

Job Market Intelligence: The Burning Glass Report

The Skills Gap in Production Roles



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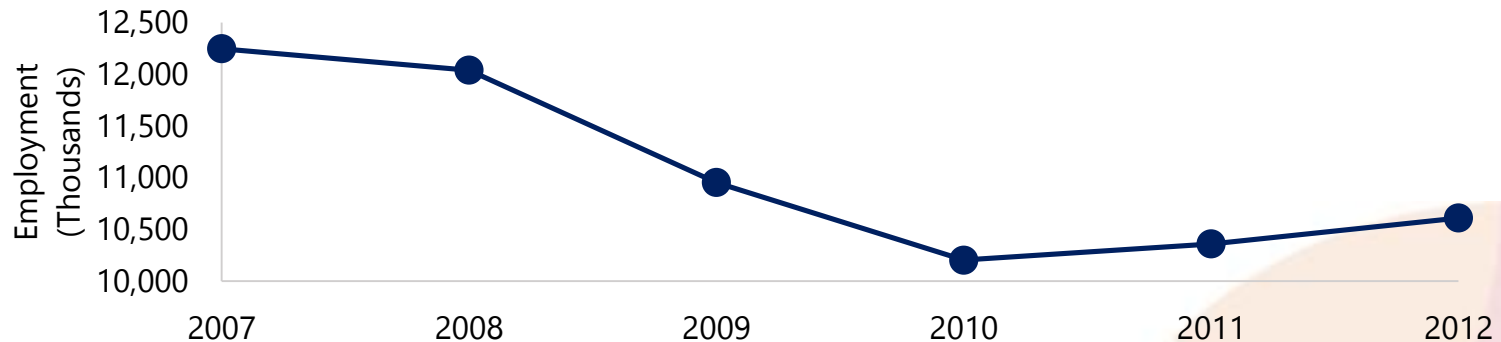
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Is There a Skills Gap in Skilled Production Roles?

Total employment in production jobs has declined 13% in the past five years.



Despite that, employers often highlight a skills gap and report difficulty filling key production roles.

“Shortages in skilled production jobs – machinists, operators, craft workers, distributors, technicians, and more – are taking their toll on manufacturers’ ability to expand operations, drive innovation, and improve productivity.”

-Boiling Point? The skills gap in U.S. manufacturing. The Manufacturing Institute.

Drawing from its database of nearly 100M online job postings, Burning Glass analyzed online job postings for US production jobs in 2013 to quantify the skills gap for skilled production roles.

Highlighting Skilled Production Jobs

To examine the skills gap, Burning Glass identified skilled production jobs that employers often report as hard-to-fill and compared their employment and online job posting trends to all production jobs.

Skilled production occupations were defined as those for which employers are most likely to request postsecondary training.

Examples of skilled production roles include the following:

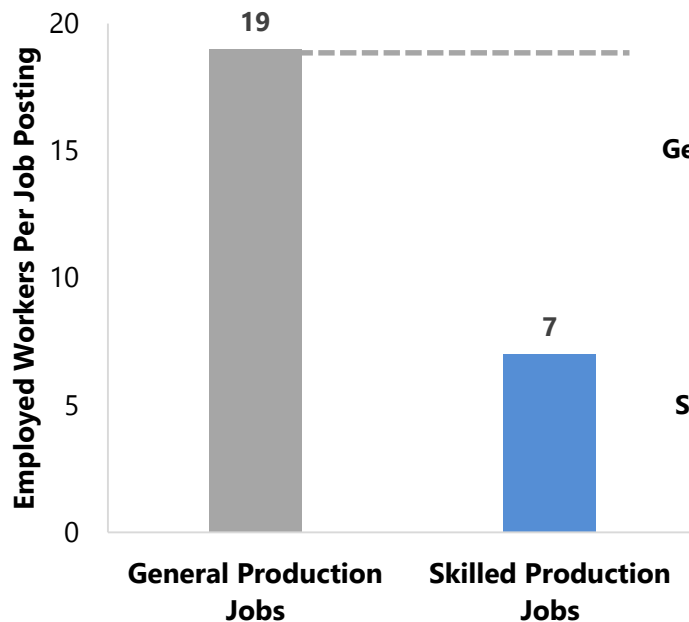
- CNC Programmers
- Avionics Technicians
- Civil Designers
- Production Supervisors

What Evidence is there of a Skills Gap?

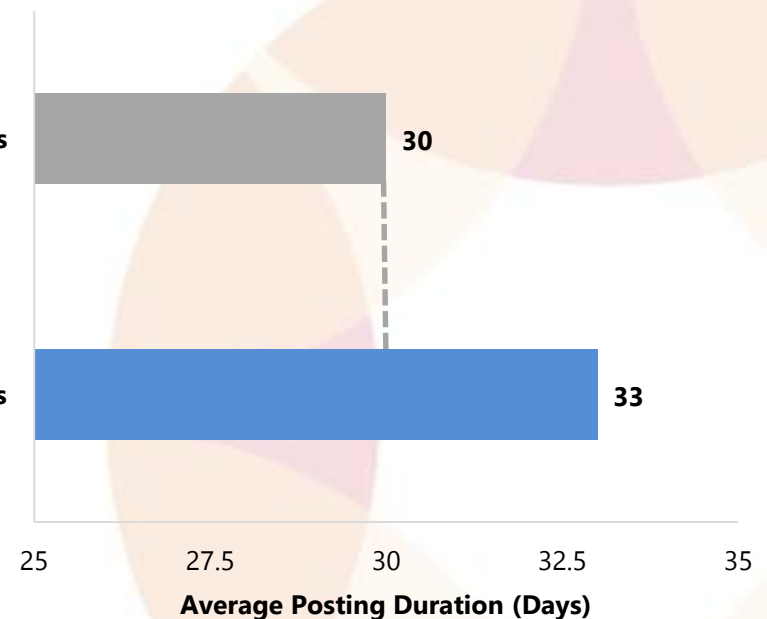
Compared to general production roles, skilled production occupations have:

- **Weaker Supply:** For each skilled production opening, employers are recruiting from a labor pool that is 1/3 the size of that for general production roles.
- **Longer Fill Times:** Postings for skilled production roles are open for 10% longer.

Lower Supply-to-Demand Ratio*









Longer Posting Duration



*The supply-to-demand ratio is the ratio of employed workers over total postings in 2013. Employment data are from the Bureau of Labor Statistics' Occupational Employment Statistics (OES) dataset. Job postings are from Burning Glass's proprietary job postings database.

For Which Occupations is the Skills Gap Most Severe?

The skilled production occupations highlighted below are among those with the most significant skill gaps.

Occupation	Employed Workers Per Job Posting	Average Posting Duration (Days)	% Requiring Advanced Qualification*	Average Salary**
General Production Jobs	19	30	 12%	\$33,459
Skilled Production Jobs	7	33	 55%	\$52,178
Numerical Tool and Process Control Programmers	5	33	 31%	\$48,640
Avionics Technicians	3	38	 32%	\$55,440
Electrical Engineering Technicians	6	39	 52%	\$58,070
Mechanical Drafters	3	38	 74%	\$53,270

*% Requiring Advanced Qualification is the percentage of postings explicitly calling for postsecondary education or credentials.

**Salaries were calculated using BLS OES 2012 data.

How Does the Magnitude of the Skills Gap Vary by State?

Burning Glass assessed the evidence of a skills gap for skilled production roles in the 17 largest states with above average concentrations of production jobs, and ranked the states based upon a combination of their employed supply-to-demand ratios and average posting durations for skilled production roles.

The analysis reveals that the skills gap is more acute in some key production states than others. (For full state rankings, see appendix.)

States with the Least Evidence of a Skills Gap

1. Indiana

2. Tennessee

3. Ohio

4. Wisconsin

5. South Carolina

States with the Greatest Evidence of a Skills Gap

1. Michigan

2. Texas

3. Louisiana

4. Iowa

5. Kansas

What Skills Are Employers Asking For?

The lists below indicate skills more commonly requested by employers in skilled production jobs than in production jobs overall.

High-Demand Skills in Skilled Production Jobs

Logistics	Process Improvement	Advanced Manufacturing
<p>Scheduling</p> <p>SAP</p> <p>Inventory Management</p>	<p>Good Manufacturing Practices (GMP)</p> <p>Capability Maturity Model (CMM)</p>	<p>Computer Aided Drafting/Design (CAD)</p> <p>Programmable Logic Controller (PLC) Programming</p> <p>Schematic Diagrams</p>

Appendix: State-Level Data

Burning Glass assessed the evidence of a skills gap for skilled production roles in the 17 largest states with above average concentrations of production jobs. Rankings are based upon a combination of employed supply-to-demand ratio and average posting duration for skilled production roles in each state.

State	Skills Gap Rank
Indiana	1
Tennessee	2
Ohio	3
Wisconsin	4
South Carolina	5
Alabama	6
Pennsylvania	7
Minnesota	8
Kentucky	9
Missouri	10
Washington	11
North Carolina	12
Kansas	13
Iowa	14
Louisiana	15
Texas	16
Michigan	17



Appendix: State-Level Data

State	Employed Workers Per Job Posting*	Average Posting Duration* (Days)
Indiana	9.9	33
Tennessee	8.1	30
Ohio	7.7	30
Wisconsin	7.4	30
South Carolina	8.2	32
Alabama	7.2	31
Pennsylvania	8.6	33
Minnesota	5.3	28
Kentucky	7.9	34
Missouri	6.8	32
Washington	5.7	30
North Carolina	7.6	34
Kansas	6.4	33
Iowa	5.1	31
Louisiana	7.3	36
Texas	6.9	37
Michigan	6.0	36

*Employed workers per job posting and average posting duration were calculated for skilled production occupations in each state.

Appendix: State-Level Data

The following data are included to provide additional context on the scale of production hiring in the states analyzed for this report and were not used in evaluating state-by-state skills gaps.

State	# of General Production Postings	# of Skilled Production Postings	% Skilled Production Postings
Indiana	9,644	8,355	46%
Tennessee	8,788	7,539	46%
Ohio	16,852	15,650	48%
Wisconsin	13,222	9,385	42%
South Carolina	6,059	5,382	47%
Alabama	7,647	6,636	46%
Pennsylvania	13,550	14,260	51%
Minnesota	16,075	10,764	40%
Kentucky	6,190	5,567	47%
Missouri	7,252	7,582	51%
Washington	13,444	10,921	45%
North Carolina	12,240	11,803	49%
Kansas	6,219	5,313	46%
Iowa	7,885	6,301	44%
Louisiana	7,884	6,243	44%
Texas	30,791	35,942	54%
Michigan	19,053	16,512	46%

Appendix: State-Level Data

The following data are included to provide additional context on the scale of production hiring in the states analyzed for this report and were not used in evaluating state-by-state skills gaps.

States meeting the criteria outlined on slide 7 were ranked based on production jobs data.

State	Rank # of General Production Postings	Rank # of Skilled Production Postings	Rank # of General Production Per Capita	Rank # of Skilled Production Per Capita	Rank % Skilled Production Postings
Indiana	9	9	9	11	10
Tennessee	10	11	12	15	11
Ohio	3	3	10	10	5
Wisconsin	7	8	3	5	16
South Carolina	17	16	13	16	7
Alabama	13	12	8	8	8
Pennsylvania	5	4	17	17	2
Minnesota	4	7	1	2	17
Kentucky	16	15	11	12	6
Missouri	14	10	15	13	3
Washington	6	6	5	6	13
North Carolina	8	5	14	14	4
Kansas	15	17	4	3	12
Iowa	11	13	2	1	14
Louisiana	12	14	7	9	15
Texas	1	1	16	7	1
Michigan	2	2	6	4	9

About Burning Glass

Burning Glass's tools and data are playing a growing role in informing the global conversation on education and the workforce by providing researchers, policy makers, educators, and employers with detailed real-time awareness into skill gaps and labor market demand. Burning Glass's job seeker applications power several government workforce systems and have been shown to have substantive impact on reemployment outcomes and on labor market literacy.

With headquarters in Boston's historic Faneuil Hall, Burning Glass is proud to serve a client base that spans six continents, including education institutions, government workforce agencies, academic research centers, global recruitment and staffing agencies, major employers, and leading job boards.

For More Information

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