

# Understanding the Local Labor Market

## Focus: Manufacturing

Southwestern Pennsylvania's (SWPA) manufacturing sector has been an historically significant economic force for the region. It continues to be a vital economic anchor for the Pittsburgh region and faces an exciting future with the creation of green jobs.

This issue of *Understanding the Local Labor Market* summarizes the industry's key labor market indicators on economic performance, talent development and career opportunities. It also highlights the most pressing needs of regional employers and offers some of the best practices at the local level.

For more information on the manufacturing industry and/or to find out about other industry sectors, visit: [www.trwib.org](http://www.trwib.org)

### INDUSTRY OUTLOOK

- ◆ Pennsylvania ranks as the 4th state in the USA by size of the manufacturing industry, with the 3rd largest annual payroll and the 6th largest capital exported.
- ◆ In SWPA the industry ranks first in total sales, accounting for more than 20% of total dollars generated in the region. It represents the 4th largest employment sector with the 3rd highest annual payroll and the 5th highest average wages.
- ◆ SWPA's steel supply chain firms, an historically essential part of our region's success and prosperity, continues to play an important role in our economy.
- ◆ Substantial growth is demonstrated in electrical and appliance manufacturing, wood products, and fabricated metals.
- ◆ High turnover rates among workers ages 14-24 and an aging workforce represent a challenge for the manufacturing industry in SWPA.
- ◆ Green job opportunities exist at every level of the career ladder and the projected expansion and reliance on green products and technology are key factors in the survival, expansion, and rejuvenation of the SWPA manufacturing community.

Indicator	Value
2007 Jobs	105,043
02-07 growth	(11%)
07-17 growth	(10%)
Average wage	\$70,793
2007 business units	2,955
Total Payroll	\$7.9 billion
Total Sales	\$50 billion

### CAREER OPPORTUNITIES IN THE INDUSTRY

The majority (77%) of the manufacturing industry is concentrated into four occupational clusters: Production, Office and Administration, Transportation and Material Moving, and Architecture and Engineering.

Regional companies such as Bayer, U.S. Steel, Alcoa, and PPG offer significant opportunities in these clusters with jobs as machinists, material

movers, production workers, and team assemblers. Furthermore, all of these occupations have been identified and appear on the PA list as High Priority Occupations.

Jobs in Manufacturing by Occupational Clusters	2007 Jobs	% of Industry Jobs	% of Total
Production occupations	56,095	53.33%	77%
Office and administrative support occupations	9,552	9.08%	
Transportation and material moving occupations	8,708	8.28%	
Architecture and engineering occupations	6,590	6.26%	
Installation, maintenance, and repair occupations	5,747	5.46%	23%
Management occupations	5,532	5.26%	
Sales and related occupations	4,090	3.89%	
Business and financial operations occupations	2,572	2.45%	
Construction and extraction occupations	1,835	1.74%	
Computer and mathematical science occupations	1,302	1.24%	
Life, physical, and social science occupations	1,261	1.20%	
Arts, design, entertain., sports, and media occupations	810	0.77%	
Building and grounds cleaning/maintenance occupations	618	0.59%	
Food preparation and serving related occupations	226	0.21%	
Farming, fishing, and forestry occupations	97	0.09%	
Healthcare practitioners and technical occupations	75	0.07%	
Protective service occupations	54	0.05%	
Healthcare support occupations	15	0.01%	
Legal occupations	10	0.01%	

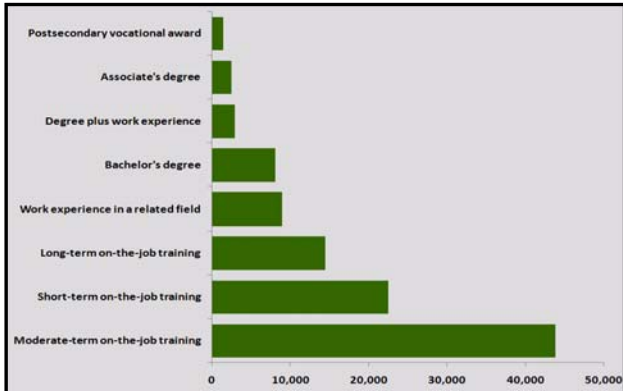
# TALENT DEVELOPMENT

Education Level	Jobs
Moderate-term on-the-job training	43,851
Short-term on-the-job training	22,544
Long-term on-the-job training	14,519
Work experience in a related field	8,998
Bachelor's degree	8,140
Degree plus work experience	2,963
Associate's degree	2,541
Postsecondary vocational award	1,521

Bachelor's degrees and Associate's degrees are required for only 10% of all jobs in the manufacturing industry. In fact, 86% of jobs in the industry do not require higher education at all, but require on-the-job training and work-related experience.

Based on this data, the educational requirements of the industry provide significant opportunities for building entry-level skills and career pathways for more advanced jobs and positions within the industry. Also, careers in manufacturing offer well above living wages with an average wage of \$70,000.

However, there continues to be a large problem both for the manufacturing sector in SWPA and across the country. Creating a significant pipeline for recruiting people into the industry has been difficult and those individuals that do enter manufacturing careers would benefit from more enhanced, focused training programs.



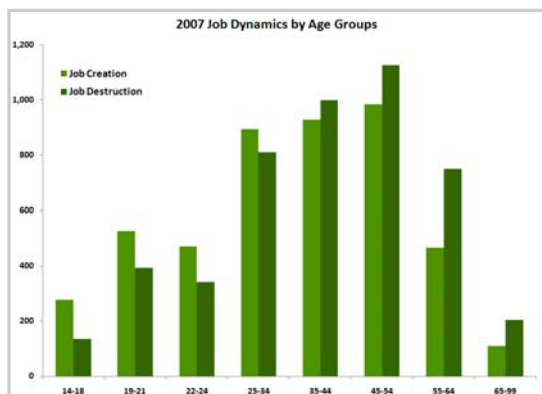
## THE MOST PRESSING NEEDS OF REGIONAL EMPLOYERS



**“The first need in manufacturing is talented, skilled workers. There are not enough on-the-job training programs available that don’t have companies incur the expense of stopping production.”**

*James Miller  
ABARTA, Inc.*

According to the 2007 Local Employment Dynamics data, wages in the manufacturing industry are generally higher than the regional average but there is a very high turnover for younger age groups. While this could be explained by lack of appropriate skills or motivation to develop a career in manufacturing, availability of other/better job opportunities, and/or decision to pursue higher education; replacing workers is costly and it greatly affects the productivity of regional employers.



The 2007 job creation/destruction dynamics suggest aging-related issues. Jobs held by older (and probably more experienced workers) are disappearing at a significantly higher rate. Although more jobs are being created than destroyed among younger age groups, given the turnover rate, employers are still facing serious problems in recruiting and retaining workers.

**“I believe that our region is poised for significant opportunity with the emerging green industries. We have the resources, minerals, transportation, industrial areas for redevelopment- we just need the skills for employees.”**

*Kevin Whalen  
Q-Dot, Inc.*

## HIGH PRIORITY OCCUPATIONS AND GREEN JOBS

In a study identifying green occupations conducted by GSP Consulting, *Southwestern Pennsylvania Green Jobs Analysis and Action Plan*, six of the 13 manufacturing High Priority Occupations listed to the right are also green jobs. (*Designated by green shading*)

Green jobs are defined as employment opportunities in four industry sectors that have significant green output or employ a large number of green occupations including:

- ◆ Green Products
- ◆ Renewable Energy
- ◆ Green Services
- ◆ Environmental Conservation

High Priority Occupation	Average Wage
Supervisors - Production & Operating Workers	\$50,330
Structural Iron & Steel Workers	\$50,210
Tool & Die Makers	\$45,970
Sheet Metal Workers	\$45,300
Industrial Machinery Mechanics	\$40,400
Inspectors, Testers, Sorters, Samplers & Weighers	\$39,640
Extruding & Drawing Machine Oprs, Metal & Plastic	\$36,180
Welders, Cutters, Solderers & Brazers	\$32,730
Machinists	\$32,480
Printing Machine Operators	\$31,580
Molding & Casting Machine Oprs, Metal & Plastic	\$28,360
Multiple Machine Tool Oprs, Metal & Plastic	\$28,320
Cutting, Punching & Pres Machine Oprs, Metal & Plastic	\$27,300

TRWIB certifies training providers that prepare jobseekers for PA High Priority Occupations (HPO's).

Limited funds for jobseekers interested in training for any of these occupations may be available via your local Career-Link office: [www.careerlinkpittsburgh.com](http://www.careerlinkpittsburgh.com). If you are a training provider interested in appearing on the PA eligible training provider list, please contact TRWIB at **412-552-7099**.

## REGIONAL ACTIVITIES IN MANUFACTURING

### Future of the Industry and Green Jobs in Manufacturing and Production

TRWIB convenes the leading constituents in the Green Movement. The group, called the Green Jobs Advisory Board (GJAB), meets monthly to determine how to define green jobs, align itself with the American Recovery and Reinvestment Act, and make the greatest impact on the region by implementing sustainable employment practices.

Manufacturing sub-clusters and industries that create green products and those that offer green services in SWPA could add more than 11,600 green jobs by 2015 which would make for a total of nearly 30,000 green job opportunities throughout the region.

Those currently involved in manufacturing careers can transfer and apply their skills and experience to the production of new technologies and products with little or no training. Opportunities for green jobs exist in a number of manufacturing sub-sectors, but most opportunities will stem from green energy production, weatherization, and green product/component manufacturing.

### Industry Partnership and Collaboration

The Western Pennsylvania Steel Partnership (WPASP) plans to utilize the work that the Three Rivers Area Labor Management Committee has been doing with the five largest steel manufacturers in the area. The WPASP will not only be addressing the needs of the five largest steel manufactures but will also be incorporating the work of the University of Pittsburgh's Center for Industry Studies who completed a research study that focused on the steel supply chain and the role that steel supply firms have in the region's economic development.

The demand for qualified steel supply chain workers is growing with over two-thirds of representatives from the industry reporting that they have either recruited from or lost an employer to another Pittsburgh-area steel supplier. This exemplifies the need for the industry to come together and address issues such as recruitment and retention.

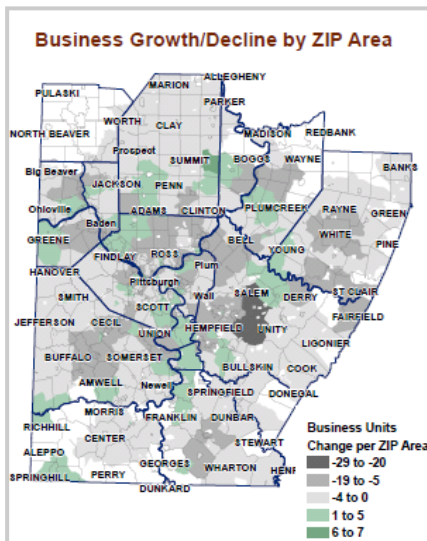
# IMPORTANCE OF CAREER TECHNICAL EDUCATION:

Regional employers and community leaders recognize and agree on two critical needs to ensure the future stability and success of the manufacturing industry. First, employers in the manufacturing sector are unable to obtain **skilled, well-trained workers**. As highlighted earlier, nearly 90% of jobs in the manufacturing sector require skill training and technical development education. However, the second critical need is for adequate and **focused training programs**. This contradiction in the employee development system creates significant barriers within the workforce of SWPA.

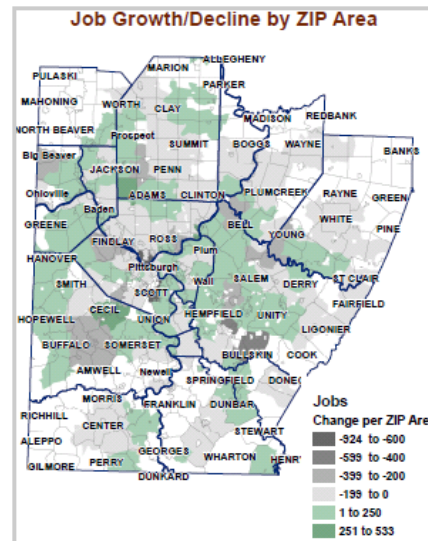
Thousands of potential workers go unemployed and hundreds of jobs go unfilled because these potential workers are either unable to find the necessary training or the training may also not exist.

It is both unfair, inefficient, and expensive to expect employers to exclusively perform on-the-job training. Extensive on-the-job training programs require time, money, and loss of production; all of which employers are unwilling to sacrifice. The need and importance for adequate career technical education is an essential element to ensure the future success and sustainability of the manufacturing sector and is the key to getting young workers into Pennsylvania's workforce and filling the employment gaps in the manufacturing sector.

## REGIONAL GROWTH 2005-2007



In terms of jobs, the highest decline overall occurred in Allegheny and Westmoreland County (89% of all jobs lost), while Butler and Green County experienced the highest growth.



With many jobs and employment sites being located outside the reach of public transportation, job access becomes an important barrier especially for entry-level workers. Many establishments are reporting staff shortages or high turnover due to the same issue.

## Prepared by Three Rivers Workforce Investment Board

### Mission

TRWIB informs decision-making on regional development to ensure that current and future market needs of businesses and job seekers are met. TRWIB fulfills its mission through: Acquiring, managing, interpreting and sharing relevant workforce data; Identifying and researching critical workforce issues; and Consulting and advising on public policy with employers and employment sectors.

### Vision

As the leading knowledge broker on regional workforce trends, needs and characteristics, TRWIB strategically informs economic and community development efforts. Ultimately, TRWIB intelligence helps Southwestern Pennsylvania optimize its greatest asset – the workforce – to attract and retain businesses that result in the region's economic gain.

425 Sixth Avenue, Suite 650, Pittsburgh, PA 15219

P: 412-552-7090, F: 412-552-7091, [info@trwib.org](mailto:info@trwib.org)

### Acknowledgements:

TRWIB would like to acknowledge the participation of regional employers:

James Miller

Corporate Manager  
ABARTA, Inc.  
TRWIB Board Member

Kevin Whalen

General Manager  
Q-Dot, Inc.  
TRWIB Board Member

Jody Tanner

Area Manager  
The Callos Companies

Paul Anselmo

Vice President  
New Century Careers

### Data sources:

#### Industry facts:

EMSI, Inc. Complete Employment, 2008.

#### Educational facts:

National Center for Education Statistics

#### Geographical facts:

PA Center for Workforce Information and Analysis, 2008.

#### State Initiatives

[www.paworkforce.state.pa.us](http://www.paworkforce.state.pa.us)

#### Local Initiatives:

[www.trwib.org](http://www.trwib.org)