Those estimates represent the percentage of Commonwealth contracting and procurement dollars that diverse businesses would be expected to receive based on their availability for specific types and sizes of Commonwealth prime contracts and subcontracts.

Steps to calculating availability. BBC used a bottom up, *contract-by-contract matching approach* to calculate availability. Only a portion of the businesses in the availability database was considered potentially available for any given Commonwealth prime contract or subcontract. BBC first examined the characteristics of each specific prime contract or subcontract (referred to generally as a *contract element*), including type of work and contract size. BBC then identified businesses in the availability database that perform work of that type, in that role (i.e., as a prime contractor or subcontractor), and of that size.

BBC identified the specific characteristics of each prime contract and subcontract included as part of the disparity study and then took the following steps to calculate availability for each contract element:

1. For each contract element, the study team identified businesses in the availability database that reported that they:
 - Are interested in performing construction; professional services; or goods and support services work in that particular role for that specific type of work for the Commonwealth; and
 - Have bid on or performed work of that size in the past five years.
2. The study team then counted the number of diverse businesses and *majority-owned businesses* in the availability database that met the criteria specified in Step 1.
3. The study team translated the numeric availability of businesses for the contract element into percentage availability.

BBC repeated those steps for each contract element that the study team examined as part of the disparity study. BBC multiplied the percentage availability for each contract element by the dollars associated with the contract element, added results across all contract elements, and divided by the total dollars for all contract elements. The result was dollar-weighted estimates of the availability of diverse businesses for Commonwealth contracts and procurements. Figure 5-2 provides an example of how BBC calculated the availability of minority- and woman-owned businesses for a specific subcontract associated with a professional services prime contract that DGS awarded during the study period.

BBC's availability calculations are based on prime contracts and subcontracts that DGS awarded between July 1, 2011 and June 30, 2016. A key assumption of the

availability analysis is that the contracts and procurements that DGS awarded during the study period are representative of the contracts and procurements that DGS will award in the future. If the types and sizes of the contracts and procurements that DGS awards in the future differ substantially from those that they awarded in the past, then the Commonwealth should adjust availability estimates accordingly to account for those differences.

Improvements on a simple head count of businesses. BBC used a custom census approach to calculate the availability of diverse businesses for Commonwealth work rather than using a simple *head count* of diverse businesses (e.g., simply calculating the percentage of all local businesses that are minority-, woman-, veteran-, disabled, or LGBT-owned). There are several important ways in which BBC's custom census approach to measuring availability is more precise than completing a simple head count.

BBC's approach accounts for type of work. Federal regulations suggest calculating availability based on businesses' abilities to perform specific types of work. BBC took type of work into account by examining 60 different subindustries related to construction; professional services; and goods and support services as part of estimating availability for Commonwealth prime contracts and subcontracts.

BBC's approach accounts for contractor role. The study team collected information on whether businesses work as prime contractors, subcontractors, or both. Businesses that reported working as prime contractors were considered potentially available for Commonwealth prime contracts. Businesses that reported working as subcontractors were considered potentially available for Commonwealth subcontracts. Businesses that reported working as both prime

**Figure 5-2.
Example of an availability calculation
for a Commonwealth subcontract**

On a contract that DGS awarded in 2015, the prime contractor awarded a subcontract worth \$959,440 for business services and consulting. To determine the overall availability of minority- and woman-owned businesses for that subcontract, the study team identified businesses in the availability database that:

- a. Were in business in 2015;
- b. Indicated that they performed business services and consulting;
- c. Reported bidding on work of similar or greater size in the past; and
- d. Reported interest in working as a subcontractor on Commonwealth or PennDOT projects.

The study team found 56 businesses in the availability database that met those criteria. Of those businesses, ten were minority- or woman-owned businesses. Thus, the availability of minority- and woman-owned businesses for the subcontract was 18 percent (i.e., $10/56 \times 100 = 18$).

contractors and subcontractors were considered potentially available for both Commonwealth prime contracts and subcontracts.

BBC’s approach accounts for the relative capacity of businesses. To account for the capacity of businesses to work on Commonwealth contracts, BBC considered the size—in terms of dollar value—of the prime contracts and subcontracts that a business bid on or received in the previous five years when determining whether to count that business as available for particular prime contracts or subcontracts. For each contract element, BBC considered whether businesses had previously bid on or received at least one contract of an equivalent or greater dollar value. BBC’s approach to accounting for capacity is consistent with many recent, key court decisions that have found such measures to be important to measuring availability (e.g., *Associated General Contractors of America, San Diego Chapter vs. California Department of Transportation, et al.*,⁵ *Western States Paving Company v. Washington State DOT*,⁶ *Rothe Development Corp. v. U.S. Department of Defense*,⁷ and *Engineering Contractors Association of S. Fla. Inc. vs. Metro Dade County*⁸).

BBC’s approach accounts for interest in relevant work. The study team collected information on whether businesses are interested in working on Commonwealth construction; professional services; and goods and support services work (in addition to considering several other factors related to Commonwealth prime contracts and subcontracts such as contract type and size). Businesses had to indicate that they are interested in performing such work for the Commonwealth in order to be considered potentially available for Commonwealth contracts and procurements.

BBC’s approach generates dollar-weighted results. BBC examined availability on a contract-by-contract basis and then dollar-weighted the results for different sets of contract elements. Thus, the results of relatively large contract elements contributed more to overall availability estimates than those of relatively small contract elements. That approach is consistent with relevant case law and federal regulations.

E. Availability Results

BBC estimated the availability of diverse businesses for the 49,269 relevant construction; professional services; and goods and support services prime contracts and subcontracts that DGS awarded between July 1, 2011 and June 30, 2016.

Minority-and woman-owned businesses. BBC examined the availability of minority- and woman-owned businesses for various contracts sets to assess the degree to which they are ready, willing, and able to perform various types of Commonwealth work.

⁵ *AGC, San Diego Chapter v. California DOT*, 2013 WL 1607239 (9th Cir. April 16, 2013).

⁶ *Western States Paving Co. v. Washington State DOT*, 407 F.3d 983 (9th Cir. 2005), cert. denied, 546 U.S. 1170 (2006).

⁷ *Rothe Development Corp. v. U.S. Department of Defense*, 545 F.3d 1023 (Fed. Cir. 2008).

⁸ *Engineering Contractors Association of S. Fla. Inc. vs. Metro Dade County*, 943 F. Supp. 1546 (S.D. Fla. 1996).

Overall. Figure 5-3 presents overall dollar-weighted availability estimates of the availability of minority- and woman-owned businesses for Commonwealth contracts and procurements. Overall, the availability of minority- and woman-owned businesses for the Commonwealth’s contracts and procurements is 22.1 percent. Put another way, one might expect minority- and woman-owned businesses to receive 22.1 percent of the contracting and procurement dollars that DGS awards. Non-Hispanic white woman-owned businesses (10.6%) and Asian American-owned businesses (4.9%) exhibited the highest availability among all minority- and woman-owned groups.

Figure 5-3.
Overall availability estimates by racial/ethnic and gender group

Note:
Numbers rounded to nearest tenth of 1 percent and thus may not sum exactly to totals.
For more detail and results by group, see Figure F-2 in Appendix F.
Source:
BBC Research & Consulting availability analysis.

Business group	Availability %
Asian American-owned	4.9 %
Black American-owned	4.3 %
Hispanic American-owned	2.0 %
Native American-owned	0.4 %
Non-Hispanic white woman-owned	<u>10.6 %</u>
Total Minority- and Woman-owned	22.1 %

Contract role. Many small disadvantaged businesses are small businesses and thus often work as subcontractors. Because of that tendency, it is useful to examine the availability of minority- and woman-owned businesses separately for prime contracts and subcontracts. Figure 5-4 presents those results. As shown in Figure 5-4, the availability of minority- and woman-owned businesses considered together is similar for Commonwealth prime contracts (22.2%) and subcontracts (21.4%).

Figure 5-4.
Availability estimates by contract role

Note:
Numbers rounded to nearest tenth of 1 percent and thus may not sum exactly to totals.
For more detail, see Figures F-8 and F-9 in Appendix F.
Source:
BBC Research & Consulting availability analysis.

Business group	Contract role	
	Prime contracts	Subcontracts
Asian American-owned	5.1 %	1.9 %
Black American-owned	4.5 %	1.4 %
Hispanic American-owned	2.1 %	0.5 %
Native American-owned	0.4 %	0.1 %
Non-Hispanic white woman-owned	<u>10.2 %</u>	<u>17.4 %</u>
Total Minority- and Woman-owned	22.2 %	21.4 %

Industry. BBC examined the availability of minority- and woman-owned businesses separately for Commonwealth construction; professional services; and goods and support services contracts. As shown in Figure 5-5, the availability of minority- and woman-owned businesses considered together is highest for the Commonwealth’s goods contracts (31.1%) and lowest for construction contracts (9.7%).

Figure 5-5.
Availability estimates by industry

Business group	Industry		
	Construction	Professional services	Goods and support services
Asian American-owned	0.1 %	4.8 %	13.5 %
Black American-owned	0.4 %	7.7 %	1.3 %
Hispanic American-owned	1.1 %	0.5 %	7.9 %
Native American-owned	0.0 %	0.6 %	0.3 %
Non-Hispanic white woman-owned	8.1 %	13.0 %	8.0 %
Total Minority- and Woman-owned	9.7 %	26.6 %	31.1 %

Note: Numbers rounded to nearest tenth of 1 percent and thus may not sum exactly to totals.

For more detail and results by group, see Figures F-5, F-6, and F-7 in Appendix F.

Source: BBC Research & Consulting availability analysis.

Results by time period. BBC examined the availability of minority- and woman-owned businesses separately for contracts and procurements that DGS awarded in the *early study period* (i.e., July 1, 2011 – December 31, 2013) and the *late study period* (i.e., January 1, 2014 – June 30, 2016) to determine whether the types and sizes of contracts that DGS awarded across the study period changed over time, which in turn would affect availability. As shown in Figure 5-6, the availability of minority- and woman-owned businesses considered together is similar between the early (22.7%) and late (21.6%) study periods.

Figure 5-6.
Availability estimates by time period

Business group	Time period	
	Early	Late
Asian American-owned	4.4 %	5.3 %
Black American-owned	4.5 %	4.1 %
Hispanic American-owned	2.0 %	1.9 %
Native American-owned	0.4 %	0.4 %
Non-Hispanic white woman-owned	11.4 %	9.8 %
Total Minority- and Woman-owned	22.7 %	21.6 %

Note:

Numbers rounded to nearest tenth of 1 percent and thus may not sum exactly to totals.

For more detail and results by group, see Figures F-3 and F-4 in Appendix F.

Source:

BBC Research & Consulting availability analysis.

Veteran-owned businesses. BBC also separately examined the availability of veteran-owned businesses for Commonwealth construction; professional services; and goods and support services contracts. Overall, the availability of veteran-owned businesses for the Commonwealth’s contracts and procurements is 4.6 percent.

Disabled-owned businesses. Similarly, BBC examined the overall availability of disabled-owned businesses for Commonwealth work. The availability analysis indicated that the availability of disabled-owned businesses for the contracts and procurements that DGS awards is 2.5 percent.

LGBT-owned businesses. Finally, BBC also separately examined the availability of LGBT-owned businesses for Commonwealth contracts and procurements. Overall, the availability of LGBT-owned businesses for that work is 1.7 percent.

CHAPTER 6.

Utilization Analysis

CHAPTER 6.

Utilization Analysis

Chapter 6 presents information about the participation of minority-owned businesses, woman-owned businesses, veteran-owned businesses, service-disabled veteran-owned, lesbian/gay/bisexual/transgender (LGBT)-owned businesses, and disabled-owned businesses (referred to collectively as *small diverse businesses*) in construction; professional services; and goods and support services prime contracts and subcontracts that the Department of General Services (DGS) awarded between July 1, 2011 and June 30, 2016.¹ BBC Research & Consulting (BBC) measured the participation of diverse businesses in Commonwealth of Pennsylvania (Commonwealth) contracting in terms of *utilization*—the percentage of prime contract and subcontract dollars that small disadvantaged businesses received on Commonwealth prime contracts and subcontracts during the study period.² For example, if 5 percent of Commonwealth prime contract and subcontract dollars went to non-Hispanic white woman-owned businesses on a particular set of contracts, utilization of non-Hispanic white woman-owned businesses for that set of contracts would be 5 percent. BBC considered utilization results on their own and as inputs in the disparity analysis (for details, see Chapter 7).

Minority- and Woman-owned Businesses

BBC examined the participation of minority- and woman-owned businesses for various sets of contracts that DGS awarded during the study period. The study team assessed the participation of all of those businesses considered together and separately for each relevant racial/ethnic and gender group.

Overall. Figure 6-1 presents the percentage of contracting dollars that minority- and woman-owned businesses received on construction; professional services; and goods and support services contracts and procurements that DGS awarded during the study period (including both prime contracts and subcontracts). As shown in Figure 6-1, overall, minority- and woman-owned businesses considered together received 4.5 percent of the relevant contracting dollars that DGS awarded during the study period. Minority- and woman-owned businesses that were certified as Small Diverse Businesses (SDBs) received 3.3 percent of those dollars. Non-Hispanic white woman-owned businesses (2.5%) and Asian American-owned businesses (1.0%) exhibited higher levels of participation on Commonwealth contracts than all other minority- and woman-owned groups.

¹ “Woman-owned businesses” refers to non-Hispanic white woman owned businesses. Information and results for minority woman-owned businesses are included along with their corresponding racial/ethnic groups.

² For disparity study analyses, BBC measured the availability and utilization of all diverse businesses regardless of size and revenue.

Figure 6-1.
Overall utilization results

Note:
Numbers rounded to nearest tenth of 1 percent. Numbers may not add to totals.
For more detail, see Figure F-2 in Appendix F.

Source:
BBC Research & Consulting utilization analysis.

Utilization %	
Minority- and Woman-owned	
Asian American-owned	1.0 %
Black American-owned	0.7 %
Hispanic American-owned	0.2 %
Native American-owned	0.0 %
Non-Hispanic white woman-owned	2.5 %
Total Minority- and Woman-owned	4.5 %
SDBs	
Asian American-owned	1.0 %
Black American-owned	0.6 %
Hispanic American-owned	0.1 %
Native American-owned	0.0 %
Non-Hispanic white woman-owned	1.6 %
Total SDBs	3.3 %

Contract Role. Many minority- and woman-owned businesses often work as subcontractors. Because of that tendency, it is useful to examine the participation of minority- and woman-owned businesses separately for prime contracts and subcontracts. Figure 6-2 presents those results. As shown in Figure 6-2, the participation of minority- and woman-owned businesses considered together was much higher in Commonwealth subcontracts (30.3%) than in prime contracts (3.0%). However, the vast majority of contracting dollars that the Commonwealth awarded during the study period were associated with prime contracts.

Figure 6-2.
Utilization results by contract role

Numbers rounded to nearest tenth of 1 percent.
Numbers may not add to totals.
For more detail, see Figures F-8 and F-9 in Appendix F.

Source:
BBC Research & Consulting utilization analysis.

Business group	Contract role	
	Prime contracts	Subcontracts
Asian American-owned	0.3 %	12.7 %
Black American-owned	0.6 %	2.3 %
Hispanic American-owned	0.1 %	1.5 %
Native American-owned	0.0 %	0.2 %
Non-Hispanic white woman-owned	1.9 %	13.6 %
Total Minority- and Woman-owned	3.0 %	30.3 %

Industry. BBC examined the participation of minority- and woman-owned businesses separately for the Commonwealth’s construction; professional services; and goods and support services contracts. As shown in Figure 6-3, the participation of minority- and woman-owned businesses considered together was highest in the Commonwealth’s professional services contracts (6.0%) and lowest in goods and support services contracts (2.2%).

Figure 6-3.
Utilization results by relevant industry

Business group	Industry		
	Construction	Professional services	Goods and support services
Asian American-owned	0.5 %	1.6 %	0.2 %
Black American-owned	0.3 %	1.0 %	0.6 %
Hispanic American-owned	0.1 %	0.3 %	0.0 %
Native American-owned	0.0 %	0.1 %	0.0 %
Non-Hispanic white woman-owned	2.4 %	3.0 %	1.4 %
Total Minority- and Woman-owned	3.3 %	6.0 %	2.2 %

Note: Numbers rounded to nearest tenth of 1 percent. Numbers may not add to totals.

For more detail, see Figures F-5, F-6, and F-7 in Appendix F.

Source: BBC Research & Consulting utilization analysis.

Time period. BBC also examined the participation of minority- and woman-owned businesses separately for contracts and procurements that DGS awarded in the *early study period* (i.e., July 1, 2011 – June 30, 2014) and the *late study period* (i.e., July 1, 2014 – June 30, 2016) to determine whether their participation in Commonwealth contracts changed over time. As shown in Figure 6-4, the participation of minority- and woman-owned businesses considered together was somewhat great in the early study period (5.4%) than in the late study period (3.7%).

Figure 6-4.
Utilization results by time period

Business group	Time period	
	Early	Late
Asian American-owned	1.4 %	0.6 %
Black American-owned	0.8 %	0.6 %
Hispanic American-owned	0.2 %	0.2 %
Native American-owned	0.1 %	0.0 %
Non-Hispanic white woman-owned	2.8 %	2.2 %
Total Minority- and Woman-owned	5.4 %	3.7 %

Numbers rounded to nearest tenth of 1 percent.
Numbers may not add to totals.

For more detail, see Figures F-3 and F-4 in Appendix F.

Source:

BBC Research & Consulting utilization analysis.

Concentration of dollars. BBC analyzed whether the dollars that minority- and woman-owned businesses received on Commonwealth contracts during the study period were spread across a relatively large number of businesses or were concentrated with a relatively small number of businesses. The study team assessed that question by calculating:

- The number of different businesses within each relevant minority- and woman-owned business group that received contracting dollars during the study period; and
- The number of different businesses within each relevant minority- and woman-owned business group that accounted for 75 percent of the group’s total contracting dollars during the study period.

Figure 6-5 presents those results. Overall, 522 different minority- and woman-owned businesses participated in Commonwealth contracts during the study period. One hundred forty of those businesses, or 26.8 percent of all utilized minority- and woman-owned businesses, accounted for

75 percent of the total contracting dollars that minority- and woman-owned businesses received during the study period.

Figure 6-5.
Concentration of dollars that went to minority- and woman-owned businesses

Business group	Utilized businesses	Number of businesses accounting for 75% of dollars	% of businesses accounting for 75% of dollars
Asian American-owned	65	11	16.9%
Black American-owned	53	8	15.1%
Hispanic American-owned	30	7	23.3%
Native American-owned	9	3	33.3%
Non-Hispanic white woman-owned	363	111	30.6%
Total Minority- and Woman-owned	522	140	26.8%

Note: The sum of utilized businesses by group is not equal to total utilized minority- and woman-owned businesses, because two minority-owned businesses that received work during the study period were of unknown race/ethnicity.

Source: BBC Research & Consulting utilization analysis.

Veteran-owned Businesses

BBC also separately examined the participation of veteran-owned businesses in Commonwealth construction; professional services; and goods and support services contracts. Overall, the participation of veteran-owned businesses for the Commonwealth’s contracts and procurements was 0.8 percent.³

Disabled-owned Businesses

Similarly, BBC examined the participation of disabled-owned businesses in Commonwealth work. The availability analysis indicated that the participation of disabled-owned businesses for the contracts and procurements that DGS awarded during the study period was 0.3 percent.

LGBT-owned Businesses

Finally, BBC separately examined the participation of LGBT-owned businesses in Commonwealth contracts and procurements. Overall, the participation of LGBT-owned businesses for that work was 0.04 percent.

³ For disparity study analyses, service-disabled veterans were classified as either veteran-owned businesses or disabled-owned businesses so as to avoid double-counting.

CHAPTER 7.

Disparity Analysis

CHAPTER 7.

Disparity Analysis

The disparity analysis compared the participation of minority-owned businesses, woman-owned businesses, veteran-owned businesses, service-disabled veteran-owned, lesbian/gay/bisexual/transgender (LGBT)-owned businesses, and disabled-owned businesses (referred to collectively as *diverse businesses*) in contracts that the Commonwealth of Pennsylvania (the Commonwealth) awarded between July 1, 2011 and June 30, 2016 (i.e., the study period) to the contract dollars that those businesses might be expected to receive based on their availability for that work.¹ The analysis focused on construction; professional services; and goods and support services contracts and procurements. Chapter 7 presents the disparity analysis in four parts:

- A. Overview;
- B. Disparity analysis results; and
- C. Statistical significance.

A. Overview

As part of the disparity analysis, BBC Research & Consulting (BBC) compared the actual participation, or *utilization*, of diverse businesses in Commonwealth prime contracts and subcontracts with the percentage of contract dollars that those businesses might be expected to receive based on their availability for that work. BBC expressed both actual participation and availability as percentages of the total dollars associated with a particular set of contracts. BBC then calculated a *disparity index* to help compare participation and availability results across relevant business groups and contract sets using the following formula:

$$\frac{\% \text{ participation}}{\% \text{ availability}} \times 100$$

A disparity index of 100 indicates *parity* between actual participation and availability. That is, participation of a particular business group was largely in line with its availability. A disparity index of less than 100 indicates a *disparity* between participation and availability. That is, a particular business group was *underutilized* relative to its availability. Finally, a disparity index of less than 80 indicates a *substantial disparity* between participation and availability. That is, a particular business group was substantially underutilized relative to its availability.²

¹ “Woman-owned businesses” refers to non-Hispanic white woman owned businesses. Information and results for minority woman-owned businesses are included along with their corresponding racial/ethnic groups. For disparity study analyses, service-disabled veterans were classified as either veteran-owned businesses or disabled-owned businesses so as to avoid double-counting.

² Many courts have deemed disparity indices below 80 as being *substantial* and have accepted such outcomes as evidence of adverse conditions for a particular business group (e.g., see *Rothe Development Corp v. U.S. Dept of Defense*, 545 F.3d 1023, 1041; *Eng’g Contractors Ass’n of South Florida, Inc. v. Metropolitan Dade County*, 122 F.3d at 914, 923 (11th Circuit 1997); and

The disparity analysis results that BBC presents in Chapter 7 summarize detailed results tables that are presented in Appendix F. Appendix F presents disparity analysis results for different sets of contracts. For example, Figure 7-1, which is identical to Figure F-2 in Appendix F, presents disparity analysis results for all Commonwealth contracts that BBC examined as part of the study. Appendix F includes analogous tables for different subsets of contracts including:

- Construction; professional services; and goods and support services contracts;
- Prime contracts and subcontracts; and
- Contracts that the Department of General Services (DGS) awarded in different time periods.

The heading of each table in Appendix F provides a description of the subset of contracts that BBC analyzed for that particular table.

A review of Figure 7-1 helps to introduce the calculations and format of all of the disparity analysis tables in Appendix F. As illustrated in Figure 7-1, the disparity analysis tables present information about minority- and woman-owned businesses in separate rows:³

- “All businesses” in row (1) pertains to information about all businesses, regardless of the race/ethnicity and gender of their owners.
- Row (2) presents results for all minority- and woman-owned businesses considered together, regardless of whether they were certified as Small Diverse Businesses (SDBs).
- Row (3) presents results for all non-Hispanic white woman-owned businesses, regardless of whether they were certified as SDBs.
- Row (4) presents results for all minority-owned businesses, regardless of whether they were certified as SDBs.
- Rows (5) through (10) present results for businesses of each individual racial/ethnic group, regardless of whether they were certified as SDBs.

Utilization results. Each disparity analysis table includes the same columns and rows:

- Column (a) presents the total number of prime contracts and subcontracts (i.e., contract elements) that BBC analyzed as part of the contract set. As shown in row (1) of column (a) of Figure 7-1, BBC analyzed 49,269 contract elements. The value presented in column (a) for each individual business group represents the number of contract elements in which businesses of that particular group participated (e.g., as shown in row (6) of column (a), Asian American-owned businesses participated in 241 prime contracts and subcontracts).

Concrete Works of Colo., Inc. v. City and County of Denver, 36 F.3d 1513, 1524 (10th Cir. 1994). See Appendix B for additional discussion of those and other cases.

³ Disparity analysis results for veteran-owned businesses, disabled-owned businesses, and LGBT-owned businesses are not presented in the disparity analysis tables in Appendix F. However, those results are discussed later in Chapter 7.

Figure 7-1.
Example of a disparity analysis table from Appendix F (same as Figure F-2 in Appendix F)

Business Group	(a) Number of contract elements	(b) Total dollars (thousands)	(c) Estimated total dollars (thousands)*	(d) Utilization percentage	(e) Availability percentage	(f) Utilization - Availability	(g) Disparity index
(1) All businesses	49,269	\$10,770,072	\$10,770,072				
(2) Minority and woman-owned businesses	2,413	\$485,932	\$485,932	4.5	22.1	-17.6	20.4
(3) Non-Hispanic white woman-owned	1,576	\$271,752	\$271,752	2.5	10.6	-8.1	23.8
(4) Minority-owned	837	\$214,180	\$214,180	2.0	11.6	-9.6	17.2
(5) Black American-owned	383	\$76,157	\$78,211	0.7	4.3	-3.6	16.8
(6) Asian American-owned	241	\$106,609	\$109,484	1.0	4.9	-3.9	20.8
(7) Hispanic American-owned	157	\$21,199	\$21,771	0.2	2.0	-1.8	10.3
(8) Native American-owned	43	\$4,590	\$4,714	0.0	0.4	-0.3	11.7
(9) Unknown minority-owned	13	\$5,625					
(10) SDB-certified	1,117	\$356,316	\$356,316	3.3			
(11) Non-Hispanic white woman-owned SDB	494	\$118,129	\$171,151	1.6			
(12) Minority-owned SDB	440	\$127,802	\$185,165	1.7			
(13) Black American-owned SDB	239	\$44,712	\$67,591	0.6			
(14) Asian American-owned SDB	139	\$69,983	\$105,794	1.0			
(15) Hispanic American-owned SDB	44	\$7,264	\$10,981	0.1			
(16) Native American-owned SDB	6	\$529	\$800	0.0			
(17) Unknown minority-owned SDB	12	\$5,314					

Note: Numbers are rounded to the nearest thousand dollars or tenth of 1 percent.

*Unknown minority-owned businesses and unknown minority-owned SDBs were allocated to minority and SDB subgroups proportional to the known total dollars of those groups. For example, if total dollars of Black American-owned businesses (column b, row 6) accounted for 25 percent of total minority-owned business dollars (column b, row 4), then 25 percent of column b, row 9 would be added to column b, row 6 and the sum would be shown in column c, row 6.

Source: BBC Research & Consulting disparity analysis.

- Column (b) presents the dollars (in thousands) that were associated with the set of contract elements. As shown in row (1) of column (b) of Figure 7-1, BBC examined approximately \$10.8 billion for the entire set of contract elements. The dollar totals include both prime contract and subcontract dollars. The value presented in column (b) for each individual business group represents the dollars that the businesses of that particular group received on the set of contract elements (e.g., as shown in row (6) of column (b), Asian American-owned businesses received approximately \$107 million).
- Column (c) presents the dollars (in thousands) that were associated with the set of contract elements after adjusting those dollars for businesses that BBC identified as minority-owned but for which specific race/ethnicity information was not available. The dollar totals include both prime contract and subcontract dollars.
- Column (d) presents the participation of each minority- and woman-owned business group as a percentage of total dollars associated with the set of contract elements. BBC calculated each percentage in column (d) by dividing the dollars going to a particular group in column (c) by the total dollars associated with the set of contract elements shown in row (1) of column (c), and then expressing the result as a percentage (e.g., for Asian American-owned businesses, the study team divided \$109 million by \$10.8 billion and multiplied by 100 for a result of 1.0 %, as shown in row (6) of column (d)).
- The bottom half of Figure 7-1 presents utilization results for minority- and woman-owned businesses that were SDB-certified.

Availability results. Column (e) of Figure 7-1 presents the availability of each minority- and woman-owned business group for all contract elements that the study team analyzed as part of the contract set (e.g., as shown in row (6) of column (e), the availability of Asian American-owned businesses is 4.9%). Availability estimates, which are represented as percentages of the total contracting dollars associated with the set of contracts, serve as benchmarks against which to compare the participation of specific groups for specific sets of contracts.

Differences between participation and availability. The next step in analyzing whether there was a disparity between the participation and availability of diverse businesses is to subtract the participation percentage from the availability percentage. Column (f) of Figure 7-1 presents the percentage point difference between participation and availability for each relevant racial/ethnic and gender group. For example, as presented in row (6) of column (f) of Figure 7-1, the participation of Asian American-owned businesses in Commonwealth contracts was 3.9 percentage points less than their availability.

Disparity indices. BBC also calculated a disparity index for each relevant racial/ethnic and gender group. Column (g) of Figure 7-1 presents disparity indices for each relevant racial/ethnic and gender group. For example, as reported in row (6) of column (g), the disparity index for Asian American-owned businesses was approximately 21, indicating that Asian American-owned businesses received approximately \$0.21 for every dollar that they might be expected to receive based on their availability for prime contracts and subcontracts that DGS awarded during the study period.

BBC applied the following rules when disparity indices were exceedingly large or could not be calculated because the study team did not identify any businesses of a particular group as available for a particular contract set:

- When calculations showed a disparity index exceeding 200, BBC reported an index of “200+.” A disparity index of 200+ means that participation was more than twice as much as availability for a particular group for a particular set of contracts.
- When there was no participation and no availability for a particular group for a particular set of contracts, BBC reported a disparity index of “100,” indicating parity.

B. Disparity Analysis Results

BBC measured disparities between the participation and availability of diverse businesses for the construction; professional services; and goods and support services prime contracts and subcontracts that DGS awarded during the study period.

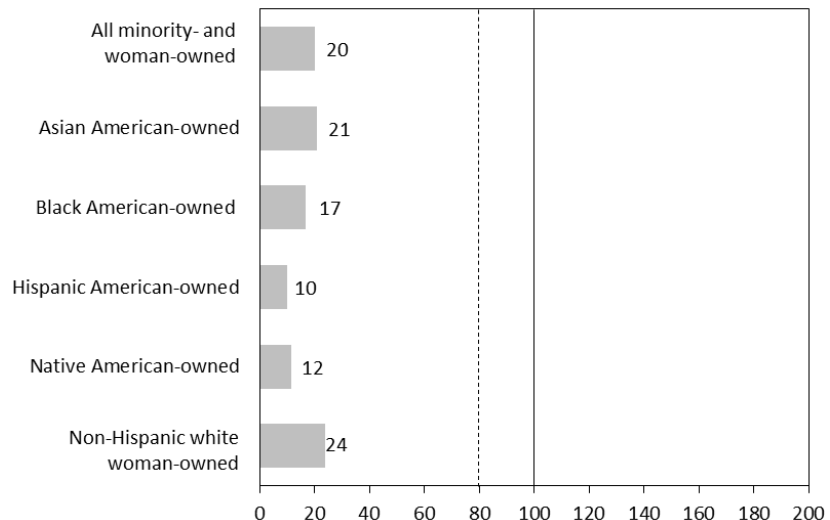
Minority- and woman-owned businesses. BBC examined the availability of minority- and woman-owned businesses for various contracts sets to assess the degree to which they may have been underutilized on various types of Commonwealth work.

Overall. Figure 7-2 presents disparity indices for minority- and woman-owned businesses for all relevant prime contracts and subcontracts that DGS awarded during the study period. The line down the center of the graph shows a disparity index level of 100, which indicates parity between participation and availability. Disparity indices of less than 100 indicate disparities between participation and availability (i.e., underutilization). For reference, a line is also drawn at a disparity index level of 80, because some courts use 80 as the threshold for what indicates a substantial disparity.

Figure 7-2.
Disparity indices by group

Note:
For more detail, see Figure F-2 in Appendix F.

Source:
BBC Research & Consulting disparity analysis.



As shown in Figure 7-2, overall, the participation of minority- and woman-owned businesses in contracts that DGS awarded during the study period was substantially lower than what one might expect based on the availability of those businesses for that work. The disparity index of 20 indicates that minority- and woman-owned businesses received approximately \$0.20 for

every dollar that they might be expected to receive based on their availability for the relevant prime contracts and subcontracts that DGS awarded during the study period. Disparity analysis results by individual racial/ethnic and gender group indicated that all relevant groups exhibited substantial disparities on DGS contracts and procurements.

Contract role. Subcontracts tend to be much smaller in size than prime contracts, and as a result, are often more accessible than prime contracts to minority- and woman-owned businesses. Thus, it might be reasonable to expect better outcomes for minority- and woman-owned businesses on subcontracts than prime contracts. Figure 7-3 presents disparity indices for all relevant racial/ethnic and gender groups separately for prime contracts and subcontracts. As shown in Figure 7-3, minority- and woman-owned businesses considered together showed a substantial disparity for prime contracts (disparity index of 13) but not for subcontracts (disparity index of 142). Results for individual groups indicated that:

- All groups showed substantial disparities for prime contracts.
- Only non-Hispanic white woman-owned businesses showed a substantial disparity on subcontracts (disparity index of 78).

Note that the vast majority of the dollars that the project team analyzed as part of the disparity study were prime contract dollars.

Figure 7-3.
Disparity indices for prime contracts and subcontracts

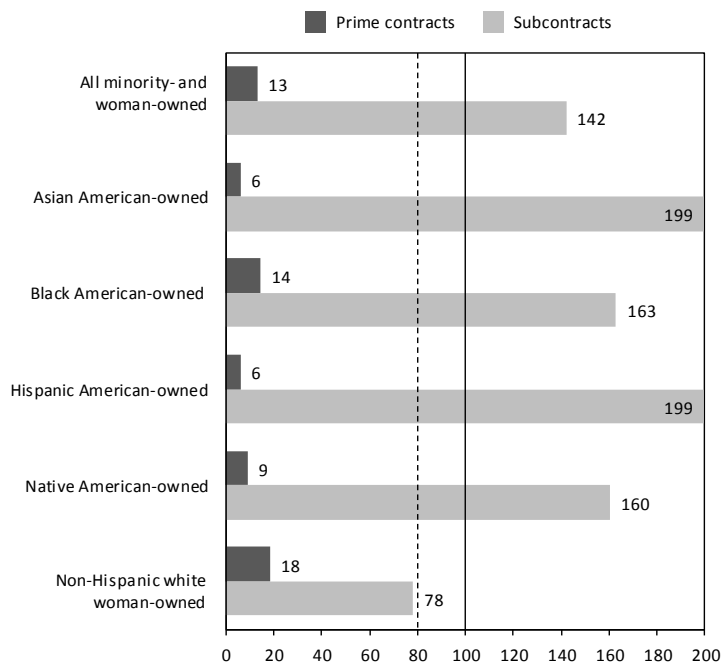
Note:

For more detail, see Figures F-8 and F-9 in Appendix F.

When calculations showed a disparity index exceeding 200, BBC reported an index of "200+." A disparity index of 200+ means that participation was more than twice as much as availability for a particular group for a particular set of contracts.

Source:

BBC Research & Consulting disparity analysis.



Industry. BBC examined disparity analysis results separately for the Commonwealth’s construction; professional services; and goods and support services contracts. Figure 7-4 presents disparity indices for all relevant groups by contracting area. Minority- and woman-owned businesses considered together showed substantial disparities for construction contracts (disparity index of 34); professional services contracts (disparity index of 23); and goods and

support services contracts (disparity index of 7). Disparity analyses results differed by contracting area and group:

- All groups showed disparities for construction contracts except Asian American-owned businesses (disparity index of 200+).
- All groups showed substantial disparities for professional services contracts.
- All groups showed substantial disparities for goods and support services contracts.

Figure 7-4.
Disparity analysis results by relevant industry

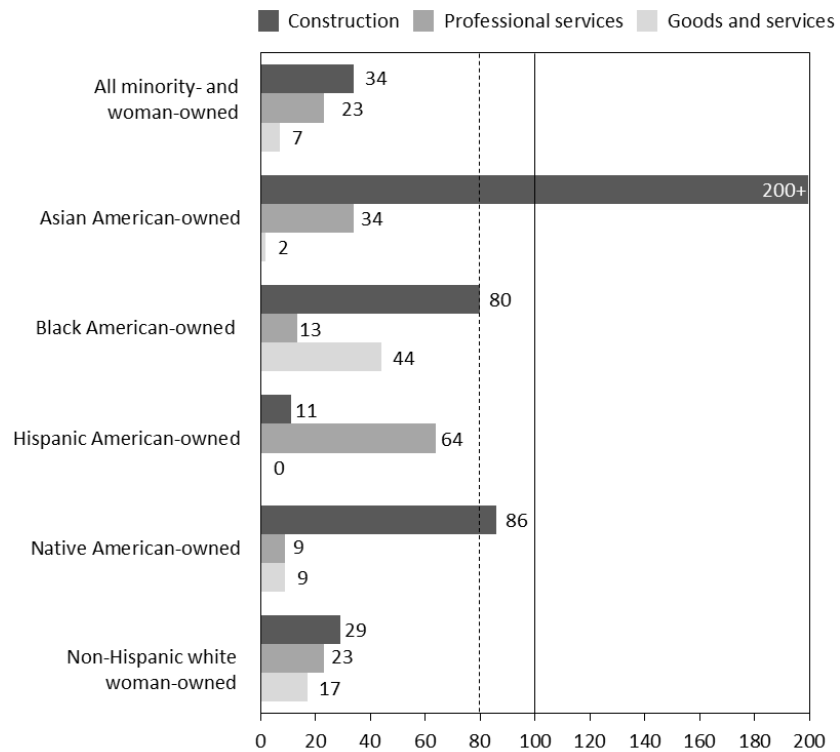
Note:

For more detail, see Figures F-5, F-6, and F-7 in Appendix F.

When calculations showed a disparity index exceeding 200, BBC reported an index of "200+." A disparity index of 200+ means that participation was more than twice as much as availability for a particular group for a particular set of contracts.

Source:

BBC Research & Consulting disparity analysis.

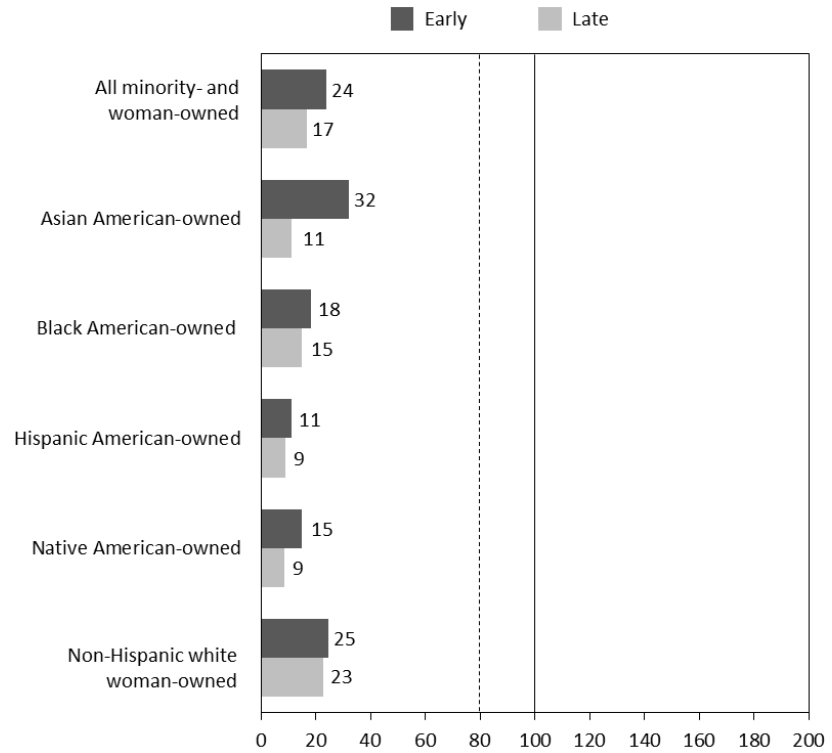


Time period. BBC also examined disparity analysis results separately for two separate time periods: July 1, 2011 through December 31, 2013 (*early* study period) and January 1, 2014 through June 30, 2016 (*late* study period). That information might help the Commonwealth determine whether there were different outcomes for minority- and woman-owned businesses as the country moved further and further from the economic downturn that began in 2008. Figure 7-5 presents disparity indices for all relevant racial/ethnic and gender groups separately for the early and late study periods. As shown in Figure 7-5, minority- and woman-owned businesses showed substantial disparities for contracts that the Commonwealth awarded in the early study period (disparity index of 24) and the late study period (disparity index of 17). All individual groups showed substantial disparities in both time periods.

Figure 7-5.
Disparity indices for
early and late study
period

Note:
 For more detail, see Figures F-3 and
 F-4 in Appendix F.

Source:
 BBC Research & Consulting disparity
 analysis.

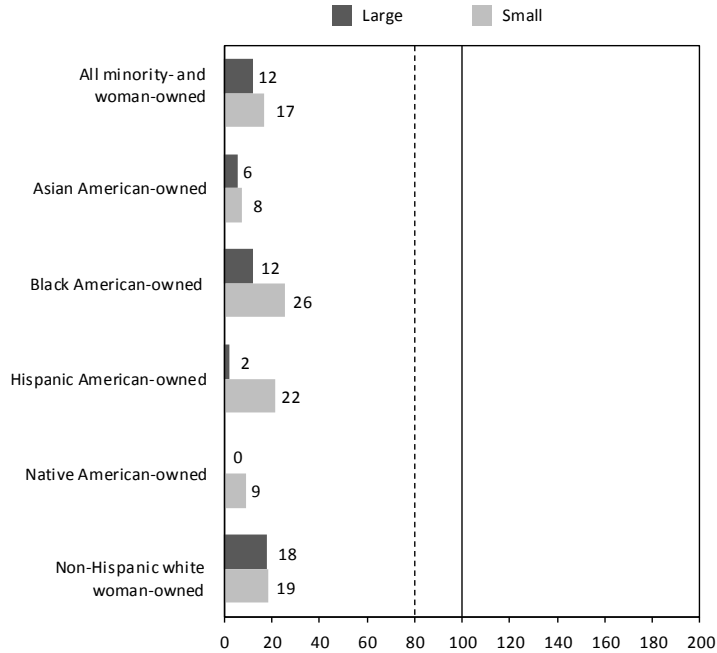


Contract size. BBC compared disparity analysis results for *large* prime contracts and *small* prime contracts that DGS awarded during the study period to assess whether contract size affected disparity analysis results for prime contracts. *Large* prime contracts were defined as contracts or procurements worth more than \$500,000, and *small* prime contracts were defined as contracts or procurements worth \$500,000 or less. Figure 7-6 presents disparity indices for all relevant groups separately for large and small prime contracts. Overall, minority- and woman-owned businesses exhibited substantial disparities for both large prime contracts (disparity index of 12) and small prime contracts (disparity index of 17). All individual groups showed substantial disparities for both large and small prime contracts.

Figure 7-6.
Disparity indices for
large and small prime
contracts

Note:
 For more detail, see Figures F-10 and
 F-11 in Appendix F.

Source:
 BBC Research & Consulting disparity
 analysis.



Veteran-owned Businesses

BBC compared participation to availability separately for veteran-owned businesses in Commonwealth contracting. Veteran-owned businesses exhibited a disparity index of 18, indicating that their actual participation in Commonwealth contracting was substantially less than their availability.

Disabled-owned Businesses

Similarly, BBC compared participation to availability for disabled-owned businesses in Commonwealth work. The disparity analysis indicated that disabled-owned businesses exhibited a disparity index of 11, indicating that their actual participation in Commonwealth contracting was substantially less than their availability.

LGBT-owned Businesses

Finally, BBC compared participation to availability separately for LGBT-owned businesses in Commonwealth work. The disparity analysis indicated that LGBT-owned businesses exhibited a disparity index of 2, indicating that their actual participation in Commonwealth contracting was substantially less than their availability.

C. Statistical Significance

Statistical significance tests allow researchers to test the degree to which they can reject random chance as an explanation for any observed quantitative differences. In other words, a statistically significant difference is one that one can consider to be reliable or *real*.

Monte Carlo analysis. BBC used an algorithm that relies on repeated, random simulations to examine the statistical significance of disparity analysis results. That approach is referred to as a

Monte Carlo analysis. Figure 7-7 describes how the study team used Monte Carlo to test the statistical significance of disparity analysis results.

Figure 7-7.
Monte Carlo Analysis

BBC used a Monte Carlo approach to randomly select businesses to *win* each individual contract element that the study team included in its analyses. For each contract element, BBC's availability database provided information on individual businesses that are potentially available for that contract element based on type of work, contractor role, and contract size. BBC assumed that each available business had an equal chance of winning the contract element, so the odds of a business from a certain group winning it were equal to the number of businesses from that group available for it divided by the total number of businesses available for it. The Monte Carlo simulation then randomly chose a business from the pool of available businesses to win the contract element.

The Monte Carlo simulation repeated the above process for all contract elements in a particular contract set. The output of a single Monte Carlo simulation for all contract elements in the set represented the simulated participation of small disadvantaged businesses for that set of contract elements. The entire Monte Carlo simulation was then repeated 1 million times for each contract set. The combined output from all 1 million simulations represented a probability distribution of the overall participation of small disadvantaged businesses if contracts were awarded randomly based only on the availability of relevant businesses working in the local marketplace.

The output of the Monte Carlo simulations represents the number of simulations out of 1 million that produced simulated participation that was equal or below the actual observed participation for each racial/ethnic and gender group and for each set of contracts. If that number was less than or equal to 25,000 (i.e., 2.5% of the total number of simulations), then BBC considered the corresponding disparity index to be statistically significant at the 95 percent confidence level. If that number was less than or equal to 50,000 (i.e., 5.0% of the total number of simulations), then BBC considered that disparity index to be statistically significant at the 90 percent confidence level.

Results. BBC used Monte Carlo analysis to test whether the disparities that the study team observed on all contracts considered together were statistically significant. BBC identified substantial disparities for minority- and woman-owned businesses considered together and for certain racial/ethnic and gender groups considered separately. Examining whether disparities are statistically significant is particularly instructive for no-goal contracts and prime contracts, because they provide information about outcomes for minority- and woman-owned businesses in the absence of DGS's use of race- and gender-conscious measures.

Figure 7-8 presents results from the Monte Carlo analysis as they relate to the statistical significance of disparities that the study team observed on prime contracts. We tested statistical significance for all minority- and woman-owned businesses considered together and separately for non-Hispanic white woman-owned businesses and for all minority-owned businesses considered together.

Figure 7-8.
Monte Carlo simulation results for disparity analysis results

Race/Ethnicity and Gender	Disparity Index	Number of simulation runs out of one million that replicated observed utilization	Probability of observed disparity occurring due to "chance"
Total minority-/woman-owned	20	0	<0.1 %
White woman-owned	24	0	<0.1 %
Total minority-owned	17	0	<0.1 %
Black American-owned	17	0	<0.1 %
Asian American-owned	21	0	<0.1 %
Hispanic American-owned	10	0	<0.1 %
Native American-owned	12	0	<0.1 %

Note: Numbers rounded to nearest tenth of 1 percent.
 Numbers may not add to totals due to rounding.

Source: BBC Research & Consulting

As shown in Figure 7-8, results from the Monte Carlo analysis indicated that there were disparities on all contracts for all minority- and woman-owned businesses, Non-Hispanic white woman-owned businesses, all minority-owned businesses, Asian American-owned businesses, Black American-owned businesses, Hispanic American-owned businesses, and Native American-owned businesses, and that those disparities were statistically significant at the 95 percent confidence level.

CHAPTER 8.

Program Measures

CHAPTER 8.

Program Measures

The Commonwealth of Pennsylvania (The Commonwealth) and its Department of General Services (DGS) launched the Small Diverse Business (SDB) Program and the Small Business (SB) Program¹ in 2012 to promote the economic growth and success of small businesses throughout Pennsylvania. As part of its implementation of those programs, DGS uses various *race- and gender-neutral measures* to encourage the participation of small businesses and small diverse businesses in its state contracting. Race- and gender-neutral measures are measures that are designed to encourage the participation of all businesses—or, all small businesses—in an organization’s contracting and are not limited to minority- and woman-owned businesses. In contrast, *race- and gender-conscious measures* are measures that are designed to specifically encourage the participation of minority- and woman-owned businesses in an organization’s contracting (e.g., using contract goals on individual contracts). DGS does use race- and gender-conscious measures as part of the SDB Program.

As part of meeting the *narrow tailoring* requirement of the strict scrutiny standard of constitutional review, organizations that implement minority- and woman-owned business programs must meet the maximum feasible portion of any overall annual minority- and woman-owned business participation goals through the use of race- and gender-neutral measures (for details, see Chapter 2 and Appendix B). If an agency cannot meet its overall goals through the use of race- and gender-neutral measures alone, then it can also consider using race- and gender-conscious measures.

BBC Research & Consulting (BBC) reviewed measures that DGS currently uses to encourage the participation of small and small diverse businesses in its contracting. In addition, BBC reviewed race- and gender-neutral measures that other organizations in Pennsylvania use. That information is instructive because it allows an assessment of the measures that DGS is currently using and an assessment of additional measures that the organization could consider using in the future. BBC reviews DGS’s program measures in three parts:

- A. Race- and gender-neutral measures;
- B. Race- and gender-conscious measures; and
- C. Other organizations’ program measures.

A. Race- and Gender-Neutral Measures

DGS uses myriad race- and gender-neutral measures to encourage the participation of small and small diverse businesses—including many minority- and woman-owned businesses—in its

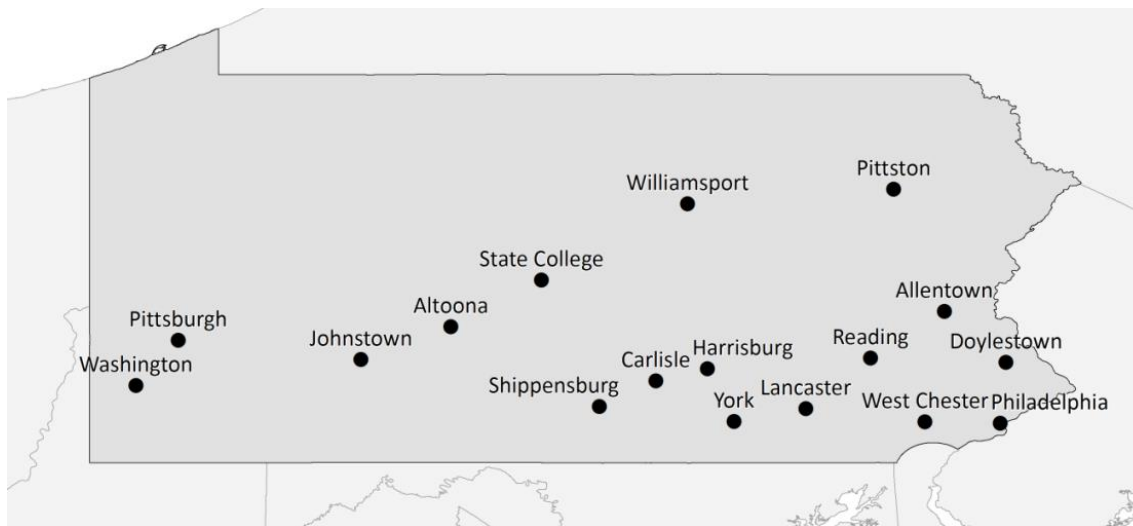
¹ The Small Business Procurement Initiative (SBPI) is part of DGS’ Small Business (SB) Program.

contracting. DGS uses the following types of race- and gender-neutral measures as part of its implementation of the SDB and SB Programs.

- Outreach efforts;
- Mentor-protégé program;
- Prompt payment;
- Bidding opportunities reserved for small businesses; and
- Technical assistance.

Outreach efforts. DGS is involved in various outreach efforts designed to support business development. DGS participates in business development events to discuss its SDB and SB Programs and to disseminate information about Commonwealth contracting opportunities. During the study period, DGS hosted or participated in more than 80 business development events in locations across Pennsylvania, including the locations presented in Figure 8-1.

Figure 8-1.
CDGS business outreach event locations, 2011-2016



Source: BBC Research & Consulting.

Presentations and networking at business development events. DGS participates in business development events organized by minority business associations, universities, and organizational partners across Pennsylvania. At those events, DGS presents information about contracting opportunities with the Commonwealth, particularly about contracting opportunities for small and diverse businesses. At those events, DGS also often meets with vendors using a “speed dating” format where vendors have an opportunity to pitch their services, and DGS can explain its small business programs and opportunities. During the study period, DGS was a keynote speaker and participant at more than 80 business development events hosted by organizations such as the Pennsylvania Diversity Coalition, Kutztown University Small Business Development Center, the Hispanic Chamber of Commerce – Philadelphia, the Pennsylvania Bar Association, and the Bucks County Office of Economic and Business Development.

Event and training notices. DGS hosts state contracting workshops and trainings that are designed to help small businesses and small diverse businesses participate in Commonwealth contracting. DGS advertises those workshops and other relevant business development events to community partners, business development organizations, its database of small business owners, and on its website.

Contracting opportunity notifications. DGS advertises its contracting opportunities through postings on its online procurement management system, Pennsylvania eMarketplace. DGS also sends courtesy e-mails directly to small businesses about contract opportunities that may correspond to their work types and interests. DGS's e-mail notifications also invite small business owners to participate in pre-proposal meetings to meet the prime contractors that are bidding on those projects.

Mentor-protégé program. As part of the SDB Program, DGS launched a mentor-protégé program in March 2018. The goal of the program is to provide developmental assistance to DGS-verified SDBs to help them successfully bid and perform on Commonwealth contracts. Participation by SDBs is voluntary. The program aims to build SDB capacity, facilitate knowledge transfer, and promote business growth. SDBs can suggest a mentor or request that DGS pair them with a mentor. Both prime and subcontractors can serve as mentors, and SDBs can serve as mentors to other SDBs. The mentor and the SDB firm enter into a Mentor Protégé Program (MPP) Agreement, which defines their relationship and any of the SDB's development goals. MPP Agreements can last for up to two years.

Prompt payment. The Pennsylvania procurement code requires DGS and other Commonwealth agencies to pay prime contractors within 45 days of them completing their project work. In addition, the procurement code requires that all subcontractors, including small and small diverse businesses, be paid within 14 days of when the prime contractor receives payment for services from the Commonwealth.² If the prime contractor fails to do so, the small business or subcontractor may bring action on the prime contractor's payment bond.³

Technical assistance. DGS works with local partners, chambers of commerce, and Procurement Technical Assistance Centers (PTACs) across Pennsylvania to provide technical support and other training resources to small business owners interested in working with the Commonwealth.

Supplier Portal and e-Alert. Small businesses can register with DGS' Pennsylvania Supplier Portal so that they can submit electronic bids for contracts and manage their companies' information. Small business owners can also opt into an e-alert subscription service through eMarketplace to receive e-mail notifications about bid opportunities that correspond to their work type(s).

Training workshops. DGS conducts workshops across Pennsylvania designed to help small business owners understand how to do business with the Commonwealth. Those workshops

² Pennsylvania Procurement Handbook, Part 1, Chapter 18.

³ Pennsylvania Procurement Handbook, Part 1, Chapter 38.

cover topics such as how to self-certify as a small business and verify as a small diverse business; how to obtain a vendor number; and how to research business opportunities with the Commonwealth. At the workshops, DGS also provides information about the main types of procurement processes that the Commonwealth uses and highlights any changes to procurement procedures that encourage the participation of small and small diverse businesses. DGS hosts the workshops with a variety of partners, including local chambers of commerce, business organizations, and PTACs.

Certification assistance. DGS provides one-on-one assistance to small business owners who want to self-certify as small businesses or become verified as small diverse businesses with the Commonwealth. DGS offers that assistance via telephone and through in-person training.

Procurement management system training. DGS offers training to all businesses about how to navigate and search for contract opportunities using eMarketplace. DGS also helps prime contractors strategize about how to include small diverse businesses in their bids.

Access to capital and business planning resources. DGS does not provide business loans or business planning assistance to small businesses directly. However, the agency refers small businesses to other organizations that do offer those services, such as the Pennsylvania Department of Community and Economic Development and the United States Small Business Administration.

Match-making events. In the past, DGS has hosted match-making events to connect prime contractors and subcontractors. For example, the agency sponsored an event where Information Technology (IT) services vendors and SDBs could sign up to meet each other and network to build project teams for future contracting opportunities.

B. Race- and Gender-Conscious Measures

DGS does use race- and gender-conscious measures as part of the SDB Program. These measures are focused on increasing the participation of certified SDBs, many of which are minority- and woman owned businesses, and include establishing minimum participation levels (MPLs) for certified SDBs on certain construction contracts.

Using evaluation preferences for SDBs on all best value procurements. Because DGS's use of the above measures includes many minority- and woman-owned businesses, there may be certain legal considerations—including meeting the *strict scrutiny standard of constitutional review*—that the department might consider making in its implementation of the SDB Program. Those legal considerations are described in Chapter 2 and Appendix B.

C. Other Organizations' Program Measures

In addition to the race- and gender-neutral measures that DGS currently uses, there are a number of race- and gender-neutral measures that other governmental and non-governmental organizations in Pennsylvania use to encourage the participation of small and small diverse businesses. Figure 8-2 provides examples of those measures.

Figure 8-2.
Examples of race- and gender-neutral measures that other Pennsylvania organizations use

Type	Examples of Program Measures
Statewide Neutral Measure Programs	
Advocacy and Outreach	<p>The Pennsylvania Chamber of Business and Industry serves as the frontline advocate for business on Capitol Hill in Harrisburg. Through lobbying, testifying, developing key relationships, grassroots activities, and tracking regulations, the organization promotes pro-business legislation and fights against efforts that may serve as barriers to local businesses.</p> <p>The PA Turnpike Commission conducts community outreach events, and partners with other business organizations - such as the Diversity and Inclusion Professionals of Central Pennsylvania, the Harrisburg Regional Chamber of Commerce, and The Enterprise Center - to share information about the agency's bidding opportunities. The agency's website also advertises bid opportunities.</p> <p>Penn State University (PSU) works with partners such as the National Minority Supplier Development Council, the Southern Alleghenies Planning and Development Commission, and the Philadelphia Minority Business Development Agency to provide information about how to identify and bid on contract opportunities with the University. In addition, PSU partners with business associations including the Pennsylvania Small Business Development Centers (SBDCs) to provide seminars that explain how to successfully complete bids and proposals for PSU contract opportunities. PSU also hosts annual trade fairs each spring with approximately 50 minority- and woman-owned businesses. The purpose of the trade fairs is for suppliers to network with end-users of goods and services at the University.</p> <p>The Pennsylvania Housing Financing Agency conducts outreach to small companies by attending business and procurement fairs to generate greater awareness about the agency's contracting opportunities. In addition, the agency provides self-help tutorials for small businesses to help them learn how to develop successful bids and proposals, and manage contracts.</p>
Capital, Bonding, and Insurance	<p>D&H Distributing is an international company with its corporate headquarters in Harrisburg, Pennsylvania. The company occasionally offers different terms and financial credit to small businesses.</p>
Technical Assistance	<p>Slippery Rock University (SRU) is a state-funded institution of higher education that posts contracting opportunities larger than \$20,000 to the Pennsylvania State System of Higher Education's eProcurement exchange: https://passhe.procureware.com/home. Businesses must register with the ProcureWare portal to participate in contracting. Once registered, business owners and representatives can then access "Help" tutorials about how to develop and submit bids and proposals through the online portal.</p> <p>Congress authorized the Procurement Technical Assistance Program (PTAP) to expand the number of businesses capable of participating in government contracting. Administered by the Defense Logistics Agency, PTAP provides matching funds through cooperative agreements with state and local governments and non-profit organizations for the establishment of Procurement Technical Assistance Centers (PTACs) to provide procurement assistance. There are 13 PTACs located throughout Pennsylvania. They help businesses secure government contracts. PTAC counselors help businesses determine their suitability for government contracts, secure necessary business registrations, pursue small business certifications, market themselves, research procurement histories, network, identify bid opportunities, prepare proposals, and resolve contract performance issues.</p>

**Figure 8-2. (Cont'd.)
Examples of race- and gender-neutral measures that other Pennsylvania organizations use**

Type	Examples of Program Measures
Statewide Neutral Measure Programs (Continued)	
Technical Assistance (Continued)	Small businesses in all 67 of Pennsylvania's counties are served by Pennsylvania Small Business Development Centers (SBDCs) . Businesses can access the SBDC in the county in which their business is located. SBDCs provide consulting services and educational programs to entrepreneurs looking to start or grow their small businesses. SBDC consultants work with entrepreneurs in confidential, one-on-one sessions to help them with a range of business issues, including testing new business propositions, shaping business plans, and investigating funding opportunities.
Prompt Payment	<p>The PA Turnpike Commission pays prime contractors within 30 days of receiving an invoice for services rendered, and requires the prime to pay its subcontractors within 5 days of receiving payment from the agency.</p> <p>The County of York issues payments to contractors within 30 days of receiving an invoice for services rendered. If the contractor elects to be paid using the County's business credit card, then county officials can pay the contractor in three days via the agency's Net Payment system.</p>
Regional Neutral Measures Programs	
Advocacy and Outreach	<p>The Greater Philadelphia Hispanic Chamber of Commerce Small Business Development & Education (SBDE) Program is an umbrella program that addresses the needs of Hispanic American business owners and corporations working in emerging markets. The SBDE's purpose is to connect members with new business opportunities to help them realize their local, regional, national, and international growth opportunities; provide education, research findings, and information to help individuals adopt best business practices; and provide meaningful opportunities for Hispanic business leaders and employees to influence public policy by engaging with public officials.</p> <p>The African American Chamber of Commerce (AACC) is an advocacy group for minority-owned businesses in the Delaware Valley and Southeastern Pennsylvania. Its purpose is to enhance the growth and effectiveness of Black American-owned businesses in the Delaware Valley and, thereby, improve the economic conditions within the community. Its primary goal is to further the interests of businesses by responding to the needs of the business community and increasing economic opportunities for Black American-owned businesses.</p> <p>The Asian American Chamber of Commerce of Greater Philadelphia (AACCGP) promotes and fosters relationships between the Asian American community and private and public sector businesses. The organization also promotes education programs geared towards increasing awareness about the availability of Asian American-owned businesses.</p> <p>Pennsy Supply Inc. provides advocacy and outreach to the small business community by conducting seminars to discuss their contracting opportunities for smaller businesses.</p>
Capital, Bonding, and Insurance	<p>The Kutztown Small Business Development Center (SBDC) has personal connections with more than 50 different lending institutions and lenders in Central and Eastern Pennsylvania. The organization helps business owners structure their loan requests to expedite the approval process. SBDC also lowers the overall cost of borrowing, and identifies hidden fees in lender disclosure documents. Kutztown SBDC employs former commercial lenders to help prepare financial projections, and provides a list of documents necessary for the business loan application process. The organization also helps business owners prepare for discussions with lenders by aiding them with budget projections, business plans, and pitches.</p> <p>The Greater Philadelphia Hispanic Chamber of Commerce SBDE Program helps Hispanic American-owned businesses access capital and provides a variety of lending products ranging from microloans to real estate and traditional lending.</p>

**Figure 8-2. (Cont'd.)
Examples of race- and gender-neutral measures that other Pennsylvania organizations use**

Type	Examples of Program Measures
Regional Neutral Measures Programs (Continued)	
Capital, Bonding, and Insurance (Continued)	<p>The Community First Fund provides financing to both start-up and growth stage small businesses. Their key focus is to ensure that capital is invested in the underserved communities that need it the most, especially the cities and towns that face challenges with poverty and unemployment. Their goal is to facilitate economic and employment growth through focused, socially-responsible lending.</p> <p>The Susquehanna Service Corps of Retired Executives (SCORE) serves Adams, Cumberland, Dauphin, Perry, and York Counties. It offers business assistance, and helps facilitate the distribution of grant money received by other entities to businesses in its service area.</p> <p>First National Bank conducts seminars throughout the Pittsburgh area to explain bonding processes to business owners, and explain how contractors can become bonded.</p>
Mentor-Protégé Programs	<p>The Susquehanna SCORE is a nonprofit partner with the United States Small Business Administration that offers free business mentoring and low or no-cost workshops.</p> <p>The Kutztown SBDC business consultants come from a variety of industries and have attained professional degrees and years of practical business experience. They have the expertise and insight to mentor business owners in areas such as evaluating or refining business plans; incorporating new technology; conducting market research; identifying funding sources; understanding regulatory requirements; and weighing sales opportunities or franchise options.</p>
Technical Assistance	<p>The Greater Philadelphia Hispanic Chamber of Commerce SBDE Program offers educational programming to retail, restaurants, and entrepreneurial ventures just starting out, including help learning English and establishing business accounting systems. For more established Hispanic American-owned businesses, the SBDE focuses on increasing minority-owned business participation by providing support to business owners seeking certification and pursuing contract acquisition.</p> <p>The AACC - Supplier Development Program focuses annually on addressing key areas that contribute to African American business failure; helping grow businesses that can hire within their communities, and meeting the needs of businesses looking to improve and grow their supplier diversity spend.</p> <p>The AACCGP provides technical assistance and support for newly founded and growing Asian American-owned businesses. For example, the organization conducts educational sessions on business plans, cash flow analyses, marketing, obtaining start-up capital, and obtaining working capital. In addition, the organization provides technical support related to certification with various Pennsylvania organizations.</p> <p>Pitt Ohio is a supply chain solutions company that provides technical assistance to local businesses in the Pittsburgh area that want to submit bids and proposals.</p> <p>The Kutztown SBDC offers existing businesses and early-stage entrepreneurs access to no-cost confidential consulting services and learning opportunities. Funding support and resources are provided through a cooperative agreement with the United States Small Business Administration, the Commonwealth of Pennsylvania through the Department of Community & Economic Development, and through support from Kutztown University.</p>

**Figure 8-2. (Cont'd.)
Examples of race- and gender-neutral measures that other Pennsylvania organizations use**

Type	Examples of Program Measures
City or Local Neutral Measures Program	
Advocacy and Outreach	<p>The Housing Authority of the City of Pittsburgh (HACP) promotes its contracting opportunities at local events hosted by other organizations. The purpose of these outreach efforts is to encourage vendors to register on the HACP webpage for future contracting opportunities. For example, HACP will participate in the 2018 business development open house sponsored by the Allegheny County Department of Minority, Women, and Disadvantaged Enterprise and the Southwestern Pennsylvania Commission.</p> <p>The Philadelphia Housing Authority (PHA) partners with the local Asian, Hispanic, and minority business chambers of commerce to conduct outreach events. The agency's Affirmative Action Contract Compliance program promotes the development of certified Minority-owned and Woman-owned Business Enterprises (MBE/WBEs). The program maximizes the participation of certified MBE/WBEs in PHA contracts and subcontracts.</p> <p>The City of Harrisburg provides outreach to potential contractors through its "Doing Business in the City" initiative in order to improve the financial stability of businesses in the region. Its outreach initiatives include providing a forum for small businesses to learn about contracting opportunities with the City. The City has also developed a directory of potential contractors that includes information about the services that they provide and their status as disadvantaged businesses.</p> <p>The City of Pittsburgh provides outreach to small businesses at community events in order to encourage them to register with the City's business supplier list, and receive notices about contracting opportunities. The list is also forwarded to prime contractors so that they can reach out to sub-contractors about potential contracting opportunities.</p>
Capital, Bonding, and Insurance	<p>The Housing Authority of the City of Pittsburgh waives bonding requirements for some smaller projects to encourage small business participation.</p> <p>The City of Harrisburg tries to make its procurement process easier for smaller businesses by allowing certain policies to be more lenient. For example, small sole proprietorships that are contracted to work on small projects may have less stringent bonding and insurance requirements than contractors that work on larger projects.</p> <p>The City of Pittsburgh recently removed its bonding requirements for master (prime) contracts to make it easier for small businesses to engage in City contracting.</p>
Mentor-Protégé Programs	<p>The PHA facilitates opportunities for networking between subcontractors and prime contractors, often leading to mentor-protégé relationships.</p>
Technical Assistance	<p>The Jump Start Incubator of Berks County provides technical services to newly-established businesses through one-on-one counseling sessions and planned workshop seminars. . It helps them create short-term and long-term planning strategies, and market their services.</p> <p>HACP provides technical support to small businesses by hosting a "How to Do Business Workshop." They use "dummy" bid responses to teach vendors how to successfully respond to requests for proposals (RFPs) and invitations for bid (IFBs).</p> <p>The City of Allentown offers technical assistance via telephone to small companies throughout the bidding and contracting processes. The City also just completed a survey in partnership with the local chamber of commerce to better understand the needs of small businesses.</p>

**Figure 8-2. (Cont'd.)
Examples of race- and gender-neutral measures that other Pennsylvania organizations use**

Type	Examples of Program Measures
City or Local Neutral Measures Program (Continued)	
Prompt Payment	<p>HACP makes payments within 30 days of receiving invoices from prime contractors, or sooner if possible.</p> <p>PHA pays prime contractors within 30 days of receiving invoices, and requires that prime contractors pay subcontractors within 7 days of receiving an agency payment.</p> <p>The City of Allentown uses a prompt payment system that ensures contractor invoices are processed within 30 days.</p> <p>The University of Pennsylvania ensures prompt payment to small businesses. The University pays contractors within approximately three days of them submitting their invoices.</p> <p>The City of Pittsburgh issues payments promptly to contractors through its Electronic Distributing Invoice system. Payments are typically issued within 30 to 45 days upon receipt of contractor invoices.</p>

CHAPTER 9.

Program Implementation

CHAPTER 9.

Program Implementation

The Commonwealth of Pennsylvania's (The Commonwealth's) Department of General Services (DGS) implements the Small Diverse Business (SDB) to encourage the participation of diverse businesses in Commonwealth contracting. The 2018 Commonwealth Disparity Study for DGS provides information that the agency should consider to refine its implementation of the SDB Program. Study recommendations are based on disparity study results and the study team's review of DGS's contracting practices and program measures. In considering any changes to its implementation of the SDB Program, DGS should assess whether additional resources or changes in internal policy would be required.

Consolidation of Programs

There appears to be substantial confusion among members of the business community regarding the SDB Program, the SB Program, the Pennsylvania Department of Transportation's (PennDOT's) implementation of the Diverse Business (DB) Program, and PennDOT's implementation of the Federal Disadvantaged Business Enterprise (DBE) Program. The similarity of the objectives and names of the SDB, SB, DB, and DBE programs proves to be challenging for many businesses attempting to work with the Commonwealth (and PennDOT). Although PennDOT must implement the Federal DBE Program separately for its federally-funded contracts, the Commonwealth might consider ways to work with PennDOT to consolidate the SDB and SB Programs with PennDOT's DB Program. Doing so might help encourage businesses to become certified, adhere to program requirements, and engage with both agencies. It might also reduce the amount of monitoring that DGS and PennDOT must undertake as part of all four programs.

SDB Participation

Currently, DGS only considers SDB participation when it awards contracts using a *best value* method or a *sealed bid with minimum participation levels* method. However, most Commonwealth contracts are awarded using a *simple sealed bid method*, so DGS usually does not consider the participation of diverse businesses in individual contracting, either as prime contractors or subcontractors. However, DGS is introducing a streamlined *Request for Proposals* process and is working with executive agencies to substantially increase the number of contracts that it awards using a best value method. DGS should continue those and other efforts that allow for more frequent consideration of SDB participation in its contracting. In addition, DGS should consider requiring all subrecipient local agencies to consider SDB participation in contracts that they award using grant funds that they receive from Commonwealth executive agencies.

Statutory Authorization of DGS Programs

The programs applied to DGS contracting were established via Executive Order 2015-11. In contrast, many state programs and the Federal DBE Program are authorized via legislation.

Implementation via legislation provides more certainty about contracting programs and procedures and may provide more concrete policies and procedures for the staff responsible for implanting the programs. During the qualitative research and public outreach conducted as a part of the disparity study, some stakeholders recommended that DGS pursue legislation to provide consistency across administrations related to programs for diverse businesses. DGS should consider statutory authorization of these programs in the future (potentially in concert with a consolidation of PennDOT and DGS programs).

Overall Annual Aspirational Goal

DGS has set an overall annual aspirational goal for SDB participation in Commonwealth contracting of 10 percent in fiscal year 2017, 20 percent in fiscal year 2018, and 30 percent in fiscal year 2019. DGS should consider adjusting its overall aspirational goal based on information from the study's team availability analysis, which indicates that the overall availability of minority- and woman-owned businesses is 22.1 percent; veteran-owned businesses is 4.6 percent; disabled-owned businesses is 2.5 percent; and lesbian/gay/bisexual/transgender- (LGBT-) owned businesses is 1.7 percent.¹ DGS might consider using those values as the basis for its overall annual aspirational goals for the participation of minority- and woman-owned businesses and other diverse groups in its contracts, assuming that the types and sizes of the contracts and procurements that DGS awards in the future are similar to those of the contracts and procurements that DGS awarded during the study period.

In setting their overall annual aspirational goals, some organizations also examine available evidence to determine whether an adjustment to availability is necessary to account for current conditions in the local marketplace for diverse individuals and businesses. Results presented in Chapter 3, Appendix C, and Appendix D indicate that various individuals and groups face substantial barriers in human capital, financial capital, business ownership, and business success that might be relevant to DGS's overall annual aspirational goal. DGS should consider that information closely when determining whether to make an adjustment as part of determining its overall annual aspirational goal.

Subcontract Opportunities

Overall, minority- and woman-owned businesses did not show disparities on the subcontracts that DGS awarded during the study period. However, subcontracting accounted for a relatively small percentage of the total contracting dollars that DGS awarded during the study period.

To increase the number of subcontract opportunities, DGS could consider implementing a program that requires prime contractors to subcontract a certain amount of project work as part of their bids and proposals. For specific types of contracts where subcontracting or partnership opportunities might exist, DGS could set a minimum percentage of work to be subcontracted. Prime contractors would then have to meet or exceed this threshold in order for their bids to be

¹ There is overlap among the businesses that are classified as minority- and woman-owned businesses; veteran-owned businesses; disabled-owned businesses; and LGBT-owned businesses. To avoid double counting, DGS should take that overlap into account rather than simply summing the percent availability associated with each relevant diverse business group.

considered responsive. If DGS were to implement such a program, it should include flexibility provisions such as a good faith efforts process.

Subcontracting Goals

As part of the SDB and SB Programs, DGS uses subcontracting goals on a small number of individual contracts that it awards to encourage diverse business participation and, specifically, minority- and woman-owned business participation. Prime contractors bidding on those contracts must either meet the goals by making subcontracting commitments to diverse businesses or by requesting *good faith efforts* waivers. DGS reviews waiver requests and will grant waivers if prime contractors demonstrate good faith efforts towards compliance with the goals. If prime contractors do not meet the goals through subcontracting commitments and do not submit acceptable good faith efforts waivers, then DGS may reject their bids.

Based on disparity analysis results, DGS should consider expanding its use of subcontracting goals in the future, specifically as they relate to encouraging the participation of minority- and woman-owned businesses. Disparity analysis results indicated that all relevant racial/ethnic and gender groups show substantial disparities on DGS contracts overall and the expanded use of subcontract goals might provide additional subcontracting opportunities for minority- and woman-owned businesses and help address some of those disparities. DGS should consider disparity analysis results for various contract sets to ensure its future use of subcontracting goals is appropriate and narrowly tailored.

Certification

DGS does not currently certify minority- and woman-owned businesses or other diverse business itself but instead relies on PennDOT and other organizations to do so. Many businesses participating in in-depth interviews and public meetings commented on the difficulties and time requirements associated with PennDOT's certification process. In fact, representatives of some diverse businesses reported that they were not certified because they perceived the process as too difficult and time consuming.

DGS might consider operating its own certification process as part of the SDB Program. Doing so would allow DGS to certify all business groups that are included as part of the program— minority-owned businesses, woman-owned businesses, veteran-owned businesses, service disabled veteran-owned businesses, LGBT-owned businesses, and disabled-owned businesses— and make efforts to streamline the certification process. Developing a certification process requires new policies and substantial resources. DGS might consider working with PennDOT as well as a consulting firm that specializes in certification processes if it is interested in developing its own certification process. In addition, DGS should consider business size limitations as part of its certification process, particularly relating to revenue and number of employees. Many organizations that certify diverse businesses use size limitations set forth by the United States Small Business Administration and revenue limits established by the Federal Disadvantaged Business Enterprise (DBE) program.

Unbundling Large Contracts

In general, small diverse businesses exhibited reduced availability for relatively large contracts that DGS awarded during the study period. In addition, as part of in-depth interviews, several diverse businesses reported that the size of contracts often serves as a barrier to their success (for details, see Appendix D). DGS has been working to break contract pieces into sizes that are more feasible for small businesses to pursue. The agency should continue making efforts to unbundle prime contracts and even subcontracts. For example, the City of Charlotte, North Carolina encourages prime contractors to unbundle subcontracting opportunities into smaller contract pieces that are more feasible for small, minority-, and woman-owned businesses to work on and accepts such attempts as good faith efforts. Such measures would result in DGS work being more accessible to small businesses, which in turn might increase opportunities for diverse businesses and result in greater participation in DGS contracting.

Bidding Procedures

As part of in-depth interviews and public meetings that the study team conducted, several business owners indicated that Commonwealth bidding procedures were confusing, cumbersome, or not well documented. DGS should consider ways in which it can streamline bidding procedures to reduce burdens for small diverse businesses that are potentially interested in pursuing DGS work. In addition, many business owners commented that prime contractors regularly engage in bid shopping and eliminate or substitute subcontractors from their project teams after contract award. To help prevent such practices, DGS should consider requiring prime contractors to list all major subcontractors and suppliers as part of their bids on Commonwealth contracts and instituting policies that require prime contractors to obtain DGS approval to change any subcontractors or scopes of work after contract award.

Prime Contract Opportunities

Disparity analysis results indicated substantial disparities for all racial/ethnic and gender groups on the prime contracts that DGS awarded during the study period. However, minority- and woman-owned businesses showed somewhat better outcomes on small prime contracts than on large prime contracts. DGS should consider establishing a small business set-aside program that would involve the agency setting aside certain small prime contracts exclusively for small business bidding. Doing so would encourage the participation of small businesses, including many minority- and woman-owned businesses. If DGS establishes such a program, it would have to ensure that the program meets all applicable legal standards, including establishing a *rational basis* for the program.

Prompt Payment Policies

Per state code, DGS requires prime contractors to pay their subcontractors within 14 days of receiving payment from the agency.² However, as part of in-depth interviews, several businesses, including many diverse businesses, reported difficulties with receiving payment in a timely manner on Commonwealth contracts, both when they work as prime contractors and as

² 62 PA C.S. Section 3933(c)

subcontractors (for details, see Appendix D). Many businesses also commented that having capital on hand is crucial to small business success. DGS should consider reinforcing its prompt payment policies with its procurement staff and prime contractors and could also consider automating payments directly to subcontractors. Doing so might help ensure that both prime contractors and subcontractors receive payment in a timely manner. It may also help ensure that small diverse businesses have enough operating capital to remain successful.

Contract Management

DGS currently tracks payments that it makes to vendors in its SAP system but lacks a centralized contract management system that maintains information on the specific contracts to which those payments relate. DGS should consider prioritizing the establishment of an effective contract management system because it will help the agency more accurately monitor the participation of diverse businesses on a contract-by-contract basis. In addition, DGS awards grants to various Commonwealth agencies to fund different projects but has not established a process to collect prime contract or subcontract data related to those projects. DGS should also consider establishing a system to collect and maintain those data to further improve the accuracy of its efforts to monitor diverse business participation in Commonwealth contracting.

Growth Monitoring

Along with working to improve its contracting and vendor data systems, DGS might also consider collecting data on the impact that the SDB Program has on diverse businesses' growth over time. Doing so would require DGS to collect baseline information on certified SDBs—such as revenue, number of locations, number of employees, and employee demographics—and then continue to collect that information from each firm on an annual basis. Such metrics would allow DGS to assess whether the program is helping diverse businesses grow and also help refine the measures that DGS uses as part of the SDB Program.

Subcontract Data

In addition to not having a centralized contract management system, DGS does not collect or maintain information on subcontracts related to the prime contracts that it awards. DGS should consider collecting comprehensive data on *all* subcontracts, regardless of whether they are performed by diverse businesses. Collecting data on all subcontracts will help ensure that the agency monitors the participation of diverse businesses as accurately as possible. Collecting the following data on all subcontracts would be appropriate:

- Subcontractor name, address, phone number, and email address;
- Type of associated work;
- Subcontract award amount; and
- Subcontract paid amount.

DGS should consider collecting those data as part of bids but also requiring prime contractors to submit data on subcontracts as part of the invoicing process for all contracts and incorporating those data into its data systems. DGS should train relevant department staff to collect and enter subcontract data accurately and consistently.

Business Development and Outreach

DGS should consider continuing and expanding efforts to grow and support small businesses throughout the Commonwealth. As discussed in Chapter 8, DGS and other entities throughout Pennsylvania currently operate a number of programs that provide technical assistance, mentoring, and networking opportunities for entrepreneurs. Data from the quantitative analysis of marketplace conditions (Chapter 3) shows that there are still substantial disparities in business ownership for women, minorities and other diverse individuals. Based on those results, DGS should consider expanding and improving its business development programming, and networking and outreach events, in order to further catalyze small business formation and success.

DGS hosts and participates in many networking and outreach events that include information about marketing, becoming certified in the Commonwealth, doing business with the Commonwealth, and available bid opportunities. DGS should consider continuing those efforts but might also consider broadening its efforts to include more partnerships with local trade organizations and other public agencies. DGS might also consider creating a consortium of local organizations and public agencies that would jointly host quarterly outreach and networking events and training sessions for businesses seeking public sector contracts. In addition, DGS should consider ways that it can better leverage technology to network more effectively with businesses throughout the Commonwealth. DGS could consider making use of online procurement fairs, webinars, conference calls, and other tools to provide outreach and technical assistance.