

EMPLOYMENT OPTIONS FOR LOW-SKILL WORKERS IN THE BALTIMORE, MARYLAND, METROPOLITAN AREA

*Viable Occupations, Local Dynamics,
Workforce Training and Education: Issues and Challenges*

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Disclaimer

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EXECUTIVE SUMMARY

Over the past six months the signs of a troubled U.S. economy have been difficult to miss – plummeting home values, rising foreclosures, evaporating pensions, record food and gas prices, severe income inequality, and increased layoffs signal the deepest recession since the Great Depression. Even before the economic crisis, the decline of domestic manufacturing, the rise of globalization, and increased competition for good jobs had created unprecedented challenges for low-skill American workers in older industrial cities such as Baltimore. In a time when firms are contracting and Americans’ budgets are stretched, it becomes even more beneficial to business leaders and policymakers to educate and train low-skill workers in employment clusters unique to their metropolitan area. Therefore, it is the goal of this report to (i) develop a list of occupations to be targeted as sustainable, long-term career options for low-skill workers in the Baltimore metropolitan area, (ii) review the job training and educational infrastructure for target occupations, (iii) examine barriers facing workers entering these occupations, and (iv) recommend ways of improving recruitment and retention in these fields.

The Baltimore metropolitan area has made great improvements over the past 20 years after a difficult transition from a manufacturing port to a service-based economy. Local business and political leaders have been instrumental in revitalizing downtown, creating a concentration of some of the most respected hospitals and biotechnology firms in the country, and fostering world-renowned academic institutions. However, the Baltimore area’s economic development successes have not been shared equally. The region, especially Baltimore City, is still challenged by high income inequality, concentrated poverty, limited public transportation, high crime, and low high school graduation rates – characteristics that create barriers to employment for low-skill workers in particular.

Baltimore has a vast network of workforce development providers and stakeholders that seek to move the region’s low-skill population into viable, sustainable jobs. Despite the commendable efforts of these organizations, the Baltimore region’s poorest most underskilled workers continue to fall through the cracks. Thus, we suggest creating regionally focused, occupation-specific task forces that stress communication and collaboration between educational, government, nonprofit, and philanthropic institutions. Increased collaboration and communication between organizations and jurisdictions will strengthen Baltimore’s workforce development services by:

- Concentrating recruiting efforts to make low-skill workers aware of available education and training options;
- Stressing communication between training programs to address redundancies and gaps in the regional education and job training infrastructure;
- Facilitating dialogue between employers and trainers to create programs that address skill deficiencies, provide remedial training, and outline career paths that clearly delineate connections between training and job placement; and
- Pooling the collective knowledge and resources of workforce development agencies across jurisdictions.

In order to determine the most viable employment options for low-skill workers in the Baltimore metropolitan area, a three-stage analysis was performed. This methodology took into account a

range of factors when selecting occupations including their availability; accessibility; earnings; advancement potential; and risk for offshoring, technological innovation, or industry decline. The final list included 10 occupations within six broad categories: health care, automotive services, construction trades and heavy equipment operations, food service and hospitality, professional services, and sales. This list is by no means exhaustive, but instead provides an overview of the *most* accessible and viable jobs in the Baltimore area.

Low-skill workers in Baltimore metropolitan area, and the United States, face stark challenges to gaining good jobs in the 21st century economy. Against the backdrop of the most severe economic crisis since the Great Depression, these challenges are only amplified. The stakes could not be higher for Baltimore's business leaders and policymakers to make the region as competitive as possible. A competitive regional economy is not possible without a skilled, capable workforce. For Baltimore, this has historically meant attracting high-skill, college educated workers to the region. However, building a sustainable economy also requires facilitating the movement of low-skilled Baltimoreans into viable jobs within sustainable industries. By identifying strategies for moving low-skill workers into viable career paths, this report represents a first step in this process.

I. INTRODUCTION

The United States' low-skill workers—defined as those who have no specialized skills and perform tasks that can be completed by any worker—face unprecedented employment challenges in today's economy. The manufacturing sector's workforce and contribution to national income have experienced a precipitous decline due to technological advances enabling higher productivity, increased competition from overseas labor markets, and the acceptance of globalized trade agreements.¹ Between 1953 and 2006, the manufacturing sector's contribution to the gross domestic product (GDP) decreased from 28% to 12%.² These jobs were once the source of a living wage, steady benefits, and the opportunity for advancement for millions of low-skill American workers. The result of America's economic transformation into a knowledge-driven, service-oriented economy is that low-skill workers compete for service jobs that typically do not provide a living wage, fringe benefits, or upward mobility. A living wage is defined as the wage needed for a sole provider working full time to support his or her family. For Baltimore, living wages are set at \$9.33 per hour for a single adult, \$17.04 for one adult and one child, and \$23.51 for two adults and two children.³ Fringe benefits refer to nonwage compensation including but not limited to health, dental, and life insurance; worker's compensation; short- and long-term disability coverage; retirement contributions; paid vacation; and sick leave. Jobs offering upward mobility provide workers with a clearly defined career ladder of positions that offer higher earning potential and increased responsibility. Beyond the lack of jobs meeting this criterion, this movement to a service-based economy has resulted in a more unequal and volatile labor market for low-skill workers.

These economic changes have resulted in stark challenges for low-skill workers across the country. Policymakers have implemented numerous workforce and economic-development policies and programs in an effort to promote employment, curb joblessness, and provide under-skilled workers with training and education. These initiatives include national endeavors such as the Welfare to Work (WtW) grant program, which incentivized single parents to move off of income support and into the workforce. The WtW program was enacted in 1997 as part of the Balanced Budget Act and was discontinued in 2004 after five years of mixed results. WtW focused on providing Temporary Assistance for Needy Families (TANF) recipients with job training and placement assistance—a challenging endeavor given TANF enrollees' existing barriers to employment. While the WtW program did succeed in moving some participants off the rolls, approximately 60% of enrollees across 10 of the 12 evaluation sites were not employed two years after entering the program.⁴ Indeed, many of the WtW program enrollees worked, with participants averaging between 32 and 38 hours per week. However, program enrollees had more difficulty sustaining employment—a phenomenon that speaks to the WtW program's lack of skill-enhancement training, as only 33% of participants received training aimed at boosting their human capital. The WtW initiative was only a temporary program that placed stringent fiscal

¹ Mankiw, N. Greg. "The Manufacturing Sector" Remarks to the Exchequer Club, Washington, DC. 17 December 2003.

² McCormack, Richard. "Manufacturing continues to shrink as a percentage of U.S. economic activity." All Business. 06 June 2006.

³ The Pennsylvania State University Living Wage Calculator (www.livingwage.geog.psu.edu/results.php?location=13367).

⁴ Fraker, Thomas M. and Dan M. Levy, Irma Perez-Johnson, Alan M. Hershey, Demetra S. Nightingale, Robert B. Olsen, Rita A. Stapulonis. "The National Evaluation of the Welfare-to-Work Grants Program: Final Report." Mathematica Policy Research (2004): 1-279.

requirements on grantees.⁵ In the end, the limited scope of the program was unable to address the systemic problems preventing employment among TANF recipients.

The Department of Housing and Urban Development takes a more place-based economic development approach through its Renewal Community/Empowerment Zone/Enterprise Community program, which provides tax breaks and financial incentives in an effort to attract businesses and jobs to more than 100 distressed urban and rural areas nationwide. Initiated in 1994 as an innovative community development financing tool, the RC/EZ/EC program is one of the only sources of capital investment for small businesses in blighted urban neighborhoods. The program also operates neighborhood One-Stop Capital Shops and business resource centers where business owners can receive technical assistance and consulting services. RC/EZ/EC program challenges have included the inability to effectively coordinate with existing government and business organizations and the relatively thin resources for nonprofit organizations supporting the program.⁶ Because of the numerous factors influencing the economic vitality of RC/EZ/EC neighborhoods, program evaluations have difficulties linking specific policies to community development outcomes.

Countless other local, regional, state, and federal job training and workforce development programs aim to promote low-skill job growth and job training. Yet, despite these massive policy efforts, the challenge of addressing these issues is still unmet. Providing job training and placement assistance to the nation's low-income, low-skill population is an immensely difficult task. Even the most well-funded programs such as WtW and the RC/EZ/EC initiatives have had limited success. Past workforce development efforts have been critiqued for only preparing low-skilled workers for job placement, with fewer resources focused on retention. Sustainable employment is driven by skill enhancement and human capital development. The main engines of this development are advanced education, vocational programs, and on-the-job training of the country's low-skill workforce.⁷

In a 2005 report entitled "The Right Jobs: Identifying Career Advancement Opportunities for Low-Skilled Workers," Jobs for the Future (JFF) attempted to identify national job clusters within reach of low-skill workers. JFF used a three-pronged methodological approach. First, the researchers examined the Bureau of Labor Statistics' Standard Occupational Code list and restricted it to occupations with proper earnings (\$25,000 per year), accessibility, availability, and potential for advancement. Second, the list was narrowed further to exclude occupations with a high risk of off-shoring, technological innovation, and overall industry decline. Lastly, employers and job training professionals were interviewed to gain more information on hiring practices, emerging non-quantitative trends, training requirements, and potential barriers to access.⁸ After the three-phase screening, JFF identified six viable occupation clusters: nurses,

⁵ IBID

⁶ "Empowerment Zone Initiative: New Paths to Opportunity: Job Training and Placement Activities in Selected Empowerment Zone/Enterprise Community Sites (Findings from the 3rd Round of Assessment)." The Nelson A. Rockefeller Institute of Government: State University of New York. Prepared for the U.S. Department of Housing and Urban Development; July 1997.

⁷ Simon, Martin, Hoffman, L. "The Next Generation of Workforce Development Project: A Six-State Policy Academy to Enhance Connections Between Workforce and Economic Development Policy." National Governors Association Center for Best Practices. Prepared for: U.S. Department of Labor Employment and Training Administration; December, 2004.

⁸ Goldberger, Susan, Lessell N., Biswas, R.R. "The Right Jobs: Identifying Career Advancement Opportunities for Low-Skilled Workers. Jobs for the Future. September 2005.

customer service representatives, automotive and truck technicians, computer support specialists, building trades workers, and commercial drivers of heavy vehicles.

While JFF's research on low-skill job clusters at the national level is helpful to federal leaders and policymakers, it is less salient for local and regional employment development efforts. Regional economies are driven by local industry-specific clusters of firms, workers, and higher education institutions. Workforce development officials must tailor policies and programs that train underskilled workers to be competitive within their local regional economy. To do this, it is imperative for local leaders to understand their metropolitan area's industrial makeup and labor market conditions.

In an effort to identify locally relevant occupation clusters, this research uses the foundation created by JFF, modifies it to incorporate local data, and applies it to the Baltimore metropolitan statistical area (MSA). The main goals of this study are to (i) develop a list of target occupations capable of providing low-skilled workers in the Baltimore, MSA with sustainable, long-term career options, (ii) review the job training and educational infrastructure for target occupations, (iii) examine barriers facing workers entering these occupations, and (iv) recommend ways of improving recruitment and retention in these fields.

Baltimore Metropolitan Area: History and Trends

The Baltimore metropolitan area is the economic, cultural, and transportation hub of north-central Maryland. The U.S. Bureau of the Census defines the Baltimore metropolitan statistical area (MSA) as Baltimore City, and the surrounding counties of Anne Arundel, Baltimore, Carroll, Harford, Howard, and Queen Anne's. With more than 2.65 million people and more than 1.12 million workers, the Baltimore metropolitan area is one of the 20 largest metropolitan areas in the country.⁹ When it is combined with the Washington, DC, metropolitan area, the entire region contains nearly 8 million people.¹⁰

History

The Baltimore MSA has experienced similar economic and demographic trends as other large and moderate-sized U.S. industrial cities. Historically, the region was developed as a major port and manufacturing hub. Throughout the first half of the 20th century, the economic base was focused on steel processing, shipping, auto manufacturing, and transportation. Baltimore City capitalized on its unique location as the closest major East Coast seaport to the Great Lakes industrial towns. For many years, Bethlehem Steel was the city's largest employer, with its mill in Sparrows Point being the largest in the country at one point. The post-World War II industrial boom also coincided with Baltimore City's peak population of 950,000 in 1950. At this point, Baltimore City was the sixth-largest city in the country, contained 70% of the region's population, and enjoyed a robust manufacturing sector.¹¹

The share of employment within the manufacturing sector in the United States declined precipitously throughout the second half of the 20th century (see Exhibit 1). The proportion of workers employed in manufacturing declined from 32% in the early 1940s to just below 13% in

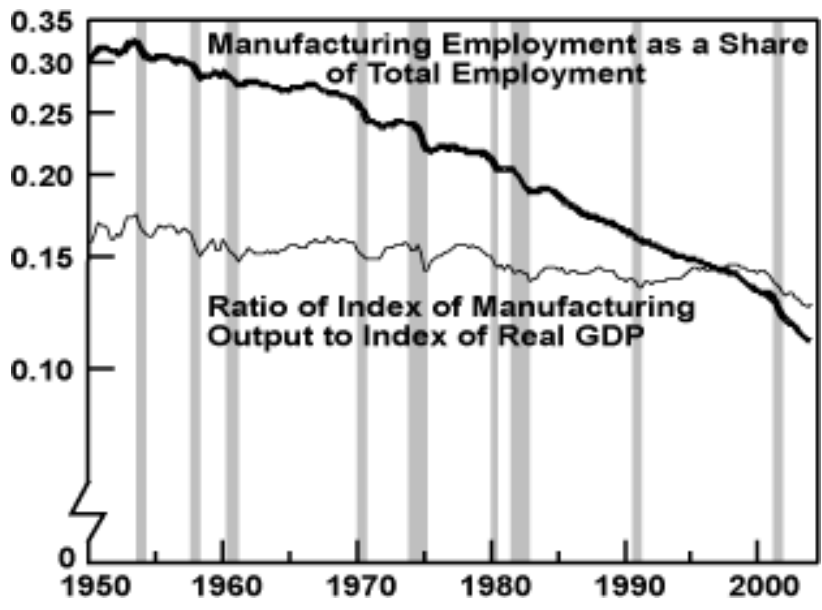
⁹ Bureau of the Census, 2007.

¹⁰ Bureau of the Census, 2007.

¹¹ Davis, K, & Brocht, C (2002). Subsidizing the Low Road: Economic Development in Baltimore. *Good Jobs First*, Retrieved June 27, 2008,

2000.¹² Innovations in technology and the mechanization of labor have decreased the number of manufacturing workers needed to drive output increases. Continually, abundant and less costly labor abroad has forced firms to outsource more manufacturing jobs to developing economies to remain competitive. These trends have altered the industrial makeup of cities throughout the United States, with employment losses most pronounced in older industrial towns in the Northeast and Midwest such as Buffalo, Rochester, Cleveland, and Detroit.

Exhibit 1: Output and Employment in the Manufacturing Sector



Sources: Brauer, David. “What Accounts for the Decline in Manufacturing Employment?” U.S. Congressional Budget Office Report. 18 February 2004. Almanac of Policy Issues. 5 September 2008. www.policyalmanac.org/economic/archive/manufacturing_employment.shtml.
 Data Source: Congressional Budget Office; Department of Labor, Bureau of Labor Statistics; Department of Commerce, Bureau of Economic Analysis.
 Note: The vertical bars indicate periods of recession as defined by the National Bureau of Economic Research.

Deindustrialization, technological innovation, and the shift of U.S. manufacturing jobs overseas transformed Baltimore’s economic, demographic, and social landscape. Between 1950 and 1995, Baltimore City’s industrial base eroded as the city lost 75% of its industrial employment.¹³ According to the 2006 American Community Survey, only 6% of the region’s workers are employed in the manufacturing sector, a tremendous decline from its peak of 34% in 1950. Similar to other older industrial cities, the decline of the manufacturing sector was accompanied by a shift in population and overall economic activity away from the central city. Both businesses and the city’s middle class migrated to the suburbs during the 1960s, 1970s, and 1980s. By 2000, Baltimore City’s population had declined to 651,000, just 26% of the region’s population.¹⁴ Between 1954 and 1992, the city’s share of the region’s retail sales fell from 50%

¹² Mankiw, N. Greg. “The Manufacturing Sector” Remarks to the Exchequer Club, Washington, DC. 17 December 2003.
¹³ Davis, K, & Brocht, C (2002). Subsidizing the Low Road: Economic Development in Baltimore. *Good Jobs First*, Retrieved June 27, 2008,
¹⁴ IBID

to 18%.¹⁵ The move outward was not only limited to the phenomenon of white flight, although the movement of the white middle class did initiate Baltimore's population decline. Between 1990 and 2000, for the first time Baltimore City's black population declined. As the black middle class moved to nearby suburbs, a concentration of poor, mainly African American residents remained.¹⁶ The drain of incomes, businesses, and a weak housing market dramatically diluted Baltimore City's tax base, resulting in the decline of schools, infrastructure, and public services during this period.

In response to the city's decline, local leaders engaged in an aggressive development strategy in an effort to revitalize Baltimore City's downtown beginning in the mid-1950s with the creation of the Greater Baltimore Committee, the Committee for Downtown, and the Planning Council. These organizations drafted an ambitious downtown revitalization strategy that sparked more than 50 years of subsequent redevelopment. Local political leadership spearheaded public funding efforts in the 1960s to demolish and rebuild the most blighted areas of Baltimore City's waterfront. Revitalization continued throughout the 1980s with both public and private initiatives that redeveloped the Inner Harbor from an abandoned warehouse district to an entertainment, cultural, and tourist destination complete with shopping museums, restaurants and bars, hotels, an expanded convention center, and new baseball and football stadiums.¹⁷ Redevelopment efforts stalled throughout the 1990s, as Baltimore City struggled with high crime, failing public schools, and a fiscal crisis.

Recent governmental efforts include an ambitious effort to acquire and redevelop 5,000 vacant Baltimore City properties through the Project 5,000 effort.¹⁸ Thus far, the Housing Authority of Baltimore City has acquired more than 6,100 properties, reduced the average acquisition time from 18 months to 8 months, and mapped every city property using geographic information system (GIS) technology.¹⁹ The city is also vigorously pursuing neighborhood redevelopment initiatives. East Baltimore Development Inc. is currently overseeing an 88-acre, \$1.8 billion redevelopment effort that will incorporate new research and technology facilities, market-rate and senior housing, and education and job-training programs in a formerly blighted East Baltimore neighborhood.²⁰ Downtown redevelopment has been reinvigorated with the completion and opening of the Hilton Baltimore Convention Center Hotel in August 2008. The hotel's 757 rooms and suites and 60,000 feet of flexible space allow downtown Baltimore to compete for the nation's largest conferences and conventions.²¹ Additionally, Baltimore Development Corporation has taken an aggressive position on redeveloping brownfields—vacant urban sites where contamination is hindering new investment. Brownfield redevelopment can also be utilized as an economic development tool, as it has been estimated that decontaminating and developing Baltimore City's nearly 1,000 acres of contaminated industrial and commercial land would result in 27,000 jobs and \$25 million in property tax revenues.²²

¹⁵ Putting Baltimore's People First: Keys to Responsible Economic Development of Our City. 2004. District 1199E-DC, SEIU, AFL-CIO

¹⁶ IBID

¹⁷ www.emich.edu/public/geo/557book/d370.innerharbor.html

¹⁸ www.usmayors.org/usmayornewspaper/documents/05_01_06/baltimore2.asp

¹⁹ www.baltimorehousing.org/index/ps_5000.asp

²⁰ Kay, Liz F. "East-side renovation gets a boost." *The Baltimore Sun*. Sep. 16, 2008.

www.baltimoresun.com/news/local/baltimore_city/bal-weinberg0915,0,1280059.story?track=rss

²¹ www.baltimoredevelopment.com/initiatives/hilton.aspx

²² www.baltimoredevelopment.com/initiatives/brownfields.aspx

Current Trends

Baltimore remains a metropolitan area with tremendous problems, but also enjoys a revitalized downtown, a concentration of some of the most respected hospitals and biotechnology firms in the country, and world-renowned academic institutions. In a comparison of the 20 largest metropolitan areas excluding New York City, Los Angeles, and Chicago, the Baltimore MSA ranked in the top five in academic research and development, per capita personal income growth, percentage of firms owned by minorities, high-tech employment, and transportation. However, Greater Baltimore ranked in the bottom five in manufacturing employment, violent crime rate, leisure and hospitality employment growth, housing starts, and congestion.²³

The region's educational attainment profile is polarized, with large concentrations of both college-educated, high-skill workers and low-skill workers who have not received a high school diploma. In 2006, 33% of the 25 and older population held a college degree. The region's position as a national leader in medicine, life sciences, and biotechnology research and development concentrates high-skill workers in this industry cluster. However, at 14%, the Baltimore MSA has one of the highest rates of residents 25 and older without a high school degree.²⁴

The region's high concentration of college-educated workers can partly be explained by its specialization in health, life sciences, and biotechnology services. The two large research universities, the University of Maryland – Baltimore (UMB) and Johns Hopkins University, both attract and produce high-skill workers. Johns Hopkins Hospital and Johns Hopkins University are the largest employers in the metro area, and nearly a quarter of Greater Baltimore workers are employed in the educational services, health care, or social assistance sectors. The recently developed UMB BioPark and the Science + Technology Park at Johns Hopkins are expected to create 11,000 high-technology jobs.²⁵ It is unclear, however, whether economic development investment in the East Baltimore Biotech Park will benefit low-skill workers. According to a study of a similar biotechnology park in Connecticut, 12% of the state's biotech workforce had less than a bachelor's degree. An equivalent percentage would amount to approximately 1,000 new jobs within Baltimore City that could be filled by high school graduates and workers with some postsecondary education. However, in a city where only 40% of students graduate high school on time, firms may have difficulties finding local residents to fill new jobs.²⁶ The amount of low-skill workers employed in the biotechnology industry may depend on the extent to which Baltimore-based firms manufacture discovered products locally.

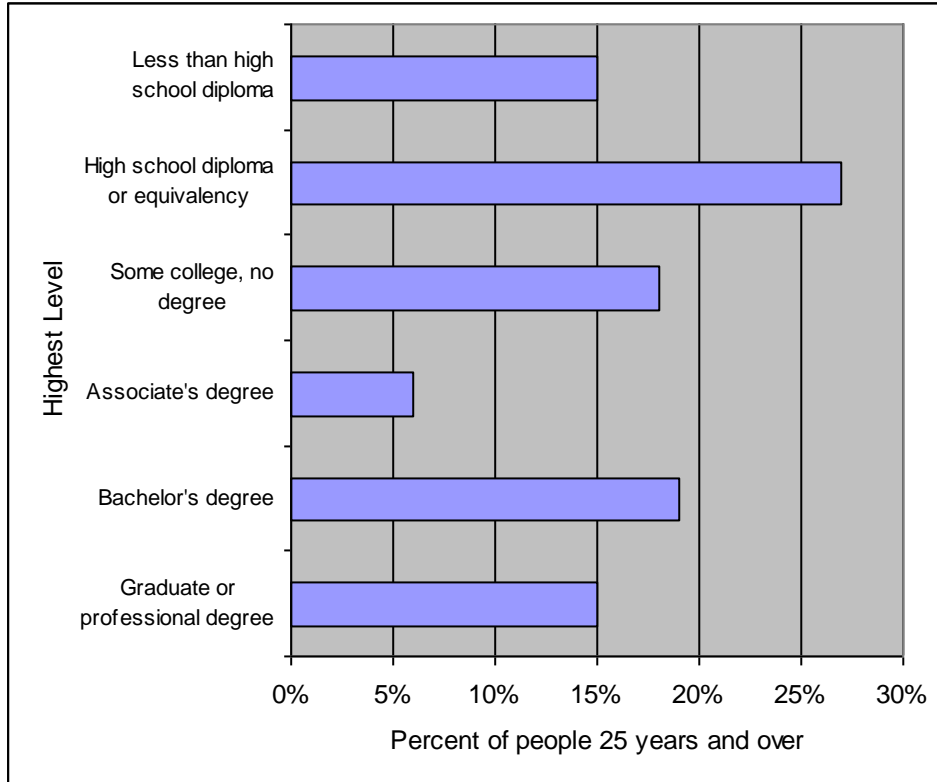
²³ 2007 Greater Baltimore State of the Region Report.

²⁴ IBID

²⁵ IBID

²⁶ Davis, K, & Brocht, C (2002). Subsidizing the Low Road: Economic Development in Baltimore. *Good Jobs First*, Retrieved June 27, 2008.

Exhibit 2: Baltimore, MD, Educational Attainment in 2006



Source: 2006 American Community Survey

Low-skill Workers and Job Opportunities

The Baltimore MSA was chosen for this study because of the high proportion of individuals with low income levels, a high percentage of individuals with low educational-attainment levels, a high percentage of nonwhite residents, a high percentage of families living in poverty, and a high percentage of workers employed in low-skill industries.

The Baltimore MSA benefited from the country's economic expansion between 1991 and 2001, with unemployment decreasing by more than 2 percentage points during that time.²⁷ However, the gains of economic expansion coincided with a litany of fiscal, education, crime, and drug problems confined to the central city. In 1997, there were nearly three low-skill job seekers for every low-skill job opening in Baltimore City, resulting in a shortage of more than 50,000 low-skill jobs.²⁸ The continuance of these problems has limited employment options for disadvantaged populations within Baltimore City, creating disparities between the city and the surrounding suburbs. Baltimore City houses 75% of TANF households, 80% of parolees, and 60% of high school dropouts, while two out of every three low-skill jobs were located in the suburbs.^{29,30} Furthermore, because goods and services tend to gravitate toward high-income areas, workers who hold those jobs are typically unable to live near their place of work.

²⁷ Economagic.

²⁸ Baltimore Area Jobs and Low-Skill Job Seekers.

²⁹ Baltimore Area Jobs and Low-Skill Job Seekers.

The spatial mismatch between jobs and low-skill workers is augmented by the lack of sufficient transit options for job-seekers without access to cars. Baltimore City residents, especially those with lower incomes, face several barriers that prevent car ownership. The cost of automobile insurance, which, on average, is nearly 80% higher in the city as compared to nearby Carroll County, remains the primary barrier to car ownership for urban dwellers. Low-income residents face even higher costs of ownership, as insurance companies have increasingly used a driver's credit history to set auto premiums.³¹ In fact, more than 205,000 Baltimore residents do not have access to an automobile. This amounts to 32% of the city's population—a full 6 percentage points higher than the number of New Orleans residents without access to cars prior to Hurricane Katrina, giving Baltimore City the worst carlessness rate in the country.³² While carlessness rates are lower in the counties surrounding Baltimore City, suburban residents without cars face even greater commuting challenges because of the sparser public transit networks in these lower-density areas.

All of these factors have resulted in the Baltimore region's low-skill workforce struggling to obtain good jobs that pay a family-supporting wage, provide benefits, and offer opportunities for upward mobility over the past decade. Therefore, it is the challenge undertaken by this research to identify occupations that *do* provide a living wage, benefits, and potential for upward mobility for the region's low-skill workers. Additionally, this report stresses the importance of developing and communicating career ladders to low-skill workers.

The remainder of this report is divided into three main sections. Section Two outlines the three-step methodological approach modified from the JFF report, including the querying of growth occupations, a risk analysis, and key informant interviews. Section Three discusses the target occupations derived from the analysis. Section Four summarizes the main conclusions and implications of this research. Section Four also discusses the current state of Baltimore's workforce development infrastructure, provides a framework for addressing gaps in the region's workforce development policies and programs, suggests additional steps to be taken, and discusses topics for further study.

³⁰ "Regional Job Access and Reverse Commute Plan." Baltimore Regional Transportation Board (2001): 1-76.

³¹ Waldron, Tom. "Actuarial Discrimination: City residents pay up to 198% more for car insurance than county residents." The Abell Report 18.5(2005): 1-8.

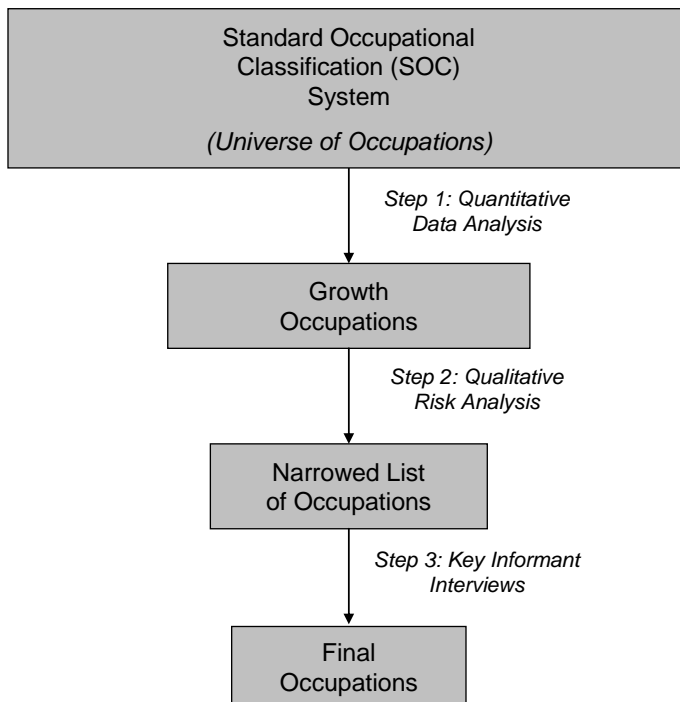
³² "In New Orleans, death was highest among people who lacked access to cars. In Baltimore City, the percentage of those with lack-of-access is higher than New Orleans's." The Abell Report 18.4(2005): 1-8.

II. METHODOLOGY

In order to determine the most viable employment options for low-skill workers in the Baltimore metropolitan area, a three-stage analysis was performed. The analysis was based upon the approach employed by Jobs for the Future (JFF) in the 2005 report, “The Right Jobs: Identifying Career Advancement Opportunities for Low-Skilled Workers”. However, the execution of each stage of the analysis process was modified to be applicable to a unique local setting instead of the more general, national setting.

The exhibit below provides a general overview of the occupational selection process. The full Standard Occupational Classification (SOC) System listing was utilized as the universe of possible occupations. The analysis process then employed a three-phase approach to narrow the list to those that present the most viable options for low-skill workers in the Baltimore metropolitan area. First, a quantitative analysis was performed to ascertain the availability, accessibility, earnings, and advancement potential associated with each occupation and to remove those not meeting predetermined thresholds. The second phase of the analysis removed occupations that were deemed to be at risk for offshoring, technological innovation, industry decline, or other serious issues that would prevent workers from entering the occupation. Finally, key informant interviews were conducted to garner input from local leaders, educators, and employers to aide in finalizing the list of recommended occupations. An overview of the analysis stages is provided in the exhibit below, and each of the three stages is described in more detail in the following subsections. Appendix C also provides a more detailed chart showing occupations included during each phase of the study.

Exhibit 3: Occupational Selection Process



Growth Occupations³³

The foundation for the analysis process was the national listing of occupations provided in the Standard Occupational Classification (SOC) System produced by the U.S. Department of Labor, Bureau of Labor Statistics (BLS). For each occupation on the SOC list, the team collected data to describe four factors: earnings, availability, accessibility, and advancement potential. The data were collected at the MSA level, either directly through the BLS or through local and state agencies. When needed data were not available at the MSA level, national-level BLS data were substituted. The table below provides a definition of each of the four analysis variables as well as the source of the data utilized to quantify each variable.

Exhibit 4: Variable Definitions and Data Sources

Category	Variable	Definition	Data Source
Earnings	Median Income	Earnings are measured as the annual median income in dollars for an occupation.	OES data available through the BLS at: http://data.bls.gov/oes/search.jsp
Availability	Total Growth and Net Replacement Openings	This variable is measured as the sum of new or growth openings and replacement openings for a given occupation.	Local OES data found on state websites. See also: www.laworks.net/Downloads/LMI/20042014QuestionsonProjections.pdf
Accessibility	Education and Training Necessary for Entrance into an Occupation	The educational attainment cluster is a broad system of educational categorization that includes high school, some college, and college. This system provides a hierarchical sorting of occupations that reflects increasing skill levels and accounts for multiple paths of entry into various occupations. As a separate secondary variable, postsecondary training categories are applied to each occupation through internal BLS staff and interviews with employers.	National data from the Bureau of Labor Statistics and regional education data from the American Community Survey. For BLS data, see: http://data.bls.gov/oep/servlet/oep.noeted.servlet.ActionServlet?Action=empeduc
Advancement Potential	Wage Growth	This variable is used as a proxy to judge advancement potential within a field, calculated by the difference between the 10th percentile of BLS earnings data and 90th percentile of BLS earnings data. BLS collects hourly wage data and then multiplies by 2,080 hours or the total number of working hours in a year.	OES data available through the BLS at: http://data.bls.gov/oes/search.jsp

³³ This process, which was conducted for six major metropolitan areas, was documented in further detail in an article on growth occupations presenting opportunities for low-skill workers, published as part of the collection *Retooling for Growth: Building a 21st Century Economy in America's Older Industrial Areas*, edited by Richard McGahey and Jennifer Vey, and published in 2008 by Brookings Institute Press.

The SOC codes and the corresponding data variables were combined into a single dataset in a Microsoft Access database for analysis. Thresholds were set for each variable, and a multistage query was executed to derive the list of growth occupations. Growth occupations are defined as occupations in which a significant number of openings exist, and in which a low-skill worker can gain entry, obtain a livable wage, and grow into a career.

Occupations were selected that:³⁴

- provided 200 or more openings per year,
- required the SC/C (some college coursework or a college degree) educational attainment cluster or below,³⁵³⁶
- produced a wage growth of 60% or more between the top and bottom deciles, and
- provided median earnings that were equal to 185% or more of the federal poverty guidelines set by the U.S. Department of Health and Human Services (i.e., greater than or equal to \$18,888.50).

Risk Analysis

The list of growth occupations was narrowed further by conducting a qualitative risk assessment that aimed to determine whether the job would be obtainable in the future. As JFF noted in the “Right Jobs” article, the BLS data do not always fully integrate current dynamics into their datasets. Also, national-level data do not always reflect local dynamics that may only be informed by consulting local sources.

While it is difficult to predict the exact trends that will occur within an industry and specific occupations, it is possible to gauge areas that present a risk. In JFF’s “Right Jobs” article, three key risk areas were defined that could lead to the decrease in the domestic demand for an occupation—offshoring, technological innovation, and industry decline. The analysis methods employed for the risk analysis stage of this project focused predominantly on these same three risk categories, although other occupation-specific risks were reviewed when appropriate.

The data sources reviewed during the risk analysis process included local newspapers, publications by local nonprofits and other locally based groups, trade association and union informational materials and publications, reports from local planning organizations and local governmental agencies, and other mainstream national publications. At the culmination of the analysis, a risk matrix was developed that showed each occupation’s risk category—high, medium, or low. Occupations deemed to have low risk factors were selected to move on to the next stage of the analysis.

³⁴ In the JFF study, occupations were excluded from the analysis process that required work experience, i.e. first-line supervisory positions. In this study, these occupations were not excluded, but instead remained as candidates when appropriate, and were discussed in detail during interviews with key local informants to ensure their viability.

³⁵ For descriptions of the BLS educational attainment clusters, see page 2 at: www.bls.gov/emp/optd/optd001.pdf

³⁶ A secondary variable was used to remove occupations that fell into the SC/C educational cluster, but in which a college degree was the most common form of entry. This provided a final threshold of an associate’s degree or less for entry into the selected growth occupations.

Exhibit 5: Risk Analysis Results Matrix

Industry	Occupation	Summary Risk Level
Installation, maintenance, and repair occupations	Automotive body and related repairers	Low
Installation, maintenance, and repair occupations	Automotive service technicians and mechanics	Low
Business and financial operations occupations	Claims adjusters, examiners, and investigators	Low
Computer and mathematical occupations	Computer support specialists	Med/High
Business and financial operations occupations	Cost estimators	Med
Architecture and engineering occupations	Electrical and electronic engineering technicians	Med
Construction and extraction occupations	First-line supervisors/managers of construction trades and extraction workers	Low
Transportation and material-moving occupations	First-line supervisors/managers of helpers, laborers, and material movers, hand	Low
Installation, maintenance, and repair occupations	First-line supervisors/managers of mechanics, installers, and repairers	Med
Sales and related occupations	First-line supervisors/managers of nonretail sales workers	Low/Med
Sales and related occupations	First-line supervisors/managers of retail sales workers	Low
Office and administrative support occupations	First-line supervisors/managers of office and administrative support workers	Med
Production occupations	First-line supervisors/managers of production and operating workers	High
Transportation and material-moving occupations	First-line supervisors/managers of transportation and material-moving machine and vehicle operators	Low
Management occupations	Food service managers	Low
Legal occupations	Paralegals and legal assistants	Low/Med
Business and financial operations occupations	Purchasing agents, except wholesale, retail, and farm products	Low/Med
Sales and related occupations	Real estate sales agents	High
Health care practitioners and technical occupations	Registered nurses (nursing and health care)	Low
Sales and related occupations	Sales representatives, wholesale and manufacturing, except technical and scientific farm products	Low
Sales and related occupations	Sales representatives, wholesale manufacturing, technical and scientific products	Low/Med

Key Informant Interviews

The third step of the selection process consisted of key informant interviews with local leaders, educators, job trainers, and employers, which provided information crucial to finalizing the list of viable occupations. The interviews served multiple purposes. First, these interviews facilitated the gathering of information on the hiring criteria specific to each occupation. Second, they provided the opportunity to obtain detailed information about the facilitation of education and training opportunities both prior to employment and for the purpose of advancement once employed. Third, these interviews provided perspective from a wide range of stakeholders on the viability of the specific occupations selected. And finally, these interviews informed on the

general barriers to entry facing low-skill workers in the Baltimore area, as well as the occupation-specific barriers that exist.

Employers were selected by reviewing job solicitations in local newspapers and on local hiring websites (e.g., Monster, WorkBaltimore). Companies hiring for positions that were similar to the occupations being studied were targeted for interviews. Educators and job trainers were selected primarily through reviews of the curriculums of area community colleges and universities, and secondarily through searching for private firms or nonprofits that specialized in specific training areas.

Letters of introduction describing the study were sent to targeted individuals, and then the interview team contacted potential interviewees to ensure they had received the letter, answer any questions they may have, confirm their willingness to participate, and schedule an interview date and time. Interviews were then conducted using a semi-structured discussion guide. Discussion guides were developed for use in interviews with local leaders, as well as two customizable discussion guide templates, for use in interviews with employers and educators/job trainers. Prior to each interview, the templates were customized to relevant occupation(s) and interviewee-specific questions were added when applicable. Copies of the discussion guides can be found in Appendices A and B.

Twenty-seven interviews with key informants were conducted between June and August 2008. The interviews were conducted via telephone and lasted approximately 30–45 minutes each. These discussions provided extensive information and were crucial to finalizing the recommended occupation list, as well as to developing recommendations for possible implementation methods and policy changes in the future.

III. TARGET OCCUPATIONS

The multistage analysis effort resulted in 10 specific occupations that appear to be the most viable options for low-skill workers in the Baltimore MSA. These occupations are parts of larger occupational clusters that local leaders, educators, and employers identified as strong areas in which to target the low-skill workforce in the Baltimore metropolitan area. The clusters are broader than one occupation, reflecting areas in which local stakeholders believe there to be promise for future employment. The specific target occupations and the corresponding occupational clusters are listed in the table below.

Exhibit 6: Target Occupations and Related Occupational Clusters

Occupational Cluster	Target Occupations
Health Care	Registered nurses
Automotive Services	Automotive body and related repairers
	Automotive service technicians
Construction Trades and Heavy Equipment Operations	First-line supervisors of construction trades workers
	First-line supervisors of helpers, laborers, and material movers
	First-line supervisors of transportation and material-moving machine and vehicle operators
Food Service and Hospitality	Food service managers
Professional Services	Claims adjusters, examiners, and investigators
Sales	Sales representatives, wholesale and manufacturing (not including technical and scientific farm products)
	First-line supervisors of retail sales workers

The 10 occupations identified through this study provide reasonable entry wages and an opportunity to grow wages over time. They are accessible with either minimal training or no training at all. But, most importantly, they offer workers a job with a viable pathway. These jobs represent the potential for careers, not simply dead-end, temporary employment. However, in most instances a worker will need to seek out methods of additional training and career advancement once on the job to enable an upward progression, so commitment from the employee is critical to long-term success.

It is important to note that this list does not account for all occupations that are accessible to low-skill workers. There are likely many other occupations in the Baltimore area in which low-skill workers can obtain employment. This list represents occupations presenting the *most viable* career options.

The following subsections, organized by occupational cluster, provide detailed information on each of the recommended occupations.

Health Care Professions

The health care profession is expected to be one of the economy's fastest-growing industries during the next decade. According to the BLS, health care will generate 3 million new wage and salary jobs between 2006 and 2016 nationally, more than any other industry. Baltimore's cluster of world-class hospitals, medical research facilities, and biotechnology firms makes the regional economy especially accessible not just for registered nurses (RNs), but for all health care professionals. Currently, the shortage of RNs provides a near guarantee that trained and certified nurses can find a job. It also creates a demand for the lower-level positions that often serve as stepping stones toward becoming an RN—licensed practical nurses (LPNs) and certified nursing assistants (CNAs).

Registered Nurses

Registered nurses perform a range of tasks centered on treating and educating patients. RNs record patients' symptoms, perform procedures, analyze test results, operate medical machinery, and administer treatment.

Occupation Strengths – The overall nursing occupation is particularly attractive for low-skill workers, as its one of the highest-paying positions that does not require a four-year degree. Individuals can become an RN through a diploma program, associate's program, bachelor's program, or a master's program. Finally, RNs and other health care professionals engaging in direct patient care do not risk losing their jobs to offshoring or technological innovation.

Variable	Amount
Annual Median Earnings	\$69,990
Wage Growth	\$43,690
Total Annual Openings	12,035
Educational Attainment Cluster	SC/C

Sources: Bureau of Labor Statistics; 2005 American Community Survey

Entrance Requirements – To obtain a job in a hospital, nursing care facility, or clinic, RNs typically must complete one of three postsecondary education options: Bachelor's in Science of Nursing (BSN), Associate Degree in Nursing (ADN), or a diploma. After completing a training or degree program, RNs must acquire a nursing license by passing the NCLEX-RN, a national licensing exam. Aside from technical training, RNs are expected to have superior soft skills to ensure effective communication with patients, doctors, and other hospital staff. Nurses must also be able to relate to their clients and at times provide emotional support to patients and families. LPN and CNA programs exist at the community college credit and noncredit level and provide much quicker certifications for those looking to enter the workforce immediately. Another entry option is available by being certified as a geriatric nursing assistant (GNA). This position allows for work in nursing home or elder care facilities and likewise can be completed through credit and noncredit community college certification programs.

Opportunities for Advancement – The RN occupation represents one rung in the overall health care career ladder. Frequently, RNs will begin as LPNs or CNAs, two positions that require less of a financial and time commitment. The Baltimore region has one of the strongest healthcare career ladder infrastructures in the country. Entry-level medical workers are able to take advantage of tuition reimbursement programs at many of the region's hospitals.

MedStar Health, a network of eight hospitals in the Baltimore/Washington region encourages its workers to pursue education and certification programs by partnering with the Community College of Baltimore County's (CCBC) LPN, CNA, BSN, ASN, and diploma programs. To help its employees grow their skill sets, Franklin Square Hospital Center, one of the eight MedStar hospitals, offers its employees between \$3,000 and \$5,000 in tuition reimbursement depending on their tenure at the hospital.

In 2004, the Department of Labor awarded the Johns Hopkins Health System (JHHS) a \$3 million demonstration grant to expand and enhance its employee training programs.³⁷ JHHS employees benefit from up to \$15,000 in tuition reimbursement per year. Similarly, the University of Maryland Medical Center offers \$10,000 per year to its employees for tuition reimbursement.

Johns Hopkins also offers the Skills Training Employment Promotion (STEP), which makes it possible for current employees to develop the skills necessary to pursue career ladder opportunities; work part-time and attend classes full-time (while maintaining full salary/benefits); and receive compensation that will be forgiven based upon working at JHHS after the successful completion of a training program. Training programs are available in occupations such as: Clinical Associate, Dietary Manager, Medical Coder, Laboratory Technician, Pharmacy Technician, Phlebotomist, and Surgical Technician.

Undoubtedly, low-skill workers face challenges to becoming RNs, but these unique opportunities for financial assistance, career advancement guidance, and skills training more readily prepare them to navigate the healthcare career ladder.

Occupational Stability – The nursing and health care field is one of the fastest growing professions in the United States and particularly in the Baltimore metro area. Demographic shifts, namely the aging of the Baby Boomer generation, have created a demand for additional health, disability assistance, and long-term care assistance services. Currently, the industry is experiencing a shortage of qualified RNs and has resorted to quickly training and promoting LPNs in-house. As a service industry, nursing is a profession that cannot be relocated overseas. While new technologies change the functionality of RNs, technological innovation is not a risk to the profession itself.

Key Employers – As one of the nation's largest regional clusters of hospitals, medical research facilities, and biotechnology firms, Baltimore is uniquely positioned to offer a range of health employers. As previously mentioned, MedStar Health administers a network of eight hospitals in the region, which employ more than 25,000 individuals. The Johns Hopkins University and Hospital System is the state's largest employer, with more than 50,000 employees. The University of Maryland – Baltimore Hospital System is also one of the region's major employers. RNs and other health care professionals are also hired by long-term care facilities, clinics, nursing care facilities, and private practices. Nurses are also employed by community colleges, universities, and other professional training institutions.

Training and Educational Opportunities – Almost every postsecondary educational institution in the Baltimore region offers either certificate or degree programs in the health care professions. Four-year colleges such as the University of Maryland – Baltimore, Johns Hopkins University,

³⁷ http://www.hopkinsmedicine.org/Press_releases/2004/03_12_04.html.

Coppin State University, and Towson University offer both BSN and MSN degrees. For ADN and diploma degrees and certificate programs, the Community College of Baltimore County, the Baltimore City Community College, and Anne Arundel Community College represent some of the two-year RN options for entrants with less time and resources. Individuals can also take advantage of certifications and shorter educational programs for LPNs, CNAs, and GNAs and use those to step into RN programs at a later point.

Competition for entrance into nursing programs is fierce because graduates are guaranteed jobs that pay entry-level salaries starting at about \$40,000. The shortage of nurses in hospitals has created a vacuum of nursing faculty, which has kept the size and number of classes artificially low. Admission standards are demanding, and candidates must have a firm grip of advanced science and math topics prior to admission. Low-skill workers typically need remediation in math and science to have a chance of being admitted. The high academic expectations in all nursing programs represent the stiffest barrier to entering the profession for low-skill workers. Increasingly, low-skill workers have utilized CNA-to-LPN-to-RN programs as a more accessible pathway.

Automotive Services

In a culture dominated by vehicular transportation modes, the automotive services industry provides a steady source of employment for low-skill and moderate-skill workers. The industry is highly accessible without formal education, and on-the-job training can propel an individual into a higher position, as opposed to formal classroom learning. That is not to say that classroom-based educational opportunities are unavailable; in fact, these programs can significantly increase an individual’s ability to obtain a more advanced position with better wages and benefits. Nationally, the growth of this occupational cluster has been noted by its selection as part of the President’s High Growth Job Training Initiative.³⁸

Automotive Body and Related Repairers

Automotive body and related repairers fix dents, repair damage to frames, replace damaged parts, remove scratches, and touch up paint blemishes.

Occupation Strengths – The automotive body repairer is an attractive position for low-skill workers. The profession pays a relatively high wage, does not require a four-year degree, and is projected to have solid employment demand in the near future.

Variable	Amount
Annual Median Earnings	\$50,640
Wage Growth	\$44,160
Total Annual Openings	675
Educational Attainment Cluster	HS/SC

Sources: Bureau of Labor Statistics; 2005 American Community Survey

Entrance Requirements – Entrance requirements for the automotive body repair industry vary depending on the employer. Entry-level workers with no technical expertise can receive on-the-job training at small repair shops to become paint technicians or upholstery detailers, positions that do not require a high school diploma. Historically, entry-level painters could then receive

³⁸ www.doleta.gov/BRG/JobTrainInitiative

informal apprenticeship training to gain more knowledge and skills in structural repair. However, the increased complexity of the automotive body repair industry has made formal, postsecondary training programs more essential, although they are not required to advance in all shops. Entry-level automotive repair positions are highly accessible for those who complete a formal training program. The best paying, most sustainable jobs at large repair shops and dealerships typically require prior work experience in addition to a degree or certificate in collision repair. Advanced automotive repairers must have college-level reading comprehension and mathematics skills to understand repair manuals for cars with varied and rapidly changing computer and electrical systems. Barriers to entry including a lack of English proficiency, a history of criminal activity or drug abuse, and a poor driving record may prevent job seekers from gaining employment in this field.

Opportunities for Advancement – Advancement opportunities vary across employers and depend on an individual’s educational background. In smaller repair shops, job seekers can enter the field as painters; receive informal, on-the-job training from more experienced repairers; and advance from within. However, smaller businesses typically pay lower wages and are not able to offer employees benefits. Entry-level opportunities not requiring formal training are also available at repair chains such as Midas or Jiffy Lube, although these businesses offer limited advancement opportunities. Automotive dealerships offer the most potential for upward mobility, with commission-based pay structures, management and supervisory opportunities, and more comprehensive benefit programs.

Occupational Stability – Because automobiles must be repaired quickly, the occupation is not at risk to offshoring. While technological innovation has changed the needed skills of repairers, new technologies still require maintenance and repair; therefore opportunities are not at risk to technological innovation. Despite high fuel prices, automobile ownership and manufacturing is not expected to decline. Yet, the improvements in manufacturing and design processes have enhanced the structural integrity and paint overcoats of newer cars. These improvements have lessened demand for rust repair and repainting services, once core competencies of the automotive body repair industry.

Key Employers – There are three main types of employers in the automotive body repair industry. According to BLS national occupation data, the majority of repairers (58%) are employed by automotive repair and maintenance shops.³⁹ These can range from small, neighborhood shops that serve a localized market to chain maintenance and repair shops such as MAACO or Jiffy Lube. The small shops and chain businesses are scattered across Baltimore—filling local needs throughout the metropolitan area. Nearly 20% of repairers work for automobile dealerships. Car dealerships tend to be clustered on major transit thoroughfares such as York Road in Towson, where Lexus, Ford, Saturn, and import dealerships are located. Recently, dealerships have attempted to capture more repair business by offering extended service warranties, some of which providing service past 100,000 miles. This trend has resulted in dealerships taking some business away from small repair shops, which struggle to afford the high-cost, computerized repair equipment and technology that have become the industry standard.

Training and Educational Opportunities – Training programs for automotive body repairers have rigorous entrance requirements and require a significant time and financial investment. The only

³⁹ www.bls.gov/oco/ocos180.htm

collision repair program currently offered in the region is the Community College of Baltimore County’s Automotive Collision Repair and Refinishing Associate’s Degree. The two-year program offers training in basic skills, sheet metal repair procedures, estimating, related mechanical and electrical repairs, human relations, employability skills, safe work practices, and entrepreneurship. The program offers state-of-the-art technology and facilities, with more than 70 cars and 14,000 square feet of lab space. However, student enrollment has been sluggish, mainly due to the significant time commitment needed to complete the curriculum. There is no certificate option yet available for this program.

Automotive Service Technicians

Automotive service technicians inspect, maintain, and repair automobiles—a task that has become increasingly difficult with the advent of complex electronic and computer systems in automobile design.

Occupation Strengths – The automotive service technician (mechanic) occupation provides relatively high wages, consistent job stability, and does not require a four-year college degree. Additionally, job demand within the profession is unlikely to be curtailed by offshoring, technological innovation, or industry decline.

Variable	Amount
Annual Median Earnings	\$30,870
Wage Growth	\$38,410
Total Annual Openings	2,780
Educational Attainment Cluster	HS/SC

Sources: Bureau of Labor Statistics; 2005 American Community Survey

Entrance Requirements – The majority of automotive service and repair shops and dealerships require entry-level workers to have a degree from a vocational training program. The most competitive positions at dealerships seek applicants with some work experience. The best automotive service technicians have good reasoning skills and are able to diagnose and solve a problem quickly. Mechanics are required to have college-level mathematics, reading comprehension, and computer skills in order to read and digest complex technical manuals, many of which are now available only in digital formats. Increasingly, automotive service technicians are expected to be familiar with complicated computer and electronic systems found in newer car models.

Opportunities for Advancement – Advancement in the automotive service industry generally requires postsecondary vocational training. While high school graduates may obtain entry-level jobs at small service shops or national chains, a professional degree is essential for advancement into higher-paying, sustainable jobs with benefits. Dealerships provide mechanics with the clearest career ladders, advancement into management roles, and commission-based pay structures. Typically, entry-level wages for mechanics are between \$10 and \$17 per hour. The most efficient mechanics can earn as much as \$20 to \$50 per hour.

Occupational Stability – Demand for automotive service workers is expected to remain strong. Automotive service hiring practices remain impervious to offshoring, and projections do not forecast industry decline. Technicians with advanced training and professional degrees will continue to be the most sought-after candidates. As the automobile industry becomes increasingly reliant on dynamic changes in computer and electronics systems, flexible

automotive service technicians who grasp changes in technology quickly will likely emerge as the most in-demand employees.

Key Employers – The majority of automotive service technicians are employed by dealerships and automotive service and repair shops. A smaller percentage of the workforce is employed by automotive parts distributors. According to the BLS, almost one-fifth of mechanics are self-employed. Dealerships typically pay the highest wages, offer the best benefits, and have the most advancement potential, yet these positions are all but inaccessible to workers without a professional degree. The largest car dealerships in the Baltimore metropolitan area include Jones Nissan, Fox Chevrolet, and Anderson Honda. The Mr. Tire Auto Service Center franchise remains one of the largest automotive service chains along the east coast and has 15 Baltimore-area locations. Smaller, locally owned automotive service shops such as Brentwood Automotive and Melvin’s Tire and Auto Services find niches within local communities. Entry-level opportunities for job seekers with a high school degree are scarce, and most are with local service shops that offer on-the-job training.

Training and Educational Opportunities – Automotive service educational opportunities are available at the high school and postsecondary levels, although funding cuts have limited the availability of vocational high school training programs in the Baltimore metropolitan area. The Community College of Baltimore County (CCBC) is the region’s main provider of full-time, two-year Associate and Associate of Applied Science degree programs in Automotive Service Technology. For workers who cannot afford to attend school full time, for either financial or logistical reasons, the college also offers a full range of certificate programs, with classes that meet in the evening and on weekends. CCBC programs combine classroom lectures with hands-on learning in state-of-the-art facilities, which house more than 70 cars and 14,000 square feet of lab space. Additionally, CCBC partners with Ford, General Motors, and Toyota to administer two-year dealership programs where students alternate between the classroom and working in the dealership in two-month intervals. Courses in this field offered through CCBC are designated as statewide programs, and thus students are able to obtain in-county tuition rates regardless of whether or not they live in the confines of Baltimore County.

Construction Trades and Heavy Equipment Operations

Jobs in the construction trades and in heavy equipment operations consistently provide entry-level employment opportunities for low-skill workers. Baltimore has seen a surge in demand for workers in these occupations, and while changes in the national economy have caused a downturn in residential construction, other types of construction work still abound in this area. With a prime location near Washington, DC, and other major east coast cities and ports, Baltimore is poised to continue having ample job openings in construction, heavy equipment operations, and commercial driving.

The construction, heavy equipment operations, and commercial driving industries will all be buoyed by national programs that create green collar jobs. President-elect Barack Obama has put forth a New Energy for America that seeks to invest \$150 billion over the next ten years to build clean energy future and create 5 million new green collar jobs.⁴⁰ A study by the Center for American Progress reported that a \$100 billion investment in green strategies such as building retrofitting, mass transit/freight rail, a smart grid, wind power, solar power, and advanced

⁴⁰ <http://my.barackobama.com/page/content/newenergy>.

biofuels would net over 36,000 jobs in the state of Maryland.⁴¹ These massive infrastructure projects create thousands of new jobs in construction, heavy equipment operations, and commercial driving.

First-line Supervisors of Construction Trades Workers

First-line supervisors of construction trades workers are typically building trades workers who act as the lowest-level managers on a construction site. They supervise lower-level tradesman, helpers, and laborers on residential and commercial building projects.

Occupation Strengths – The first-line supervisor of construction trades workers (construction supervisor) occupation is a high-paying position with good job demand. Traditionally, the construction profession has provided one of the best career paths for less-skilled workers, as employers do not require postsecondary training for entry-level positions. Construction is also one of the most ex-offender-friendly industries, providing opportunities to low-skill workers with criminal backgrounds.

Variable	Amount
Annual Median Earnings	\$52,960
Wage Growth	\$44,970
Total Annual Openings	2,250
Educational Attainment Cluster	HS/SC

Sources: Bureau of Labor Statistics; 2005 American Community Survey

Entrance Requirements – To be successful at any level of the construction industry, workers must be timely, reliable, and capable of completing physically demanding labor. Previous work experience is an essential requirement to being a first-line supervisor of construction workers. Construction supervisors must be able to examine and inspect work sites, coordinate project activities, understand blueprints, and delineate tasks to employees. These responsibilities require a holistic knowledge of the construction and building process, as well as a cursory familiarity with a diverse range of construction-related occupations. Typically, supervisors have received training in a specific construction trade through an apprenticeship program. After completing apprenticeship training, workers are promoted to the journeyman level. First-line supervisors generally have some experience at the journeyman level before being placed in a management position. This is not always the case, though, particularly in smaller companies. A high school diploma or GED is a prerequisite for acceptance into most apprenticeship programs. First-line supervisor positions do not require a four-year degree, although many supervisors receive an associate’s degree or postsecondary certificate in construction management.

Opportunities for Advancement – The construction occupation cluster represents one of the clearest, most accessible career ladders. Frequently, unskilled, entry-level workers enter the industry as helpers, laborers, or material movers. Then, workers will apply to enter an apprenticeship program, where they will either receive formal or informal skills training from a master tradesman. At times, entry-level workers will need to complete a pre-apprenticeship training program that offers basic construction skills and safety training. Apprenticeships traditionally last four or five years, and upon completion, the individual will be promoted to the

⁴¹ Pollin, Robert, Heidi Garrett-Peltier, James Heintz, and Helen Scharber. 2008. “Green Recovery: A Program to Create Good Jobs and Start Building a Low-Carbon Economy.” Washington, D.C: Center for American Progress and the Political Economy Research Institute.

role of journeyman. Journeymen are able to advance to the master level if they choose to stay in a specific trade or can become site supervisors or project managers. As discussed earlier, the Job Opportunities Task Force (JOTF) administers an apprenticeship program for low-skill Baltimoreans called Jumpstart. Each year Jumpstart provides approximately 100 low-skill workers with 87 hours of pre-apprenticeship training to become electricians, plumbers, and carpenters. Graduates of the program have experienced average wages between \$10 and \$12 per hour (a 33% to 57% increase in wages since entering the program).⁴²

Occupational Stability – Overall, the construction industry has a very low level of risk to offshoring and technological innovations. However, the industry does ebb and flow in step with local commercial and residential real estate markets. Real estate is cyclical in nature, but interviewees noted that construction is not affected as much by this cycle, as generally, if the cycle for residential goes down, commercial will go up (i.e., the two branches often function in an opposite manner from one another). Construction work can exact a physical toll on workers, so this is a consideration for those joining the trades. Journeymen receive markedly higher wages and enjoy greater job stability than laborers or apprentices.

Key Employers – Construction workers are generally employed by contractors, development companies, and small construction shops. Many experienced construction managers become general contractors or start their own construction business. Larger contractors and development companies typically house the most desirable positions, which pay high wages and offer benefits. Smaller construction firms are less likely to offer benefits. The largest, most high-profile development projects are dominated by contractors such as Whiting Turner, a company headquartered in Baltimore with offices throughout the country. Other large local contractors include HITT Contracting Inc. and DGS Construction Inc. Smaller construction firms, such as PJ Contracting Company and Acropolis Construction Company, are more likely to hire entry-level workers with no postsecondary training or education.

Training and Educational Opportunities – A range of community colleges offer programs in construction training and management. The Community College of Baltimore County (CCBC) offers degree and certificate programs in Construction Management and for Construction Craft Professionals. The Construction Management program is designed to prepare workers to be construction supervisors, project managers, estimators, and foremen. This Construction Craft Professionals degree is for students who have completed a four- to five-year apprenticeship. Students take 6 credits per year for a total of 24–30 credit hours, with classes being held at night. CCBC, along with Prince George’s Community College and Montgomery College, is part of a statewide consortium of construction programs. Anne Arundel Community College also offers a construction management degree aimed at more advanced professionals working in the construction industry.

First-line Supervisors of Hand-helpers, Laborers, and Material Movers

First-line supervisors of hand-helpers, laborers, and material movers oversee workers that facilitate the movement of raw and finished goods and materials. The occupation cluster is quite broad, including entry-level helpers, and laborers in construction, manufacturing, shipping, and automobile repair.

⁴² “Baltimore Workforce Collaborative.” [National Fund for Workforce Solutions.](http://www.nfwsolutions.org/workforce_detail.html?id=491)
www.nfwsolutions.org/workforce_detail.html?id=491.

Occupation Strengths – The laborer occupation cluster is one of the highest-wage-earning jobs completely accessible to low-skill workers. Entry-level laborer, helper, and material mover positions do not require a high school degree or any technical skills training. Yet, these positions are in relatively high demand across a range of industries.

Variable	Amount
Annual Median Earnings	\$40,780
Wage Growth	\$38,180
Total Annual Openings	535
Educational Attainment Cluster	HS/SC

Sources: Bureau of Labor Statistics; 2005 American Community Survey

Entrance Requirements – There are minimal barriers to entry for laborers, helpers, and material movers. Generally, first-line supervisors have entry-level experience as a laborer, helper, or material mover. While a high school degree is not essential to being promoted, high school coursework in math, writing, and comprehension prove useful as a first-line supervisor. Furthermore, time management, leadership, and communication skills are important when communicating instructions and scheduling shifts. Increasingly, knowledge of a foreign language is helpful for first-line supervisors because of the high concentration of immigrants in these industries. Finally, laborers, helpers, and material movers frequently must pass criminal background checks and drug tests. These security checks are more rigorous for jobs at ports and major shipment points.

Opportunities for Advancement – The career ladder for helpers, laborers, and material movers depends on the industry in which they are concentrated. First, helpers, laborers, and material movers in any sector can advance to supervisor if they stay with the same job for several years. However, advancement is based on their reliability and ability to manage others. For helpers and laborers in the construction industry, advancement typically occurs by learning one of the skilled trades. Entry-level workers who show an initiative to learn a skill can sometimes receive on-the-job apprenticeship training from a more experienced tradesman, especially within smaller construction companies. Within the automotive repair sector, helpers, laborers, and material movers may be able to receive training in structural repair from more advanced workers.

Occupational Stability – The stability of demand for helpers, laborers, and material movers depends on the economic condition of the specific industry in which the individual is employed. Industries experiencing growth will have high demand for entry-level workers. Yet, sectors such as construction are cyclical and typically have variable demand depending on the performance of the commercial and residential real estate market and the specific project-related needs of the company. Additionally, manufacturing trends will dictate demand for material movers in warehouses and manufacturing facilities.

Key Employers – There are myriad employers that hire first-line supervisors of helpers, laborers, and materials movers, including warehouses and storage facilities, courier companies, automotive repair and maintenance shops, grocers, and construction companies. National chains Giant Foods and Wal-Mart are two of the larger employers of material movers in the region. Material movers can also find work at major ports and shipment points where a high volume of goods arrive and depart each day. As one of the busiest deep-water ports in the country, the Port of Baltimore has a continual need for supervisors of helpers, laborers, and material movers. Similarly, the Baltimore-Washington International Airport is a major transshipment point that requires laborers to load and unload goods.

Training and Educational Opportunities – The majority of training opportunities in the helper, laborer, and material mover occupation cluster occur on the job. Although, as stated earlier, formal training opportunities may be available to entry-level laborers, depending on the industry in which they choose to focus their employment efforts. For instance, helpers, laborers, and material movers in the construction industry frequently advance to skilled trade apprenticeships. For more information on apprenticeships and construction training, see Occupation #4. Other industries that offer formal training opportunities for laborers, helpers, and material movers are the automotive repair and maintenance sectors. For more information on training and educational opportunities in these sectors, see Occupation #1 and Occupation #2.

First-line Supervisors of Transportation and Material-moving Machine and Vehicle Operators

The transportation and material-moving machine and vehicle operator profession includes commercial vehicle drivers, freight-loading machine operators, crane operators, and couriers.

Occupation Strengths – Operators of material-moving machines and vehicles receive solid wage earnings, have the potential to advance from entry-level positions, and can access positions without a college degree. Training for commercial vehicle drivers and material-moving operators (operators in industries such as construction, shipping, and waste removal, where vehicles and heavy machinery are necessary) is accessible for applicants with a high school diploma.

Variable	Amount
Annual Median Earnings	\$45,790
Wage Growth	\$41,340
Total Annual Openings	615
Educational Attainment Cluster	HS/SC

Sources: Bureau of Labor Statistics; 2005 American Community Survey

Entrance Requirements – The entrance requirements for this profession vary across industries and employers. Drivers of commercial vehicles—tractor-trailer trucks, heavy straight trucks, and passenger buses—must earn their commercial driver’s license (CDL). Tractor-trailer drivers are required to have a Class A license. To receive a Class A license, drivers must have a state-issued Class C driver’s license, pass a state permit exam, pass the Department of Transportation’s physical exam, and complete a four-week training course. Class B drivers, who are eligible to drive heavy straight trucks and passenger buses, must complete similar requirements to earn a Class B license. Entrance requirements for the training programs are minimal. Typically, students must pass the state permit exam, the physical exam, and a drug test before being accepted. Employment options for individuals with criminal backgrounds may be limited, depending on the severity of the offense. If a job seeker has a criminal record, interviewees recommended that the job seeker target his or her job search to smaller companies that may be more willing to look past these offenses and work with an employee on an individual basis.

The entrance requirements for material-moving machine operators are less stringent. Traditionally, a high school degree is not necessary for entry into these positions. Depending on the employer, entrants must have a Class C driver’s license and may need to undergo a background check and drug test to operate heavy machinery such as cranes, forklifts, and other vehicles. To move hazardous waste, one must pass more stringent background checks required by the Department of Homeland Security (DHS). Additionally, workers employed at U.S. ports, such as the Port of Baltimore, or other international entry points, including airports such as Baltimore-Washington International, will also face strict background checks. For instance,

employees at ports must have a DHS Security Transportation Worker Identification Credential to have unrestricted access to maritime points of entry.

Opportunities for Advancement – First-line supervisors of material-moving machine operators and vehicle drivers must have some previous experience in the industry to manage other employees. There are multiple career ladders within the general occupation. Commercial vehicle drivers typically begin with their Class B license and then pursue further training to receive their Class A license to increase their earning potential. Some supervisors of vehicle drivers become owner operators, who can own a fleet of trucks as a sub-business under the shell of a larger trucking company. Advancements for material-moving machine operators are frequently determined by seniority at a company.

Occupational Stability – The demand for material-moving machine and vehicle operators is strong. The trucking industry remains robust and the demand for commercial vehicle drivers is high. However, interviewees noted that driver demand may become less predictable as a result of higher, more volatile fuel prices. Jobs in other material-moving machine industries such as construction, shipping, and manufacturing are dependent on the viability of those individual occupations. This occupation cluster faces a low risk to offshoring but a slight risk to technological innovation. More efficient material-moving machines decrease the number of machines or vehicles that are needed, thus decreasing demand for operators and drivers.

Key Employers – A wide range of industries and employers need first-line supervisors of material-moving machine and vehicle operators. Local governments, transit authorities, school districts, and busing companies all hire Class B bus drivers. Freight and shipping companies and warehouses demand tractor-trailer drivers, forklift operators, crane operators, and other light-truck drivers. The area's city and county transit agencies and school districts are the largest employers of Class B bus drivers. The United Parcel Service is one of the largest employers in Baltimore County, with more than 1,900 employees. The Port of Baltimore and the Baltimore-Washington International Airport hire forklift and material-moving vehicle operators.

Training and Educational Opportunities – There are several types of commercial vehicle training programs in the Baltimore metro area. The Community College of Baltimore County (CCBC) offers training programs that prepare students to take the Class A and Class B license exams. The Class A training, which lasts four weeks, allows students to operate tractor-trailer trucks, while the two-week Class B program prepares students to operate heavy straight trucks and passenger buses. Both programs offer a combination of classroom and road experience. Commercial driving programs are also offered by Anne Arundel Community College, Harford Community College, and Chesapeake College.

Food Service and Hospitality

The Baltimore metropolitan area has experienced extensive growth in recent years, and with additional residents coming to the area as a result of the Department of Defense's Base Realignment and Closure (BRAC), growth will undoubtedly continue. This growth—combined with the highly successful redevelopment efforts in downtown Baltimore, return of population to the center city, and increased tourism—is creating more jobs in the food service and hospitality industry. These jobs provide entry-level options for low-skilled populations and significant opportunities for advancement.

Food Service Managers

Food service managers fulfill a variety of responsibilities in the operation of restaurants, cafeterias, and catering businesses. Food service managers hire and fire employees, oversee inventories and costs, coordinate and manage staff, and ensure quality service.

Occupation Strengths – The food service manager occupation provides living wages, typically offers benefits, and is accessible to workers with low-skills. The food service industry is expected to have solid job growth with plenty of management opportunities in restaurants and other food service establishments.

Variable	Amount
Annual Median Earnings	\$45,340
Wage Growth	\$48,470
Total Annual Openings	590
Educational Attainment Cluster	HS/SC/C

Sources: Bureau of Labor Statistics; 2005 American Community Survey

Entrance Requirements – There are no official requirements to be a food service manager. Historically, food service managers most commonly were promoted from positions as servers, cooks, hosts, or other positions. This is still the most frequent path taken by food service managers. While there are still many opportunities for upward mobility from an entry-level food service position, increasingly, as college training has become the norm in most professions, food service managers have been hired after attending postsecondary hospitality management programs at the certificate, associate, bachelor's, and/or graduate school levels. In hospitality management programs, students learn about the core skills in food service management, including marketing, accounting, food and beverage pricing, communications, and computer skills. Graduates of these programs are typically vying for the most competitive jobs offered by higher-end restaurants and full-service hotels. Aside from formal training, food service managers must have well-honed soft skills. Managers should have a presentable appearance and demeanor, interact well with customers and employees, be reliable, and be willing to work long hours including nights and weekends. Barriers to entry in the food service management occupation include drug abuse, a criminal record, and poor soft skills.

Opportunities for Advancement – Entry-level employees working as busboys, waiters, hosts, or cooks all have the ability to move into a management role with enough experience. Because these positions require no formal education or technical skill, the food service management occupation is particularly accessible to the low-skill workforce. Food service managers may be promoted to administer multiple restaurants in a region if they are working for a national or regional chain. Additionally, food service managers may choose to become a franchise owner of one or more restaurants.

Occupational Stability – The hospitality and food service industry has continued to grow as demand has increased from population growth and income gains in the Baltimore region, as well as from increased tourism. Food service managers and other related positions face little risk of being offshored, given their nature as service positions. Conversely, technological innovation has continually changed demand for food service workers. Automated order trackers have replaced workers in many fast food establishments. The mechanization of food preparation in fast food restaurants has also decreased the demand for entry-level workers. However, these advances are not expected to lower demand for food service managers in the near future.

Key Employers – Food service managers can be employed in a variety of establishments. Obviously, restaurants are the most common employers of food service managers. The highest concentration of restaurants lies in Baltimore’s high-density downtown and waterfront areas. Food service managers are also employed by companies that provide services to businesses, government offices, schools, and retirement homes. International food service corporations such as Sodexo and Aramark typically provide these institutions with food service workers. To a lesser extent, food service managers work at hotels and entertainment venues. Food service managers also find employment opportunities in hospitals, given the presence of the Johns Hopkins Hospital System and the University of Maryland Hospital System.

Training and Educational Opportunities – As stated earlier, an increasing number of undergraduate, and even some graduate, hospitality and management degree programs have been created during the past decade. Additionally, there are a range of technical and certificate programs in hospitality and food service management for applicants who are unable to commit to four-year programs. Hospitality management programs typically contain business courses in addition to more occupation-related courses specifically applicable to food service. Students traditionally complete internships at restaurants or hotels to give them experience prior to applying for jobs after graduation. Currently, a range of institutions offer hospitality and food service management programs in the Baltimore metropolitan area, including Morgan State University, Howard Community College, Anne Arundel Community College, Baltimore City Community College, the Community College of Baltimore County, and Chesapeake College.

Professional Services

While many employers in the professional services realm are in search of employees with advanced degrees, many jobs are still accessible to those without education past a high school diploma. The competition for these jobs can be higher, but the rewards are significant. Professional services positions offer career development and stability.

Claims Adjusters, Examiners, and Investigators

Claims adjusters, examiners, and investigators investigate a claim by interviewing claimants and witnesses, examining damages, and gauging their company’s liability.

Occupation Strengths – The claims adjusters, examiners, and investigators occupation cluster is accessible to workers without a high school degree, provides a healthy living wage, and provides solid advancement prospects. Job demand is expected to grow at an average rate, with many openings available as current claims workers switch industries or retire.⁴³

Variable	Amount
Annual Median Earnings	\$45,440
Wage Growth	\$41,380
Total Annual Openings	525
Educational Attainment Cluster	HS/SC/C

Sources: Bureau of Labor Statistics; 2005 American Community Survey

Entrance Requirements – There are no formal entrance requirements to be a claims examiner, adjuster, or investigator. Many entry-level claims workers have no postsecondary educational

⁴³ www.bls.gov/oco/ocos125.html.

training. These entry-level workers learn the claims industry through research or administrative roles, while simultaneously developing a knowledge base and skill set that will lead to increased responsibility. College graduates typically fill the most competitive jobs, although no specific degree is particularly advantageous. Public claims workers (e.g., those who sell insurance coverage) must be licensed by the state in which they are working. Contrarily, claims adjusters, examiners, and investigators employed by private insurance agencies can frequently work under the overall company's license and do not have to become personally licensed. Continuing education is an important component in the claims field. Claims adjusters, examiners, and investigators are expected to continually recertify, attend trainings and workshops, and keep abreast of changing local, state, and federal insurance legislation. Claims adjusters, examiners, and investigators must have at least high school skill levels in mathematics, reading, and writing. Solid analytical, communication, and interviewing skills are also pertinent to the responsibilities of claims workers. These advanced skill levels may create especially stiff barriers that prevent entry-level low-skill workers from entering the industry.

Opportunities for Advancement – Entry-level claims adjusters, examiners, and investigators typically gain knowledge of the industry by starting in clerical or research positions. Once they have a firm grasp of the fundamentals of the insurance business, they may receive additional training before being given claims adjusting, examining, or investigating assignments. Additionally, claims workers who are successful and show an aptitude for managing other claims workers may be promoted to a supervisory or administrative role. Finally, claims adjusters, examiners, and investigators with many years of experience will frequently become self-employed or start their own small claims business.

Occupational Stability – Job demand for claims adjusters, examiners, and investigators is expected to be solid for the foreseeable future. Because of the heavy emphasis on administrative and clerical roles within the insurance industry, claims-related positions may face challenges from overseas labor markets if these duties can be completed at lower costs abroad. Technological advancements such as automated claims systems and the internet have streamlined the claims adjustment and examination process, allowing claims adjusters, examiners, and investigators to accomplish more in a shorter period of time. Efficiency increases allow insurance companies to keep fewer claims workers on staff. Furthermore, large insurance companies are increasingly relying on call centers to handle claims inquiries, a task previously completed by claims workers themselves.⁴⁴

Key Employers – Claims adjusters, examiners, and investigators are typically employed by insurance companies and agencies. National insurance companies such as Allstate, State Farm Insurance, Fidelity National Financial, and Liberty Mutual have branch offices and agencies throughout the Baltimore region. Many claims workers are employed by larger regional companies such as the Baltimore Life Insurance Company. A smaller percentage of claims workers are self-employed or work for small claims adjustment companies. More experienced claims workers occasionally work for private insurance training companies as trainers.

Training and Educational Opportunities – There remain few formal, postsecondary educational or training programs for those seeking to become claims adjusters, examiners, and investigators. Most claims workers with a postsecondary education attended four-year degree programs, although this is by no means a requirement for the profession. Specialized prelicensure classes in

⁴⁴ IBID

Property and Casualty Insurance are offered by Anne Arundel Community College. On the private side, MODA Systems Inc. provides professional training for insurance agents, claims adjusters, title agents, bail bondsmen, long-term care professionals, certified financial planners, and assisted living managers. MODA’s professional courses typically cost \$75 for a four-credit-hour class, a feasible price for most people. Longer, 96-credit-hour training courses cost approximately \$1,100.

Sales

Sales occupations offer a breadth of options for low-skill workers. The large variety of job types and schedule structures make sales occupations some of the most flexible choices for individuals with schedule constraints. The industry in general is easily accessible without formal education or training. Opportunities abound for those looking to enter the workforce and transition from entry-level employment into a career-oriented position in a short amount of time.

First-line Supervisors of Retail Sales Workers

Retail sales supervisors manage retail salespersons, cashiers, stock fillers, and customer service representatives. Supervisors are responsible for interviewing, hiring, training, budgeting, task assignments, and customer service management.

Occupation Strengths – The retail sales supervisor position is an attractive option for low-skill workers. Retail supervisors earn solid salaries and frequently receive benefits, and the position is accessible without a four-year degree or other formal training. While the turnover rate in retail sales remains high, this trend also ensures a large number of openings and creates a strong demand for experienced sales workers.

Variable	Amount
Annual Median Earnings	\$34,710
Wage Growth	\$40,830
Total Annual Openings	4,390
Educational Attainment Cluster	HS/SC/C

Sources: Bureau of Labor Statistics and 2005 American Community Survey

Entrance Requirements – There are no official entrance requirements for first-line supervisory positions in the retail sales field. Supervisors have varied educational backgrounds, ranging from high school graduates to workers with college degrees in business, marketing, accounting, or the social sciences. Traditionally, some prior experience in retail sales, wholesale sales, or customer service is essential to advance to the management level, although if the need exists to fill an advanced position, a competent worker may advance with little experience. At larger retail chains, supervisors may undergo a training program that outlines management skills, company practices, and the corporation’s culture and values. Supervisors must have the necessary technical skills to operate computers, cash registers, and management software programs. Additionally, retail sales management requires good communication, leadership, and organizational skills.

Opportunities for Advancement – First-line supervisors of retail sales workers typically start as entry-level workers in retail sales or customer service. Entry-level positions in retail sales are accessible for workers of all backgrounds, but typically, the best jobs require at least a high school degree. Low-skill workers with good workplace behavior and appearance are qualified to

work in entry-level sales. The accessibility of management positions varies across employers. In small retail shops, only one or two employees may handle management duties. In larger retail chains, workers have more opportunities to advance to positions such as assistant manager or department supervisor. In most instances, sales workers must have an extended tenure as an entry- or secondary-level employee before being considered for management positions; although in some circumstances, workers may be promoted more quickly if they demonstrate the applicable skill sets. Unfortunately, the high turnover rate, low wages, and inconvenient hours accompanying entry-level retail sales jobs can discourage workers from staying at one store long enough to advance.

Occupational Stability – Historically, the retail sales industry has been subject to high turnover rates and changes in the overall economy. Job openings for retail sales supervisors are projected to be solid for workers with retail experience.⁴⁵ Retail sales professions face little pressure from offshoring trends, and consumer demand continually grows as the population of the Baltimore and Washington, DC, metro areas expands and incomes and tourism rise.

Key Employers – The main employers of retail sales supervisors include grocery chains, big-box retailers, clothing, and apparel stores. However, retail sales supervisors are needed at any store that specializes in any type of consumer good. Within the Baltimore metropolitan area, retail jobs are widely dispersed. The largest clusters of retail jobs are concentrated in shopping nodes such as the Anne Arundel Mall, Harford Mall, Towson Town Center, Owings Mill Mall, and Harborplace and the Gallery downtown. These areas contain a mix of high-end retail stores that pay higher wages and may offer benefits. Wal-Mart and Giant Foods remain two of the region's most accessible options for entry-level retail workers.

Training and Educational Opportunities – There are limited formal training opportunities for entry-level retail sales workers. Many retail workers will seek either a bachelor's or associate's degree in management or business to increase their competitiveness for supervisory positions. Howard Community College offers a Business Management Certificate in Retailing, which offers courses in retail merchandising and encourages students to gain retail sales experience while enrolled. Anne Arundel Community College recently began offering a Retail Management Certificate program for retail sales workers seeking to advance to supervisor positions. The program has not garnered interest, most likely due to the nature of retail sales training. The majority of the skills necessary to advance in retail sales can be learned on the job as an entry-level worker. Therefore, postsecondary training may not be the most logical path to advancement within the profession.

Sales Representatives, Wholesale and Manufacturing (not including technical and scientific farm products)

Sales representatives sell wholesale and manufacturing products to wholesale and retail buyers. Their primary responsibility is to present the product, answer the potential buyer's questions, and explain how the product can benefit the potential buyer.

Occupation Strengths – Sales representatives, wholesale and manufacturing, remain some of the most sought-after positions in sales. Wholesale and manufacturing sales representatives typically

⁴⁵ www.bls.gov/oco/ocos025.html.

earn relatively high salaries with high growth potential, receive health care and other fringe benefits, and have solid advancement opportunities.

Variable	Amount
Annual Median Earnings	\$52,220
Wage Growth	\$73,430
Total Annual Openings	5,890
Educational Attainment Cluster	HS/SC/C

Source: Sources: Bureau of Labor Statistics; 2005 American Community Survey

Entrance Requirements – The educational requirements for sales representatives, wholesale and manufacturing, depend on the company and the background of the applicant. Increasingly, employers are seeking applicants with a bachelor’s degree for the most sought-after positions. However, job seekers with prior sales experience and a proper sales demeanor are also competitive candidates. Because no formal education program feeds into wholesale and manufacturing sales, a range of degrees including communications, marketing, business, psychology, and sociology are applicable. Technical training has a less significant role in wholesale and manufacturing sales. Interviewees repeatedly said that more important are a job seeker’s soft skills—personality, ability to communicate, demeanor, appearance, and work ethic—which are difficult to teach through formal training.

Opportunities for Advancement – Sales representatives, wholesale and manufacturing, enjoy excellent salary growth and advancement opportunities. Because much of sales is commission-based, sales representatives have almost unlimited salary growth. As sales representatives become more comfortable within their responsibility level, they frequently will be promoted to a larger territory. A solid track record can lead to promotion into an administrative or management position. Additionally, some wholesale and manufacturing sales representatives branch off and become self-employed. Because sales people are frequently in contact with managers from other businesses, lateral movements between companies are frequent.

Occupational Stability – Job stability for wholesale and manufacturing sales representatives largely depends on the stability of their product’s industry. Overall, job growth in this field is expected to be average, with the best opportunities being created in high-growth manufacturing industries. Nontechnical sales industries include heavy machinery, electronic products and systems, grocery wholesalers, and nondurable goods.⁴⁶ Wholesale and manufacturing sales representatives are consistently challenged by the rise in online commerce. As interviewees noted, companies now have access to a wider breadth of information about products and trends within an industry, and rely less on product and industry updates from sales representatives. The commission-based pay structure can result in unreliable earnings for representatives in wholesale and manufacturing sales. The long, variable work schedules and, at times, stressful environment in sales results in relatively high turnover rates throughout the industry.

Key Employers – Any employer within the sales and manufacturing industry relies on sales representatives to sell their products. The largest industries include heavy machinery, electronic products and systems, grocery wholesalers, professional and commercial equipment wholesalers, and nondurable goods wholesalers.⁴⁷ While Baltimore’s industrial sectors have diminished, there is still a significant manufacturing presence in region. Heavy machinery manufacturers such as

⁴⁶ www.bls.gov/oco/ocos119.htm#training

⁴⁷ IBID.

Mid-Atlantic Machinery and Alban Tractor Company are examples of smaller businesses that hire wholesale sales representatives.

Training and Educational Opportunities – Few postsecondary training programs are targeted toward entry-level sales workers in the wholesale and manufacturing sector. Two international corporate training programs, Dale Carnegie Training and the Sandler Training Institute, typically enroll sales people with a bachelor's degree and some sales experience. Both offer individualized and corporate training courses in communication, leadership, presentation development, sales, and skill development. While these comprehensive programs are well-respected within the industry and boost the résumés of graduates, they are cost prohibitive for low-skill, entry-level workers. The cost of training in these programs ranges between \$1,700 and \$3,300 for the full program. A trainer at a Baltimore-based franchise of one such training company suggested that low-skill workers gain experience in the retail sales or customer service industries before enrolling in postsecondary training.

IV. CHALLENGES AND SOLUTIONS

Observations

Throughout the interviews with local leaders, educators, job trainers, and employers, key themes emerged regarding the strengths and weaknesses of the Baltimore metropolitan area as a job center for low-skill workers. Many barriers were also cited that make finding, obtaining, and retaining employment a challenge for this population.

Each of the subsections below synthesizes a key issue relevant to the employment of low-skill workers in the Baltimore area, providing not only a discussion of the issue, but also suggestions for changes that will enable the area to better meet the needs of low-skill workers as they strive to attain a sustainable place in the region's economic fabric.

Workforce Development Stakeholders

Throughout this project, it was evident that the Baltimore metropolitan area contains a wide range of educational, government, nonprofit, and philanthropic institutions providing training programs, workforce development initiatives, and grants and other funding in an effort to match Baltimore's low-skill workforce with employment opportunities. Informational interviews with leaders of many of these organizations supplied an overview of Baltimore's low-skill workforce, strengths and weaknesses of the labor market, and the agendas and initiatives of the area's workforce development service providers. From these discussions and background research, it was clear that these groups provide a strong foundation for existing and future workforce development endeavors. Below is a brief summary of many of the major stakeholders.

Exhibit 7: Key Workforce Development Stakeholders in the Baltimore Metropolitan Area

Type of Institution	Name
Education	Baltimore City Community College
	Community College of Baltimore County
	Anne Arundel Community College
	Harford Community College
	Howard Community College
	Carroll Community College
	Chesapeake College
Government	Baltimore City Mayor's Office of Employment Development
	Baltimore City Department of Neighborhood and Economic Development
	Baltimore County Department of Economic Development
	Maryland Department of Labor, Licensing, and Regulation Workforce Development Division
	Howard County Department of Workforce Development
	Harford County Office of Economic Development
	Carroll County Business and Employment Resource Center
	Anne Arundel Workforce Corporation
Non-Profit	Job Opportunities Task Force
	Goodwill Industries of the Chesapeake
	Baltimore Alliance for Careers in Healthcare
	Opportunities Industrialization Center
	Centro de Ayuda
	Catholic Charities of the Archdiocese of Baltimore
Philanthropic	Anne E. Casey Foundation
	The Abell Foundation
	Robert Wood Johnson Foundation
	The Harry and Jeanette Weinberg Foundation

Source: Author's Compilation.

Education Institutions

The Baltimore metropolitan area's network of community colleges remain the most accessible postsecondary education and training option for the area's low-skill workforce, offering an array of credit and noncredit programs that award formal degrees, certificates, certifications, test preparation, and supplementary skills training. The Baltimore City Community College (BCCC) offers job seekers more than 50 degree and certificate programs. As the only community college in Baltimore City, more city undergraduates attend BCCC than any other university in Maryland, making it a vital stakeholder in the advancement of the central city's low-skill workforce.⁴⁸ The Community College of Baltimore County (CCBC) offers more than 100 associate degree and certificate programs in topics ranging from automotive service to food service management. The CCBC also provides workforce development services through its Job Network Program, which takes an individualized, case management approach to help a diverse range of job seekers become employment-ready. Situated southwest of Baltimore City, Anne Arundel Community College (AACC) is a two-year institution that offers both degree and certificate programs as well as lifelong learning and continuing education opportunities. AACC leverages its programming through effective strategic partnerships that foster economic and workforce development

⁴⁸ www.bccc.edu/88745119202147/site/default.asp.

throughout Anne Arundel County. Harford Community College, Howard Community College, Carroll Community College, and Chesapeake College are also vital nodes in the region's postsecondary education network.

Government Agencies

The public sector has a major stake in the advancement of Baltimore's regional economy, as evidenced by the numerous city, county, and state workforce and economic development agencies that provide skills training and job matching services for underskilled workers. The Mayor's Office of Employment Development (MOED) works within the central city to facilitate human capital investment and skill building to help move low-skill workers into sustainable, family-supporting jobs. MOED emphasizes skill development by encouraging job seekers to utilize its digital learning labs, pre-GED adult literacy programs, and countless other resources in its three One-Stop Career Centers. The Baltimore County Department of Economic Development (BCDED) acts as a liaison between a diverse range of local businesses and several local educational institutions. BCDED's responsibilities include administering the County's Enterprise Zone program, providing gap financing, offering technical assistance, providing ombudsman services, and facilitating new business development. The Maryland Department of Labor, Licensing, and Regulation's Workforce Development Division oversees the state's workforce programs. The department also distributes Workforce Investment Act (WIA) funding to local organizations and operates the state's One-Stop Career Centers, which collocate multiple tiers of employment services in one location in every Maryland county. Greater Baltimore workforce and economic development organizations include the Howard County Department of Workforce Development, the Harford County Office of Economic Development, the Carroll County Business and Employment Resource Center, and the Anne Arundel Workforce Development Corporation.

The diverse range of public workforce development organizations provides ample opportunities to develop partnerships, leverage resources, and evaluate policies and programs. The Baltimore metropolitan area's workforce development stakeholders have historically developed partnerships within their specific municipality only. For example, MOED has partnered with city institutions such as the Baltimore Workforce Investment Board, the Baltimore Development Corporation, the Baltimore City Community College, and the Baltimore City Public Schools. Similarly, BCDED partners with Baltimore County stakeholders including the Baltimore County Office of Workforce Development (OWD), the Baltimore County Public Schools, the Community College of Baltimore County (CCBC), the County Executive's Advisory Board on Higher Education, the Maryland Business Roundtable for Education, and local four-year institutions such as the University of Maryland – Baltimore County, Towson University, Villa Julie College (now Stevenson University), and Loyola College. The collaborative efforts of these groups have addressed labor and economic deficiencies within Baltimore City and Baltimore County, respectively. Yet, the lack of collaboration between municipalities may fail to address the changing dynamics and developing challenges within Baltimore's regional economy, which is built on pools of labor, clusters of industry and corporations, and scattered higher-learning institutions that are not solely shaped by the policies of one city or county agency.

Nonprofit Organizations

Local nonprofit organizations are vital in filling the gaps in workforce development policy and programming not covered by Baltimore's academic and government institutions. Founded in

1996, the Job Opportunities Task Force (JOTF) is a nonprofit network of employers, service providers, and community organizations whose mission is to place low-skill, low-income workers and job seekers into high-paying, family-supportive jobs. JOTF works to complete its mission by advocating its agenda to policymakers, collaborating with local organizations to develop and implement workforce development programs, and completing research on issues that affect Baltimore's low-skill population. JOTF partners with Associated Builders and Contractors, Goodwill Industries of the Chesapeake, Baltimore City Community College, and Skills Force Leasing Company to deliver the Jumpstart Pre-Apprenticeship Program. Goodwill Industries of the Chesapeake (Goodwill) remains an important policy advocate and job training and placement center for Baltimore's most marginalized individuals. Goodwill's campaigns have included working with the Highway Administration to establish a carve-out in a highway bill to provide construction jobs for economically disadvantaged individuals. The organization has also campaigned local policymakers to provide the same economic incentives to nonprofits to hire low-skill workers that private businesses receive. The Goodwill Staffing Service works with local employers to place low-skilled workers into entry-level openings. The Baltimore Alliance for Careers in Healthcare (BACH), a workforce intermediary, addresses Baltimore's health care worker shortage by moving low-skill workers into sustainable career ladders within the health care field. BACH offers career maps for the health care field that clearly outline advancement paths, career coaching, and bridge programming for job seekers that require remediation prior to placement.

These three nonprofits are only a sampling of the myriad organizations that are providing workforce development programming and support. Similar to JOTF's Jumpstart Program for construction and BACH's programming for health care, the Biotech Institute of Maryland is currently partnering with more than 29 companies to provide programming in biotechnology training for low-skill workers. Together, these are the three main initiatives of the Baltimore Workforce Collaborative, an informal alliance of public and private funders aiming to improve Baltimore's economic health by enhancing the workforce system.⁴⁹ The Institute offers two training programs: BioStart, a 12-week bridge program to improve basic skills and knowledge of the biotech industry, and its 9-week Lab Associates program, which offers its graduates a 100-hour internship and eventual full-time placement in the industry. The program has had impressive results, placing more than 80% of its graduates (178 low-income adults) at an average salary of \$25,000 per year.⁵⁰ In Anne Arundel County, the Opportunities Industrialization Center and the Centro de Ayuda focus on promoting workforce development in African American and Latino communities, respectively. Catholic Charities of the Archdiocese of Baltimore provides targeted workforce development programming to at-risk populations including ex-offenders, the homeless, and new mothers.

Philanthropic Foundations

The workforce development organizations in the nonprofit sector rely heavily on grants and donations from philanthropic foundations in the Baltimore and Washington, DC, area. The Annie E. Casey Foundation, The Abell Foundation, the Robert Wood Johnson Foundation, and The Harry and Jeanette Weinberg Foundation Inc. all provide funding that facilitates the implementation of cutting-edge workforce development programs and policies.

⁴⁹ IBID.

⁵⁰ IBID.

A Regional Approach to Job Training and Placement Programs

Occupation-specific collaboration among these local stakeholders is paramount to providing job opportunities for the Baltimore region's less-skilled population. In order to gain access to viable job options, low-skill workers often require remedial coursework, soft skills training, technical skills training, and/or job search assistance. Additionally, these individuals often require the clear delineation of career pathways to understand the long-term commitments necessary for advancement. Once on the job, low-skill workers often require continual support to balance a schedule filled with academics or training, work, and family obligations. The financial and time commitment required to provide this support is beyond the scope of any one organization. Thus, occupation-specific strategic partnerships between government workforce and economic development agencies, workforce investment boards, nonprofit organizations, public high schools, community colleges, job trainers, and, most importantly, local employers are crucial to supplying the necessary support to move low-skill workers into sustainable, living-wage jobs. As described in the section above, a large group of stakeholders are engaged in these issues in the Baltimore area; however, assembling the relevant regional partners, obtaining the required start-up funding for administrative costs and other infrastructure, and building consensus among a diverse range of stakeholders remain challenging tasks.

BACH represents an existing example occupation-specific collaboration within the Baltimore metro area. Founded in 2005, BACH is a workforce intermediary that addresses Baltimore City's health care worker shortage by moving low-skill workers into sustainable career ladders within the health care field. BACH's services help entry-level workers understand the health care career ladder by clearly outlining career maps in eight health care professions. BACH also pays one-quarter to one-half of the salaries of career coaches in area hospitals to facilitate the advancement of entry-level health care workers. BACH prepares entry-level workers for technical training programs by offering short-term remediation courses through its Pre-Allied Health Bridge Program. BACH has been highly effective in its efforts, with more than 400 entry-level hospital employees receiving career coaching and two initial groups of participants completing the Bridge Program in the spring of 2008.

The representation of numerous stakeholders has been a key strategy for BACH since its inception. BACH's success can be attributed to its fulfillment of three key strategies that are crucial to the establishment of any workforce intermediary: support from employers driven by employee demand, financial backing from the local philanthropic community, and dynamic, well-connected leadership. BACH attributes its success to its strategic partnerships with more than 30 of the area's hospitals, which embraced the trend that the standard pipeline of health care workers would be insufficient to meet the field's growing demand for skilled labor. Once this realization occurred, hospitals and long-term care facilities were more willing to invest time and money into training entry-level workers. BACH continues to recognize the importance of Baltimore's hospitals to its mission by reserving at least 25% of its Board of Directors positions for employers.

Local philanthropic grants and donations from 10 philanthropic organizations including the Anne E. Casey Foundation, the Abell Foundation, the Harry and Jeanette Weinberg Foundation, and the Baltimore Community Foundation are crucial, as funders cover 75% of BACH's infrastructure and administrative costs. While foundations are BACH's main source of income, the organization has experimented with other fundraising methods including a tiered membership fees system that offers four membership levels ranging from a per-hospital fee to a single charge

that covers an entire hospital system such as Medstar or the University of Maryland – Baltimore. BACH partners with local government institutions such as MOED, the Baltimore Workforce Investment Board, and the Maryland Department of Labor, Licensing and Regulation, yet receives only a small part of its funding from the public sector.

BACH's third successful characteristic is its strong leadership. As a nonprofit organization, BACH depends mainly on its ability to acquire funding from numerous sources. Garnering a steady supply of funding requires leadership that is well-connected in Baltimore's private, public, and philanthropic sectors. The coalition that founded BACH included representatives from MOED, the Anne E. Casey Foundation, and the Johns Hopkins Hospital System. Supplanting leaders in each of these sectors ensured that BACH's interests would be diversified across numerous stakeholders and thus be more sustainable.

BACH currently is working to expand its partnership to include government agencies, nonprofits, community colleges, and employers in Baltimore County that have a stake in the region's health care system. This change recognizes that the network on stakeholders is larger than simply one jurisdiction in a metro area that is a combination of many intertwined jurisdictions. Further, a regional focus to occupation-specific workforce development recognizes that the movement of goods, people, and services is not limited by city boundaries or school districts. Strategies that provide employment opportunities for low-skill workers in an increasingly regional economy must be created using regional coordination.

However, these tactical partnerships should not be limited to the health care industry—they are applicable to any industry. Occupation-specific and even industry-wide task force groups comprising regional stakeholders are crucial to moving less-skilled workers into viable job clusters and to helping those workers retain employment and advance in the profession.

While regionally focused task forces should be explored for all potential job options, the need is especially apparent in the automotive service and construction industries, which are currently suffering from a shortage of skilled workers. For example, the automotive service technician is a profession with high job demand, yet requires training programs that are inaccessible to workers with poor training in math and reading. Collaboration between workforce development agencies, public high schools, community colleges, and training organizations would result in remediation or bridge programs that prepare low-skill workers for entry into technical programs in automotive service. The shortage of skilled mechanics could be leveraged to create a partnership between technical programs and local dealerships, in which the employer assists students with tuition costs in exchange for their employment upon completion. Bringing regional stakeholders to the same table through occupation-specific organizations could provide a new platform for workforce development policies and programs in Baltimore.

Creating Targets and Setting Goals Regionally for Job Training and Placement Programs

Collaborative partnerships represent the first step in a regional workforce development strategy that fosters employment opportunities for low-skill workers. However, regional organizations are effective only if they can incorporate the goals of local stakeholders into a comprehensive regional strategy. Below we outline a suggested framework for targeting low-skill workers and coordination strategies that move these workers into job training and placement programs.

Concentrated Recruitment Efforts

Baltimore has a wide range of workforce development programs, community college degrees and certificates, and job training opportunities, yet many of the area's less-skilled job seekers are unaware of the resources at their disposal. The targeted recruiting of low-skill workers is a crucial first step in placing them in viable career paths.

Strong, direct links between the public school systems in Baltimore City, Baltimore County, Anne Arundel County, Harford County, and Howard County and the area's community colleges will ensure that high school students are aware of technical training and associate's degree and certificate opportunities. Career and college fairs at local high schools and community colleges are efficient, cost-effective methods for presenting information and building community ties between educators and employers. Recruitment of older low-skill workers by training and educational programs as well as by employers can occur by targeting public aid program recipients and those exiting court services.

Collaboration Between Training Programs

If the goal of a regional, occupation-specific workforce development approach is to create coordinated career paths for low-skill workers, then a more viable approach must strengthen the connection between education and training programs in the Baltimore area.

These bonds must begin with a dialogue between the area's public schools, community colleges, continuing education institutions, and nonprofit training providers. Many students exiting the typical public school curriculum do not have the necessary math, writing, and reading comprehension skills to complete technical degrees, training programs, or certificate programs. Administrators and professors at the area's community colleges repeatedly cited the fact that many entering students cannot understand percentages and fractions, take measurements, or complete other tasks that are essential to entry-level positions in health care, construction, automotive technology and repair, and numerous other occupations. This skills gap has necessitated the advent of remedial courses and bridge training programs in many of the area's community colleges, but the need to engage in these remedial efforts to even be eligible to enter into other training programs is a significant barrier for low-skill workers to overcome. The effective streamlining of the secondary and postsecondary education systems in the Baltimore region is vital in providing high school students the opportunity to compete on the college level and in the workforce.

Effective communication both *between* and *within* community colleges, technical schools, and four-year colleges and universities will help strengthen the area's postsecondary education system, form new educational alliances, and bolster the human capital and economic vitality of the region. Postsecondary education institutions have a vital stake in any sector-based workforce development strategy. Because low-skill workers contemplating a postsecondary degree will not make a significant educational investment without recognizing the benefits, a clear educational path to viable employment must be outlined. To do this, the postsecondary educational system must be streamlined in an effort to provide entrants a pathway from certification, to an associate's degree, to perhaps even a bachelor's degree. At times, students navigate this path within one institution, especially moving from a certificate program to an associate's program, a progression offered by the Baltimore City Community College, the Community College of

Baltimore College, and Anne Arundel Community College. In this case, collaboration between the noncredit and credit halves of the college is crucial.

Effective Links Between Training Programs and Employers

Collaboration between job trainers and employers is perhaps the most important connection in a sector-based workforce development strategy. However, employers and training programs rarely meet to discuss skill gaps, employment trends, and workforce needs. A common theme in interviews with local employers in sales, automotive repair and service, construction, and health care was the lack of skilled, reliable job candidates. Conversations with local job trainers and educators revealed a similar trend: Low-skill workers did not need a two- or four-year postsecondary degree to be competitive in the job market. Frequently, low-skill workers' job prospects are boosted by receiving minimal postsecondary job training through a professional certificate program. Certificate programs present opportunities for professional development at lower financial and time burden costs.

Occupation-specific workforce intermediaries, such as BACH, have the opportunity to connect a wide network of industry stakeholders, manage funding from numerous sources, and provide the training and support for low-skill workers navigating career ladders. BACH's leadership credits their success to their ability to reach and advocate to a broad network of stakeholders, a challenging feat that requires executive leadership that can appeal to a diverse range of interests. Additionally, their ability to provide career coaching to entry-level hospital workers requires the participation of several hospitals, which speaks to the importance of bringing the needs of employers to the table.

The importance of philanthropic donations to workforce intermediary organizations cannot be overlooked. Without the donations from more than 10 local and regional foundations, BACH would be unable to pay between one-quarter and one-half the salaries of career coaches. Private investment in workforce development is rare, and the majority of public funds are distributed to local governments by the U.S. Department of Labor with strict benchmarks, rules, and regulations.⁵¹ In fact, training providers interviewed for this study noted that the strict rules and regulations associated with these programs often prevented them from being able to offer the exact scope of services they felt was most appropriate. Trainers and educators worked to develop creative solutions to stretch the rules to fit their needs as much as possible. Typically, foundations are the main source of funding for workforce development initiatives that are capable of responding to dynamic employment trends endemic to local and regional economies.

Identifying Gaps in Regional Training Infrastructure

While the area's community colleges and training programs cover a wide range of topical areas across almost all industries, there are gaps that must be addressed. Baltimore's workforce development and job training community must complete a comprehensive evaluation of the postsecondary education and training infrastructure to identify these gaps. Deficiencies in the system typically arise through a lack of student demand for the coursework, degree, or certification program. At times, this may be a symptom of the regional economy and

⁵¹ Kazis, K. & Seltzer, M. (2008). New workforce development strategies. In R.M. McGahey and J.S. Vey (Eds.) *Retooling for growth: building a 21st century economy in America's older industrial areas*. (pp. 325-349). Washington, D.C.: Brookings Institution Press.

demographic makeup of the area. In other situations, it may mean that training programs are not targeting the right class of worker. For example, the admissions or application requirements for a training program may be too advanced for the most interested contingent of workers.

Job training and professional development programs are not limited to educational institutions. Numerous private job training businesses provide courses and professional development programs to workers of all skill levels. Sales training companies such as Dale Carnegie Training and the Sandler Training Institute provide training in communication, leadership, presentation development, sales, and skill development. While these companies are open to providing training to all applicants, they are specifically targeted to sales professionals with past sales experience, not entry-level workers with less formal education and skills training.

These private training programs are generally unaffordable to low-skill, low-income workers, and there are few opportunities for scholarships or government aid through grants or loans. Herein exists an example of one of the gaps in the Baltimore area's technical training program network—a lack of an entry-level postsecondary training program in retail or wholesale sales. The barriers to entry for *entry-level* sales positions are relatively low compared to many of the occupations examined in this study. However, sales *supervisor* positions require more formal training, especially positions within higher-end retail stores or wholesale and manufacturing companies. These more sustainable positions offer a family-supporting wage and benefits. Therefore, if a demand exists for low-skill workers to earn a degree or certificate in sales, then there must be a concerted effort on behalf of workforce development agencies, community colleges, and nonprofits to provide this programming. Currently, a program such as this is being offered only at Anne Arundel Community College, whose location in Arnold remains inaccessible for many individuals residing in the inner city and in outlying suburbs.

Potential Employers and Employees are Disconnected Geographically

Infrastructure Problem

One of Baltimore's most debilitating workforce challenges remains the geographic disconnect between entry-level employment opportunities and the low-skill population. The decentralization of firms in the 1980s and 1990s, coupled with industrial decline and white flight, transformed the makeup of Baltimore City from an economically and racially diverse area to a blighted, segregated, and declining urban core. The majority of the city's low-skilled, impoverished residents were left with few economic opportunities in their own neighborhoods. According to a 1997 study by the Abell Foundation, two-thirds of the region's low-skill job opportunities are outside of Baltimore City, while the central city contains approximately 76% of the region's welfare recipients and 40% of its unemployed.⁵² While high property values and a lack of affordable housing challenges the entire region, strict zoning codes and "NIMBY" (not in my back yard) sentiments in suburban areas are particularly exclusionary of low-income residents.

An ineffective public transportation system that fails to connect the region's decentralized job centers with the central city and with each other exacerbates the disconnect between entry-level jobs and low-skill workers. The insufficient public transit infrastructure was a recurrent theme throughout our conversations with government and nonprofit leaders, job trainers, and employers. The Maryland Transit Administration administers the state's public transit

⁵² Baltimore Area Jobs and Low-Skill Job Seekers.

infrastructure, which consists of local buses, commuter buses, the metro subway, light-rail transit, and the MARC train system.

The Baltimore region's transit infrastructure has limited reach and scope, particularly along east-west corridors. Baltimore's metro subway line runs north-south, stretching from downtown near Johns Hopkins Hospital northward to Owings Mills. The region's three light-rail lines also run north-south, connecting the Baltimore-Washington International Airport with Hunt Valley via downtown Baltimore. These routes limit the transit alternatives for inner-city residents who have east-west commutes. Limited east-west transit options may undermine the impact of the major East Baltimore and West Baltimore economic development initiatives such as the University of Maryland – Baltimore BioPark and the Science + Technology Park at Johns Hopkins on the rest of the region's low-skill workforce. Workers traveling longer distances via bus are frequently forced to make multiple transfers, which greatly extends their commute. These are not challenges limited to a small percentage of Baltimore's population, as nearly one-third of Baltimore City residents do not have access to an automobile.⁵³

Current public transit networks are planned to move residents of surrounding counties into downtown Baltimore, with more infrequent reverse-commute service connecting inner-city residents to the suburbs. Baltimore City remains the epicenter of the region's economic activity and contains an overwhelming majority of the region's job. Yet, according to the Baltimore Metropolitan Council, satellite job centers such as Towson, Columbia, and Hunt Valley together total 20,000 more jobs than Baltimore City.⁵⁴ The service jobs that accompany and support population increases in the fringe sections of the Baltimore metropolitan area are inaccessible via public transit and, thus, unreachable for workers without cars. Even for low-income workers who own cars, rising and volatile fuel prices have increasingly made long commutes financially infeasible. Continually, new employment opportunities are being created outside the central city. One main example is the Base Realignment and Closure (BRAC) program's recommendation to increase military and defense-related jobs at Fort Meade in Anne Arundel County and Aberdeen Proving Ground in Harford County takes effect in 2010. According to the 2007 Greater Baltimore State of the Region Report, the economic impact of BRAC is expected to generate more than 45,000 jobs regionally.⁵⁵

While connecting low-skill workers with employment opportunities is the first and most important step toward moving these workers into sustainable jobs, transit linkages must also access educational institutions. Staff at the Community College of Baltimore County (CCBC) and Anne Arundel Community College revealed that some inner-city students commuted more than two hours to attend class. Both colleges are in counties that directly border Baltimore City, and CCBC in particular is only about a 20-minute drive from downtown, yet thin bus networks force commuters to make multiple transfers to get to the college's three main campuses by bus.

Regional Transit Reassessment

In order to remedy the disconnect between low-skill workers and entry-level opportunities, local leaders must re-evaluate regional transit systems and make a commitment to enhancing the

⁵³ Waldron, Tom. "Actuarial Discrimination: City residents pay up to 198% more for car insurance than county residents." *The Abell Report* 18.5(2005): 1-8.

⁵⁴ Regional Job Access and Reverse Commute Transportation Plan.

⁵⁵ 2007 Greater Baltimore State of the Region Report.

region's transit infrastructure. In 2001, the Baltimore Metropolitan Council took important first steps in this process in response to the Job Access and Reverse Commute Act. The Council's goal was to develop a comprehensive area-wide approach to providing transportation services to low-income residents. The Regional Job Access and Reverse Commute Transportation Plan attempted to address the myriad challenges facing low-income commuters, including⁵⁶:

- Work schedules that require late-night or weekend commuting;
- Difficulties of balancing multiple destinations for child care and employment;
- Long travel times because of multiple transfers;
- Concerns about safety walking to or waiting at train stations or bus stops; and
- Difficulties obtaining or understanding information about transportation services.

To address these challenges, the 2001 plan recommended the establishment of reverse bus routes to major suburban employment centers, suburb-to-suburb connecting bus routes, and targeted routes that connect Baltimore City with major job sites such as the Arundel Mills Mall. These policy suggestions are an excellent first stage in creating a more regional transit infrastructure. However, significant next steps must be taken to address the challenges facing Baltimore's low-skill workforce. Organizations such as the Baltimore Metropolitan Council, which collaborates on a regional level, must factor in workforce development, economic development, and environmental and transportation challenges when creating regional plans, policies, and programs. Bringing employers, educational institutions, government agencies, nonprofit organizations, and philanthropic foundations to the table during these discussions will ensure that all regional stakeholders can voice their concerns and goals for regional transportation policy.

Past Mistakes Limit Future Employment

In addition to being more likely to be less educated and live in high-poverty areas, low-skill workers typically are more likely to have had some interaction with the criminal justice system. Local leaders indicated during key informant interviews that ex-offenders make up approximately 70% of Baltimore's low-skill workforce. Ex-offenders are more likely to have never graduated high school, lack professional work experience, and suffer from substance abuse or mental problems—all barriers to securing high-paying, sustainable jobs.

Low-skill workers with a criminal background face more stark barriers when applying to jobs. The large pool of low-skill workers in Baltimore creates stiff competition for entry-level positions. Therefore, employers with many applicants oftentimes will pass over ex-offenders with the worry that they will be a liability, commit a repeat offense, or pose a risk to the business itself. Workforce development experts we spoke with revealed that employers are not uniform in their willingness to hire ex-offenders. Generally, the manufacturing, construction, and other blue collar industries are considered more "ex-offender friendly" than the service sector. Baltimore's transformation from a manufacturing-based regional economy to one more reliant on tourism, hospitality, and social services has only amplified barriers to employment for job seekers with criminal records.

⁵⁶ Regional Job Access and Reverse Commute Transportation Plan.

The extent to which a criminal background limits a low-skill worker varies across occupation clusters. Typically, larger businesses are more likely to give potential hires drug screens and execute more rigorous background checks than smaller businesses. Industries with integral human interaction and customer service components such as health care and sales tend to steer clear of individuals convicted of crimes. Job seekers with drug abuse histories will automatically be precluded from work in hospitals, nursing homes, pharmacies, or other facilities containing prescription drugs. To receive a commercial driver's license, drivers must undergo rigorous drug screens and background checks.

Additionally, many of the area's larger construction companies and automotive service and repair shops will require drug testing and background checks for new workers. The Baltimore metropolitan area's larger construction companies have benefited from steady business from the federal government, which has increasingly expanded department headquarters northward from Washington, DC. To work on these job sites, construction workers must pass especially rigorous background checks. Also, ex-offenders will face barriers to obtaining the thousands of construction jobs created by expansions at Fort Meade and Aberdeen Proving Ground, the two beneficiaries of the recent BRAC recommendations. Small businesses in these occupation clusters may be more willing to take chances on ex-offenders. A small construction business in Baltimore has used the Mayor's Office for Employment Development for more than 20 new hires. Most of these new hires had criminal histories, and most have been model employees.

The large share of Baltimore's labor force with criminal pasts remains one of the city's most pressing concerns. According to Faye S. Taxman, director of the University of Maryland's Bureau of Governmental Research, between one-half and three-quarters of Baltimore's 18- to 35-year-old population has a criminal history.⁵⁷ An overwhelming majority of this population is low-skilled, considering that the Baltimore City school district graduates only 38% of its high school students.⁵⁸ Ex-offenders find themselves in a catch-22 after being released from prison—their pasts continually preventing their participation in the formal economy, a trend that increases recidivism and weakens the regional economy. Workforce development solutions must make employers aware of the challenges facing ex-offenders in the job market and encourage employers to treat job applicants with criminal backgrounds on a case-by-case basis. In many professions, especially in the blue collar industries, where an employee's work ethic, timeliness, and reliability are the most important traits to employers, a criminal background has no bearing on an employee's ability to complete a job.

Ex-offenders have greater job obtainment success rates when they are trained and vouched for by one of Baltimore's workforce development or job training organizations. The Goodwill Industries of the Chesapeake Staffing Services (Goodwill) places ex-offenders into entry-level positions across a range of businesses. If employers are unwilling to offer ex-offenders full-time positions, Goodwill will hire them as temporary employees with the hope that the employer will eventually hire them full time. This program allows employers to decrease their liability and gives ex-offenders the opportunity to prove themselves and gain an employer's trust.

Other organizations, such as the Job Opportunities Task Force (JOTF), seek to move ex-offenders into entry-level positions from multiple angles. JOTF recognizes that job placement strategies must be targeted at industries that are ex-offender friendly. The organization also

⁵⁷ <http://ips.jhu.edu/pub/Baltimore-Isn-t-Working-Because-its-People-Don-t>

⁵⁸ www.usatoday.com/news/education/2006-06-20-dropout-rates_x.htm

advocates reducing the barriers to entry for ex-offenders. JOTF has helped pass initiatives that expunge minor, nonviolent offenses from individual's criminal records and removed a question from the City of Baltimore employment application regarding an applicant's criminal background.

Lack of Confidence and Soft Skills Hamper Success

Aside from being less educated and employing less technical skills, low-skill workers frequently have serious soft skill deficiencies. Soft skills generally refer to the cluster of traits related to personality, verbal communication, teamwork, attire, and speech patterns. While students can attend classes and earn degrees in a technical skill, the soft skills are more commonly developed outside the classroom, and are shaped by upbringing and past experiences. Individuals with unstable family environments, absentee parents, and scarce cognitive development resources are especially challenged in this arena. Therefore, the circumstances that may have prevented low-skill workers from receiving a proper formal education also debilitate their ability to develop emotionally and cognitively. Low-skill workers are more likely to lack confidence, be prone to acting out against authority, and struggle to be on time. These characteristics were cited repeatedly during key informant interviews.

Because job seekers must interact positively with an employer before being hired, soft skill deficiencies are a significant barrier to employment for low-skill workers. Extremely unskilled individuals may have no work experience at all, much less be able to compile a résumé or successfully complete a job interview. Additionally, communication, teamwork, and a cordial personality are staples of any service profession. Low-skill workers that have unprofessional demeanor, dress, or speech patterns will struggle to gain employment in service industries such as health care, food service, hospitality, tourism, and retail sales. Workers with low confidence levels will struggle to deal with criticism from supervisors or co-workers—a problem particularly prevalent in the construction and automotive service and repair sectors, where growing pains during on-the-job training are commonplace. Currently, the Mayor's Office for Employment Development attempts to hone low-skill job seekers' soft skills by teaching interviewing techniques, assisting with résumés, and explaining proper workplace dress, speech, and demeanor. Other organizations and training programs engage in similar efforts.

While organizations like these are providing soft skill training to applicants, the earlier low-skill, low-income individuals receive soft skill training, the more effective it will be. Integrating soft skill development into high school, middle school, and even elementary school curriculums may have greater returns in the long term because students will be able to apply learned soft skills to every facet of their lives. Many of these traits are not conducive to classroom lessons. For example, it is difficult to teach a student to be confident. Soft skills may be more readily picked up through service learning and workforce opportunities, which will familiarize students with office and work environments, give them responsibilities, and instill timeliness and proper work etiquette.

Two examples of these types of programs are the School-to-Work Opportunities Act and the YouthWorks program. The School-to-Work Opportunities Act integrates vocational schools and work-to-school networks within high schools, effectively preparing students with no plans for postsecondary education for the workforce. YouthWorks emphasizes work-based learning experiences through programs in which youth are given part-time or summer employment to explore future careers.

Conclusions and Recommendations

The exact occupations derived from this study as the most viable employment options for low-skill workers in the Baltimore metro area may or may not be applicable choices for low-skill residents in other metro areas. This depends on the economic and demographic characteristics of the locale. However, the lessons learned from this study and the recommendations presented are likely applicable to many of the nation's older urban cores. Cities such as Rochester, Buffalo, Detroit, and others face many of the same challenges as Baltimore in developing and executing regionally-based workforce strategies; transporting workers across the metro area; tackling issues of criminal activity, drug abuse, and poor personal skills; and connecting the importance of career-minded thinking to younger populations during their formative years.

Primary Recommendation

1. Create regionally focused, occupation-specific task forces that include all regional workforce development stakeholders.

Baltimore has a vast network of workforce development providers and stakeholders that seek to move the region's low-skill population into viable, sustainable jobs. As detailed earlier in this report, this infrastructure includes government workforce and economic development agencies, workforce investment boards, nonprofit organizations, public high schools, community colleges, job trainers, and local businesses. Despite the commendable efforts of these organizations, the Baltimore region's poorest, most underskilled workers continue to fall through the cracks. Thus, we suggest creating regionally focused, occupation-specific task forces that stress communication and collaboration between all stakeholders. Increased collaboration and communication between organizations and jurisdictions will strengthen Baltimore's workforce development services by:

- Concentrating recruiting efforts to make low-skill workers aware of available education and training options;
- Stressing communication between training programs to address redundancies and gaps in the regional education and job training infrastructure;
- Facilitating dialogue between employers and trainers to create programs that address skill deficiencies, provide remedial training, and outline career paths that clearly delineate connections between training and job placement; and
- Pooling the collective knowledge and resources of workforce development agencies across jurisdictions.

Using the Baltimore Alliance for Careers in Healthcare (BACH) and other similar organizations nationwide as examples, the establishment of successful workforce development intermediaries requires three main characteristics: employer support driven by a demand for workers within the sector, financial support from the local philanthropic infrastructure, and effective, well-connected leadership that is able to leverage resources across private, public, and nonprofit sectors.

It must be recognized that starting such an organization is not necessarily an easy task. For the organization to become a productive, it will take time. Recognizing this, it is critical to bring a variety of stakeholders to the table early in the process to help drive the ideas and goals of the

group. Participants who are invested in the goals and mission of the group from its initiation will then serve as a powerful tool in the future, helping to recruit other key stakeholders to participate and in helping to secure critical funding.

Secondary Recommendations

2. Build upon the 2001 Regional Job Access and Reverse Commute Transportation Plan to address the transit challenges faced by low-skill workers without cars.

The limited scope and reach of Baltimore's regional transit infrastructure fails to connect the region's decentralized job centers with the central city and with each other, which creates a geographic disconnect between entry-level jobs and low-skill workers. Because low-skill workers tend to live in areas with fewer job opportunities and frequently do not have access to cars, they rely on a public transit commutes that may have multiple transfers and infrequent night and weekend trips. Longer commutes may not be a realistic option for many workers who have existing personal or family commitments that prevent the extended "work" hours that these commutes create. Thus, low-skill workers living in the central city often find their job options limited to the central city, particularly the areas in relatively close proximity to them, effectively excluding them from job centers in less accessible parts of the city and in suburban areas such as Towson, Columbia, and Hunt Valley.

Regional organizations, namely the Baltimore Metropolitan Council, have the ability to organize a regional transportation forum that includes employers, educational institutions, government agencies, nonprofit organizations, and philanthropic foundations. Including all relevant parties will ensure that all regional stakeholders will be able to voice their concerns and goals for regional transportation policy.

3. Reduce the barriers to employment created by past mistakes by staking ex-offenders in their job search.

Low-skill workers with a criminal background face stark barriers when applying to jobs. Local leaders indicated during key informant interviews that ex-offenders make up approximately 70% of Baltimore's low-skill workforce. Thus, the success of moving Baltimore's low-skill workforce into viable employment will partly rest on the ability to transition ex-offenders into jobs. Historically, this has been a difficult task, as employers are hesitant to invest time and money on applicants with troubled backgrounds.

Ex-offenders have greater job obtainment success rates when they are trained and vouched for by a reputable workforce development agency. Therefore, job training and placement programs such as the Goodwill Industries of the Chesapeake's ex-offender placement program result in employers being much more willing to accept an applicant who has been previously screened. To that end, increasing funding for ex-offender placement programs is a key first step. Policy shifts, such as reconsidering what specific crimes and conviction frequencies function as preventive barriers to occupational entry, would assist in this endeavor.

4. Provide middle and high school students with service learning opportunities to foster soft skills development and outline career paths.

Aside from having underdeveloped technical skills, low-skill workers typically have soft skill deficiencies. Currently, several organizations are assisting low-skill workers with soft skill development, including help with résumé writing, workplace attire, and interview preparation. However, because soft skills are linked to upbringing and personality development, soft skills training is more effective when targeted at younger audiences—namely middle and high school students. Typically, soft skills may be more readily learned through service learning and workforce opportunities, which familiarize students with office and work environments, give them responsibilities, and instill timeliness and proper work etiquette.

Several programs aim to introduce underserved individuals to the workplace at a young age. Baltimore City's YouthWorks program and First Step Inc.'s Youth Employment and Training program are two examples. Expanding funding for these programs and others like it will expound the reach and scope of soft skill training in the Baltimore metro area. Continually, youth employment program counselors should provide a holistic overview of postsecondary education options, viable career paths, and the diminished job opportunities created by run-ins with the law and failing to graduate from high school.

APPENDIX A – LOCAL LEADERS DISCUSSION GUIDE

Ford Foundation Study

Case Studies of Employment Clusters for Low-Skill Workers

Local Leaders Discussion Guide

[Interviewer: Language contained in brackets, i.e. [X], is for your informational/instructional purposes only. Language contained in carrots, i.e. <X>, is language that must be customized to the specific site and occupation of interest in a given interview.]

[Using the scripted introduction, review the purpose of the study, and the purpose and structure of the interview with the interviewee before beginning the discussion guide.]

- Please tell us about your position and your role within the *<insert name of organization>*.
 - How does your position relate to employment issues, and specifically, the issues faced by low-skill workers in *<insert location>*?
 - As an organization, how is *<insert name of organization>* involved in local employment issues?
 - What types of programs/services does your organization offer for low-skill workers trying to gain employment [if applicable]?

[Thanks for telling us more about your organization. I would now like to talk about the local employment dynamics in *<insert location>*.]

- In recent years, low-skill workers nationwide have experienced significant challenges in both obtaining and retaining employment. Those who have been successful often find that the jobs they have obtained do not provide living wages, opportunities for wage growth, career ladders, etc. Please give us your perceptions of the current conditions faced by low-skill workers in the *<insert location>*.
- What are the strengths and weaknesses of the *<insert location>* as a job market for the low-skill population?
- What opportunities are available to the low-skill population that are unique to the *<insert location>*?
- What threats face the low-skilled population here?

[As I mentioned earlier, we have already performed quantitative analysis of the occupations in the *<insert location>* area and have performed a general risk assessment. This analysis resulted in a list of ten seemingly viable occupations. I'd like to discuss with you your perceptions of these occupations as possible options for low-skill workers.]

- Below are the selected occupations for discussion:
 - Auto body and related repairers
 - Automotive service technicians and mechanics

- Claims adjusters, examiners, and investigators
- Construction trades and extraction workers (particularly, first-line supervisors/managers of)
- Helpers, laborers, and material movers (particularly, first-line supervisors/managers of)
- Retail sales workers (particularly, first-line supervisors/managers of)
- Transportation and material-moving machine and vehicle operators (particularly, first-line supervisors/managers of)
- Food service managers
- Registered nurses (nursing and health care field overall)
- Sales representatives, wholesale and manufacturing, except technical and scientific farm products

APPENDIX B – OCCUPATION-SPECIFIC DISCUSSION GUIDE TEMPLATES

Ford Foundation Study

Case Studies of Employment Clusters for Low-Skill Workers

Customizable Discussion Guide Template for Occupation-Specific Interviewees

Employers

[Interviewer: Language contained in brackets, i.e. [X], is for your informational/instructional purposes only. Language contained in carrots, i.e. <X>, is language that must be customized to the specific site and occupation of interest in a given interview.]

[Using the scripted introduction, review the purpose of the study, and the purpose and structure of the interview with the interviewee before beginning the discussion guide.]

- Please give us a short overview of your company.
 - What are your core vs. ancillary functions? [if not clear]
 - What are the various job functions of your workers?
 - How many workers do you employ?
 - What levels of workers do you employ?

- What is the typical educational and training background of your entry-level employees in the <insert occupation> occupation? [or first-line managers when applicable]
 - What is generally the highest level of educational attainment?
 - What is generally the lowest level of educational attainment?
 - Are your hiring standards typical across the industry/occupation?
 - How do you recruit new employees?

- Please tell us about the training options available to your employees.
 - Do you have internal training protocols for new employees?
 - Do you offer apprenticeships?
 - Do you offer internships?
 - Do you fund external training opportunities for new and/or existing employees?

- What are the typical entry-level salaries per year in your organization for the <insert occupation> occupation?
 - Do you feel that your organization's salary levels are comparable to your competitors?
 - Are your employees hourly or salaried? Is the salary partially commission-based? [if applicable]
 - Are benefits [i.e. health, dental, vision, retirement plan, life insurance, short/long term disability, etc.] available? If yes, to whom?

- Please tell us about your perceptions of the current status of your industry and the trends anticipated over the next few years?
 - Do you anticipate significant industry growth or decline?

- Do you expect the movement of jobs in the U.S. overseas?
- Do you perceive that technological innovations will affect the execution of the work and/or the number of employees and their needed skill sets?

- Finally, do you feel there are any barriers that we have not discussed, which would prevent low-skill workers in the <insert location> metro area from being viable candidates for positions in the <insert occupation> occupation?

- Thank you for taking the time to speak with our team. Your input is invaluable as we work to finalize this study of the <insert location> metro area.

Ford Foundation Study

Case Studies of Employment Clusters for Low-Skill Workers

Customizable Discussion Guide Template for Occupation-Specific Interviewees

Educators and Job Trainers

[Interviewer: Language contained in brackets, i.e. [X], is for your informational/instructional purposes only. Language contained in carrots, i.e. <X>, is language that must be customized to the specific site and occupation of interest in a given interview.]

[Using the scripted introduction, review the purpose of the study, and the purpose and structure of the interview with the interviewee before beginning the discussion guide.]

- Please give us a short overview of your organization.
 - What are your core vs. ancillary functions? [if not clear]
 - What types of education and/or training do you offer related to the <insert occupation> occupation?
 - To your knowledge, what other types of education and/or training programs are offered for the <insert occupation> in the <insert location> metro area?

- Please tell us about the education and training options you provide in a bit more detail.
 - What are the admission requirements or other prerequisites?
 - How do you recruit participants to the program?
 - Generally, what are the demographic characteristics of program participants? [i.e. age, ethnicity, sex, socioeconomic status, English as a second language, interaction with the criminal justice system, etc.]
 - Are there costs associated with the program(s)?
 - How do you offer this education and/or training? [i.e. online, in a classroom setting, one on one counseling, internships, etc.]
 - How often do participants meet? [i.e. weekly, monthly, biweekly, etc.]
 - At what time of day do participants meet? [i.e. weekdays, evenings, weekends, etc.]
 - What materials are used to facilitate the course [i.e. textbooks, online tutorials, speakers, etc.]

- What is the typical educational and training background of entry-level employees in the <insert occupation> occupation? [or first-line managers when applicable]
 - What is generally the highest level of educational attainment?
 - What is generally the lowest level of educational attainment?
 - Are hiring standards typical across the industry/occupation?

- What are the education or training opportunities available to workers once they have entered the <insert occupation> occupation?
 - Do firms have internal training mechanisms for new employees?
 - Do firms offer apprenticeships?
 - Do firms fund external training opportunities for new and/or existing employees?

- Based on your experiences, what are the typical entry-level salaries per year for the <insert occupation> occupation?

- Do you feel that these salary levels are comparable across competitors?
- Are employees in this occupation generally hourly or salaried? Is the salary partially commission-based? [if applicable]
- Are benefits [i.e. health, dental, vision, retirement plan, life insurance, short/long term disability, etc.] generally available to them?

- Please tell us about your perceptions of the current status of this industry and the trends anticipated over the next few years?
 - Do you anticipate significant industry growth or decline?
 - Do you expect the movement of jobs in the U.S. overseas?
 - Do you perceive that technological innovations will affect the execution of the work and/or the number of employees and their needed skill sets?

- Finally, do you feel there are any barriers that we have not discussed, which would prevent low-skill workers in the <insert location> metro area from being viable candidates for positions in the <insert occupation> occupation?

- Thank you for taking the time to speak with our team. Your input is invaluable as we work to finalize this study of the <insert location> metro area.

APPENDIX C – NARROWING OF OCCUPATIONS

Universe of Occupations

The universe of occupations utilized for this study was the Standard Occupational Classification (SOC) System, created by the U.S. Department of Labor. The system is comprised of over 820 individual occupations. More information about the SOC can be found at: <http://www.bls.gov/SOC/>.

Occupations Resulting After Step 1

After the first step of the analysis process, the following 21 growth occupations remained:

Occupation	Industry
Food service managers	Management occupations
Purchasing agents, except wholesale, retail, and farm products	Business and financial operations occupations
Claims adjusters, examiners, and investigators	Business and financial operations occupations
Cost estimators	Business and financial operations occupations
Computer support specialists	Computer and mathematical occupations
Paralegals and legal assistants	Legal occupations
Registered nurses	Healthcare practitioners and technical occupations
Electrical and electronic engineering technicians	Architecture and engineering occupations
First-line supervisors/managers of retail sales workers	Sales and related occupations
First-line supervisors/managers of non-retail sales workers	Sales and related occupations
Sales representatives, wholesale and manufacturing, technical and scientific products	Sales and related occupations
Sales representatives, wholesale and manufacturing, except technical and scientific products	Sales and related occupations
Real estate sales agents	Sales and related occupations
First-line supervisors/managers of office and administrative support workers	Office and administrative support occupations
First-line supervisors/managers of construction trades and extraction workers	Construction and extraction occupations
First-line supervisors/managers of mechanics, installers, and repairers	Installation, maintenance, and repair occupations
Automotive body and related repairers	Installation, maintenance, and repair occupations

Occupation	Industry
Automotive service technicians and mechanics	Installation, maintenance, and repair occupations
First-line supervisors/managers of production and operating workers	Production occupations
First-line supervisors/managers of helpers, laborers, and material movers, hand	Transportation and material moving occupations
First-line supervisors/managers of transportation and material-moving machine and vehicle operators	Transportation and material moving occupations

Occupations Resulting After Step 2

Upon the completion of the risk analysis phase of the study (Step 2), the following occupations remained:

Occupation	Industry
Automotive body and related repairers	Installation, maintenance, and repair occupations
Automotive service technicians and mechanics	Installation, maintenance, and repair occupations
Claims adjusters, examiners, and investigators	Business and financial operations occupations
First-line supervisors/managers of construction trades and extraction workers	Construction and extraction occupations
First-line supervisors/managers of helpers, laborers, and material movers, hand	Transportation and material moving occupations
First-line supervisors/managers of retail sales workers	Sales and related occupations
First line supervisors/managers of transportation and material-moving machine and vehicle operators	Transportation and material moving occupations
Food service managers	Management occupations
Registered nurses (NURSING)	Healthcare practitioners and technical occupations
Sales representatives, wholesale and manufacturing, except technical and scientific farm products	Sales and related occupations

Occupations Resulting After Step 3

After completing the third step of the analysis process, no additional occupations were eliminated. Key informants interviewed during this phase of the study agreed that these ten occupations and their related industries all presented viable options for low-skill workers.