Labor Supply and Demand and the Talent Pipeline in North Carolina and its Regions

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Andrew Berger-Gross

Senior Economist

NC Department of Commerce / Labor & Economic Analysis Division (LEAD)

Key questions and objectives

- What are the “in-demand” regional and occupational job markets?
  - Connecting job-seekers with available positions
  - Connecting employers with available talent

- Is our higher-education system aligned with labor market need?
  - Identifying priorities for educational / workforce investments
  - Eliminating mismatch / closing the “skills gap”

Definitions and Data

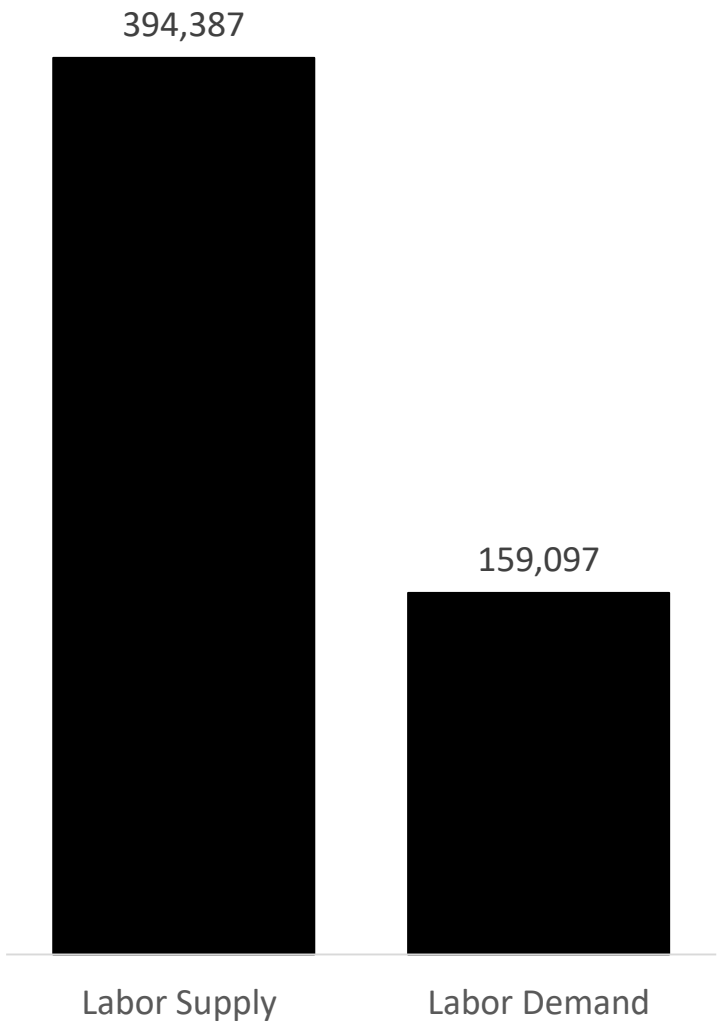
- Labor supply
  - Jobseekers
  - LEAD analysis of data from the U.S. Census Bureau and U.S. Bureau of Labor Statistics
    - Sources: American Community Survey (ACS); Current Population Survey (CPS); Local Area Unemployment Statistics (LAUS)

- Labor demand
  - Job openings
  - LEAD analysis of data from the Conference Board and the U.S. Bureau of Labor Statistics

Source: LEAD analysis of data from the U.S. Census Bureau, the Conference Board, and the U.S. Bureau of Labor Statistics.
These figures represent annual averages of monthly data.

NC's Labor Supply/Demand Rate

Labor supply data: LAUS

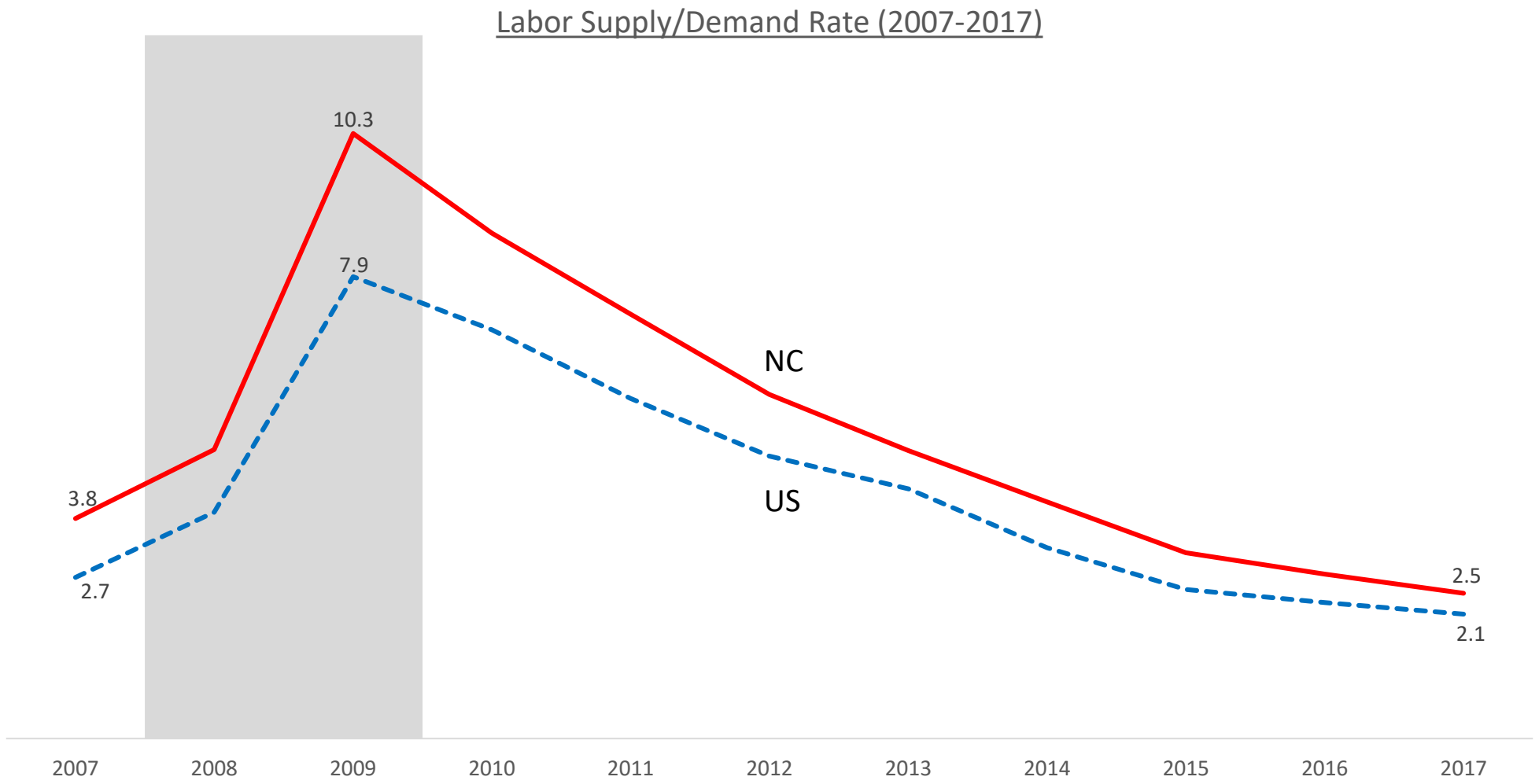


In 2017,
there was an
average of
2.5 jobseekers
per job opening
in North Carolina

Source: LEAD analysis of data from the U.S. Census Bureau, the Conference Board, and the U.S. Bureau of Labor Statistics.
These figures represent annual averages of monthly data.

Labor Market is Tighter than Pre-Recession

Labor supply data: LAUS



Source: LEAD analysis of data from the U.S. Census Bureau, the Conference Board, and the U.S. Bureau of Labor Statistics.
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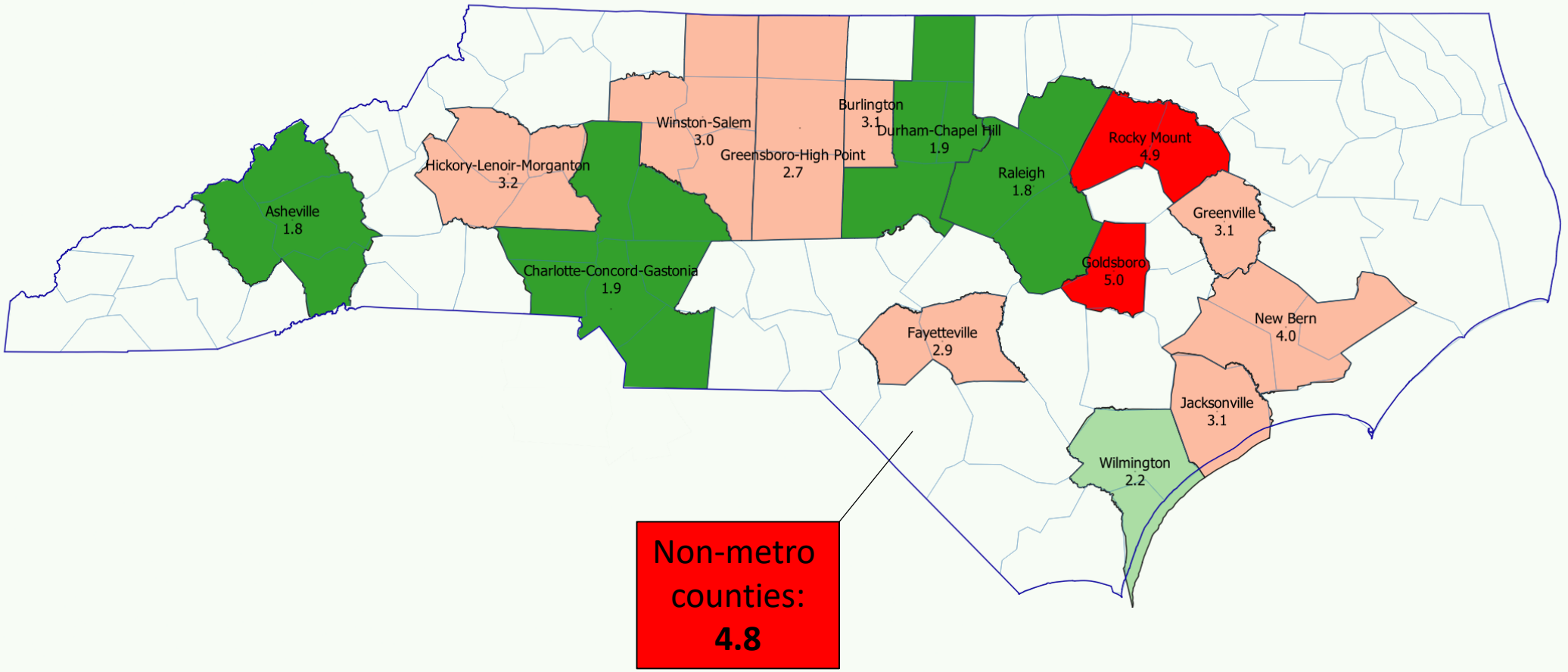
Metropolitan Statistical Areas (MSAs)

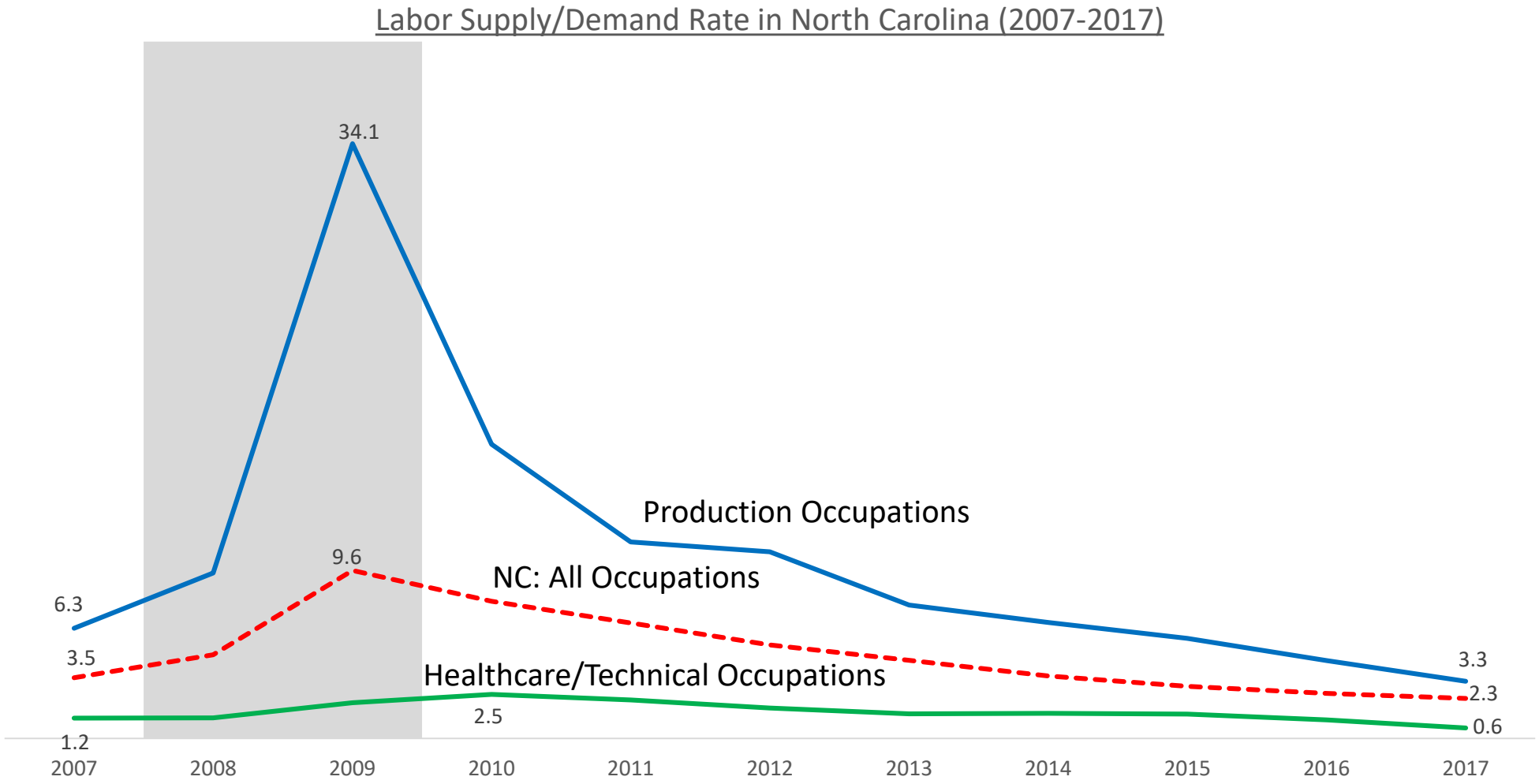
Labor Supply/Demand Rate (2017)



Source: LEAD analysis of data from the U.S. Census Bureau, the Conference Board, and the U.S. Bureau of Labor Statistics.
These figures represent annual averages of monthly data. Includes only jobseekers with recent job experience.

Occupational Labor Markets Have All Tightened

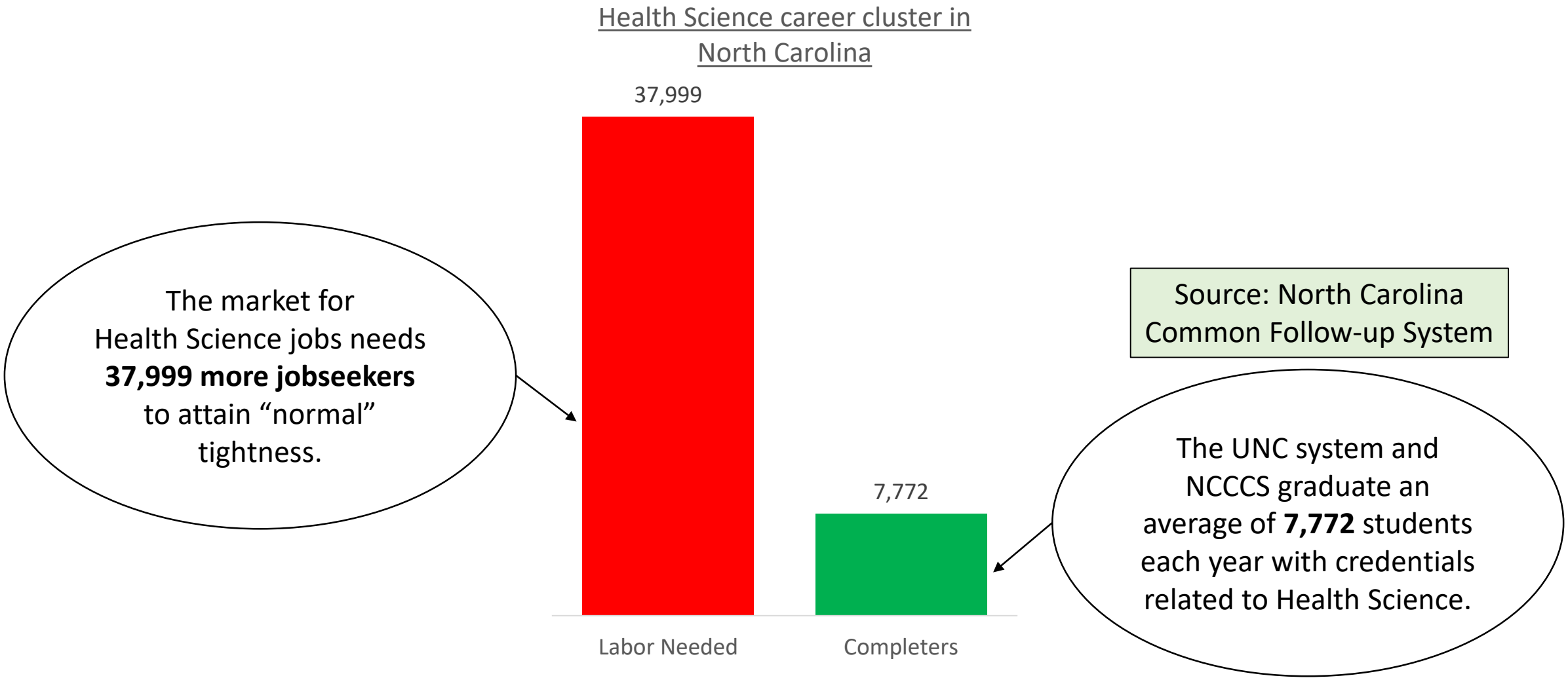
Labor supply data: CPS



Source: LEAD analysis of data from the U.S. Census Bureau, the Conference Board, the U.S. Bureau of Labor Statistics, and the NC Common Follow-up System.
These figures represent multi-year averages. Labor supply/demand data are an average of 2014-2016. Educational program completers data are an average of 2010-2015 program years.

Is Higher Ed System Aligned With Labor Market?

Labor supply data: ACS



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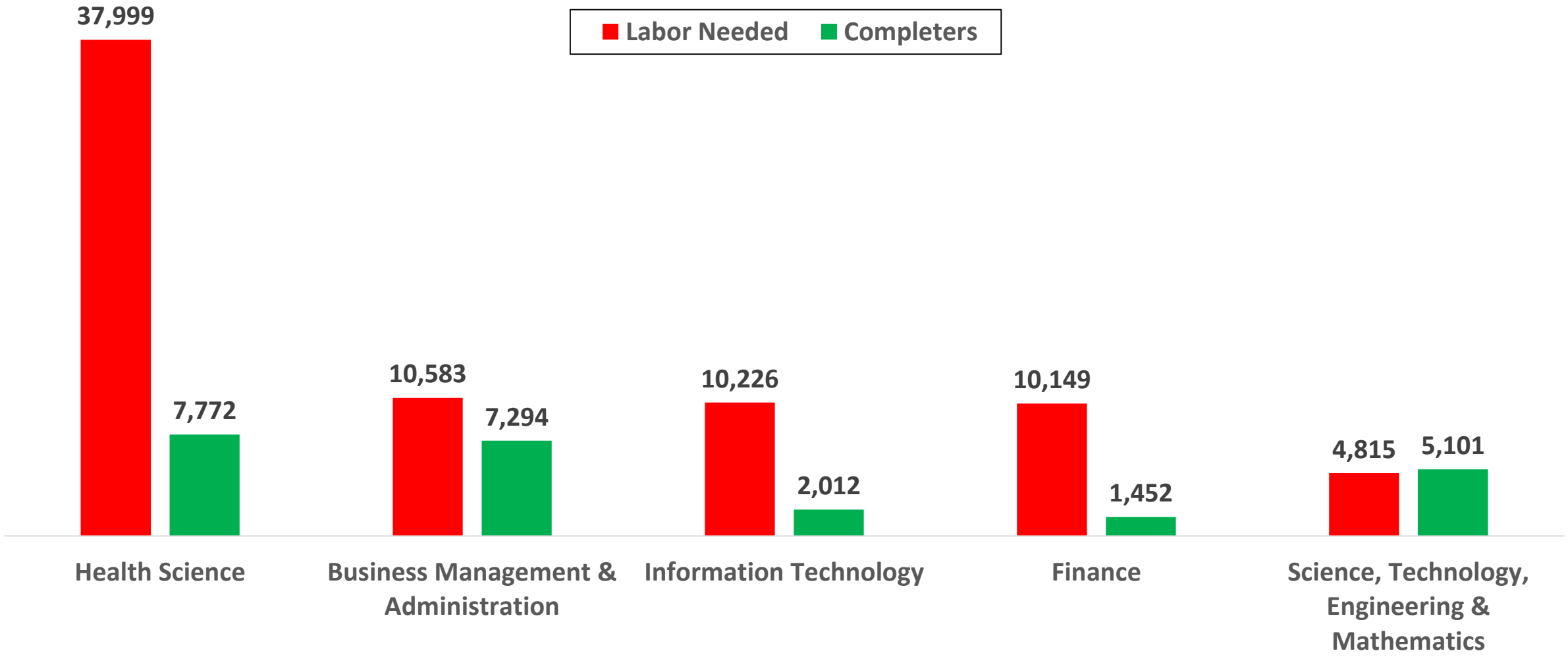
NC's Most "In-Demand" Career Clusters

Labor supply data: ACS



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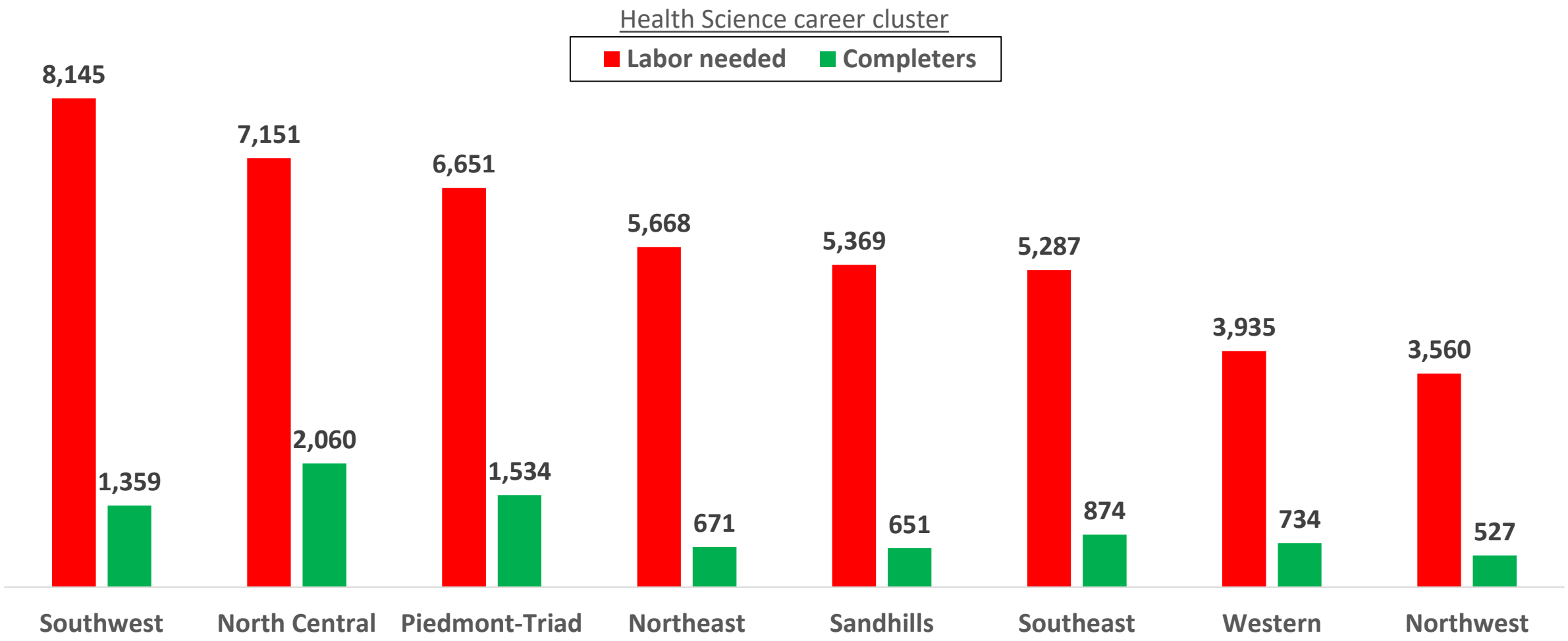
Health Science: Most "In-Demand" Field in Each Region

Labor supply data: ACS



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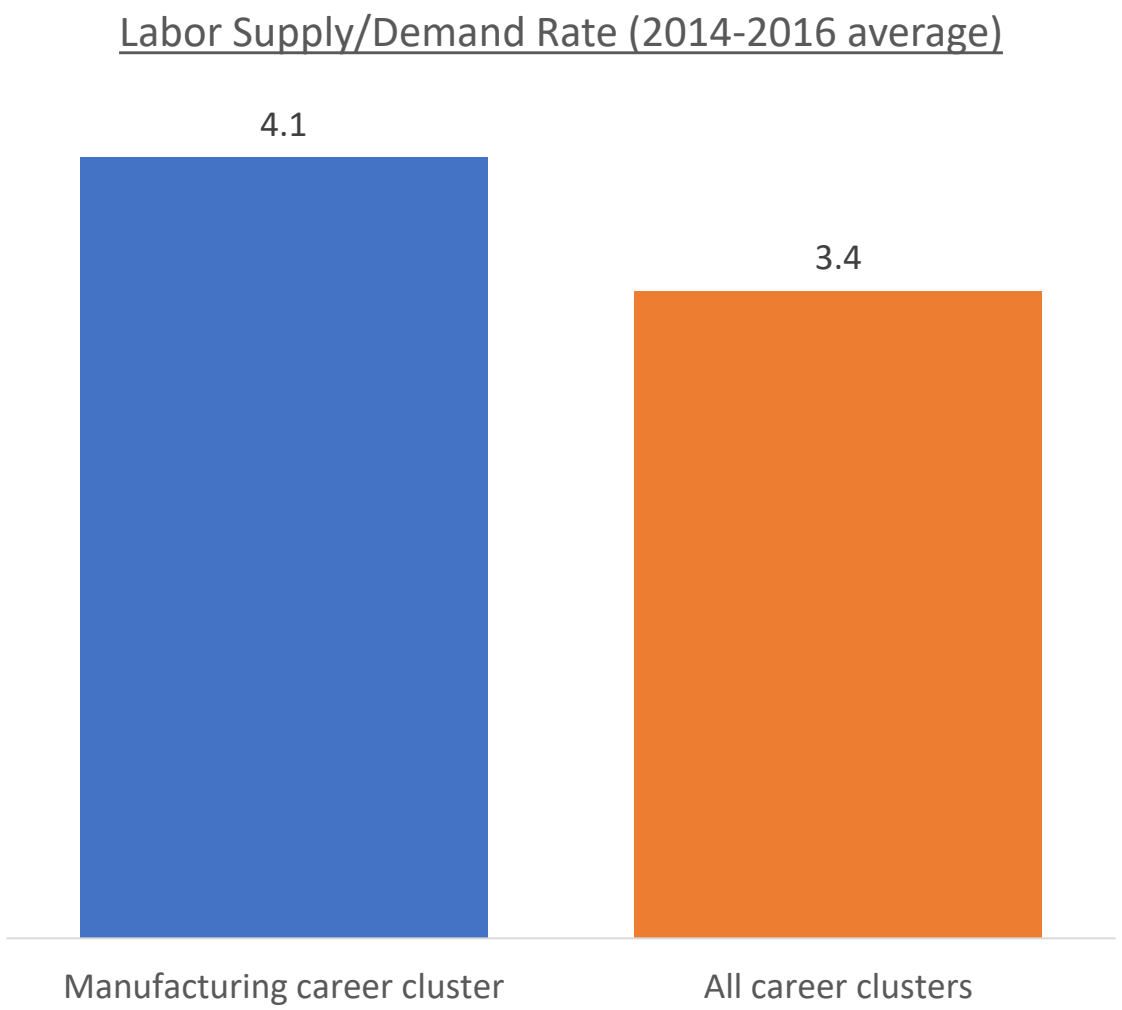
Overall, Market for Manufacturing Jobs is Slack…

Labor supply data: ACS



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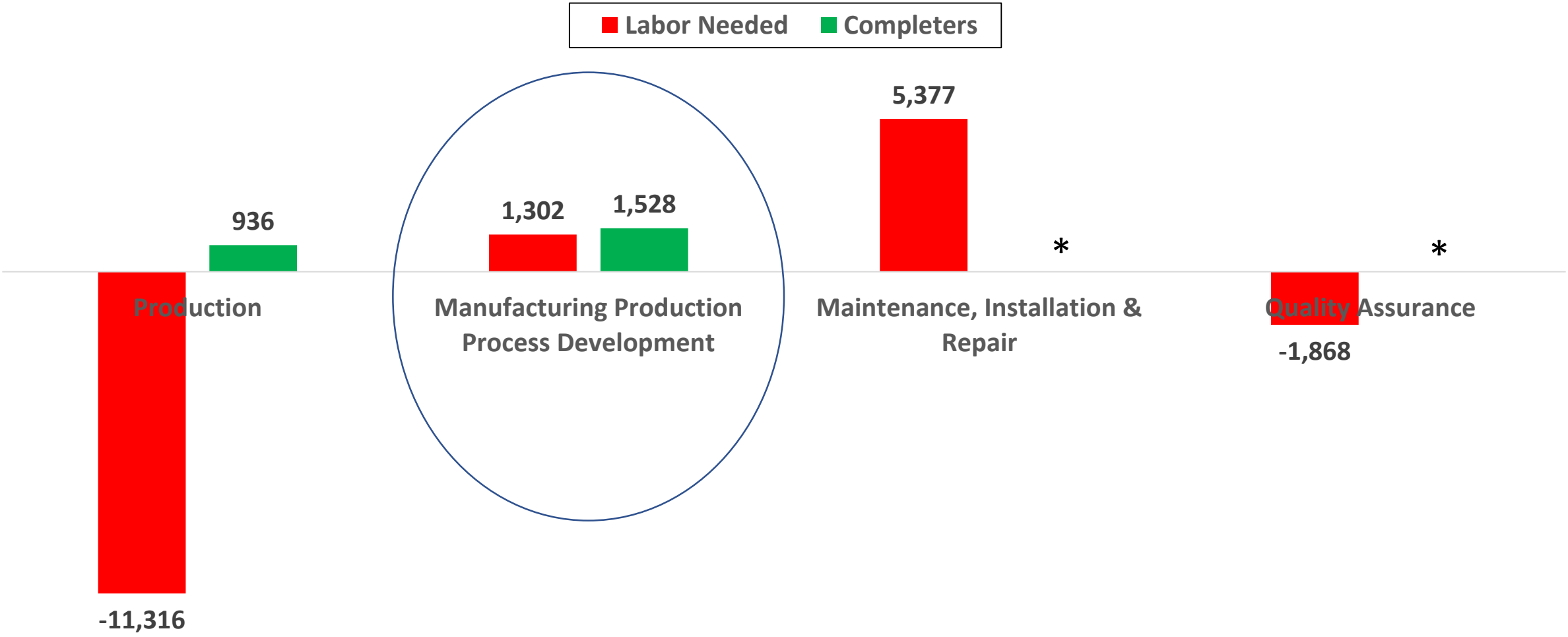
These figures represent multi-year averages. Labor supply/demand data are an average of 2014-2016. Educational program completers data are an average of 2010-2015 program years.

… But Some Manufacturing Pathways Need More Labor

Labor supply data: ACS



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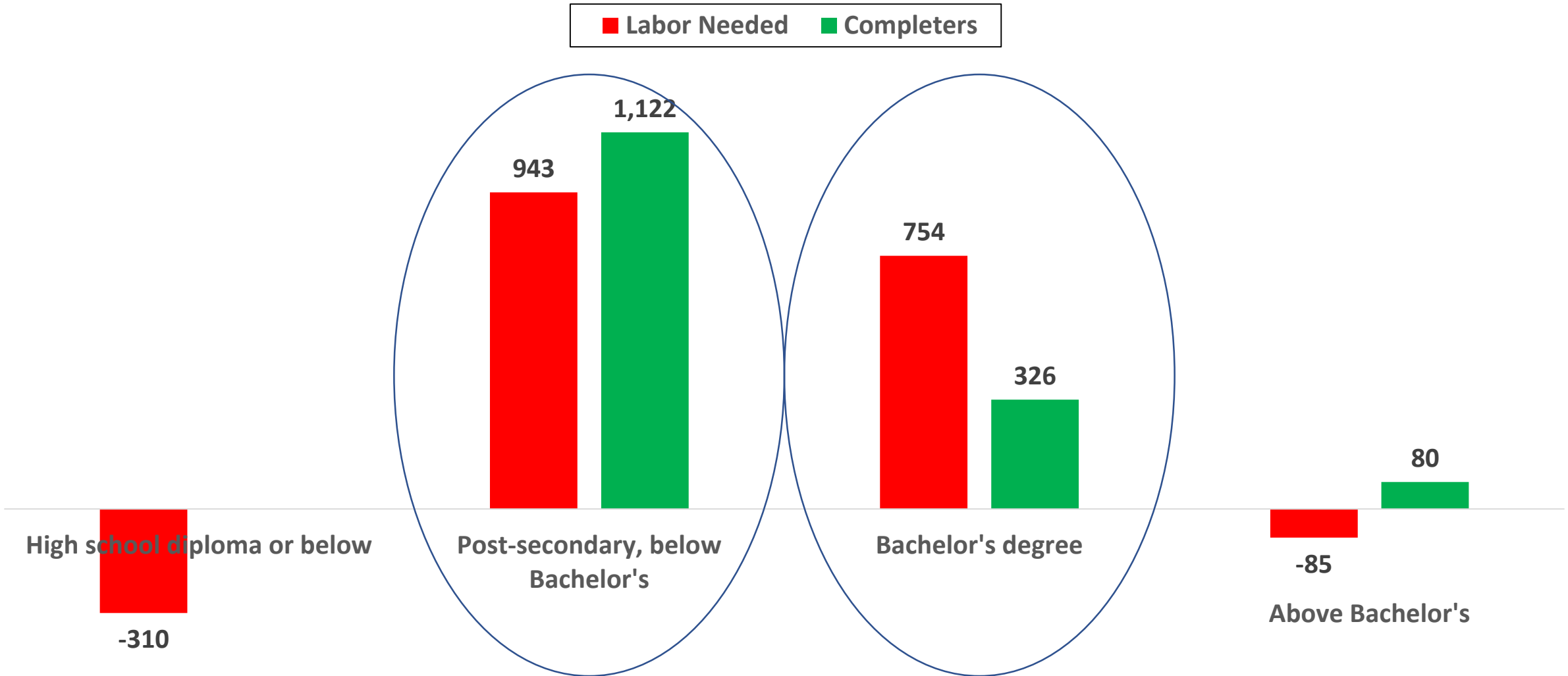
Mfg. Process Devp. Pathway Needs More Skilled Labor

Labor supply data: ACS



Source: LEAD Star Jobs https://www.nccommerce.com/lead/data-tools/star-jobs

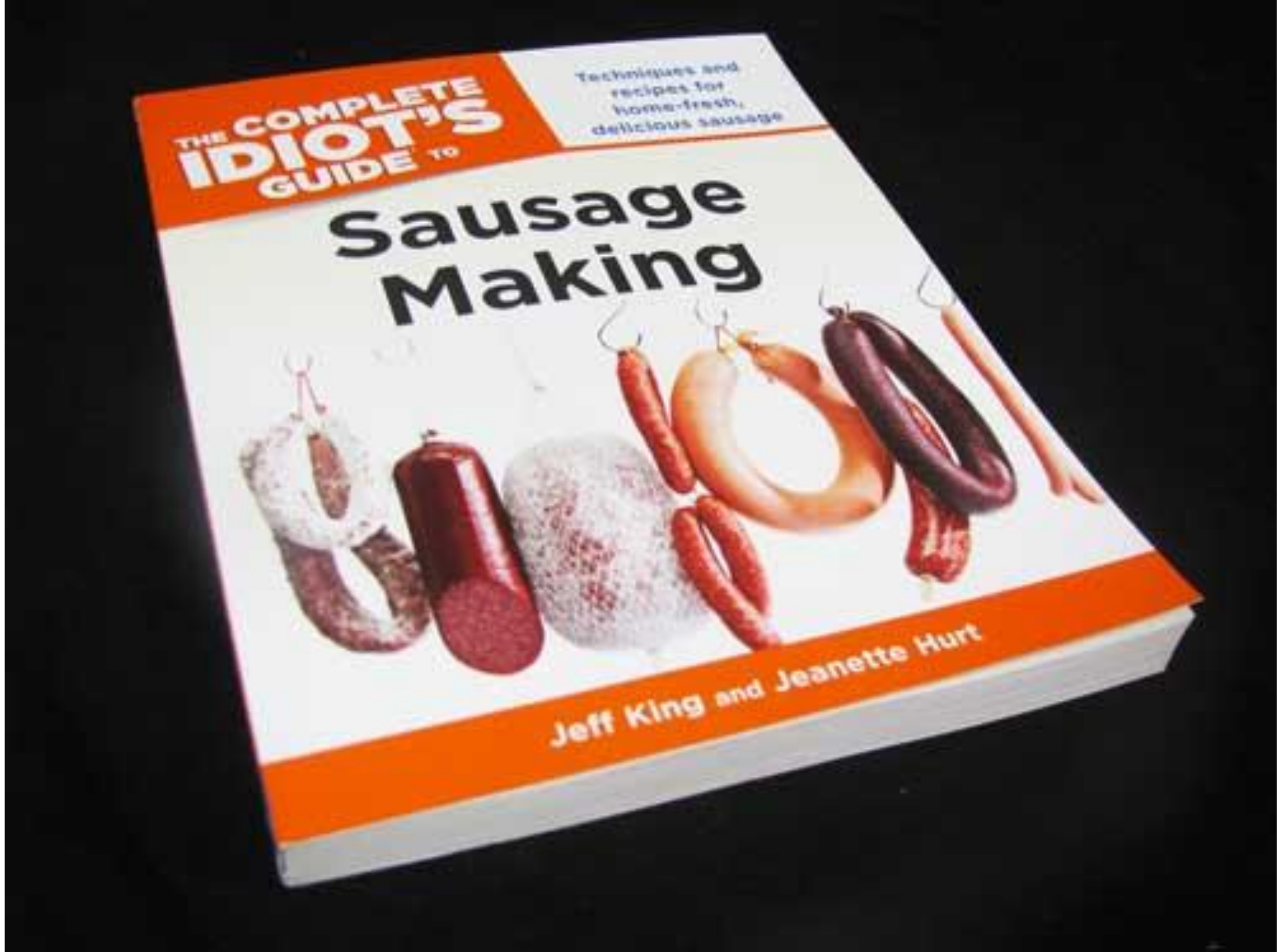
“4 Star Jobs” in Mfg. Process Development

Purchasing Agents (SOC 13-1023)

- Education level: Bachelor’s
- Median annualized wage: $57,630
- Projected annual employment growth: 0.8%
- Projected annual number of job openings: 265

Electrical and Electronics Engineering Technicians (SOC 17-3023)

- Education level: Post-secondary, below Bachelor’s
- Median annualized wage: $58,560
- Projected annual employment growth: 0.6%
- Projected annual number of job openings: 104


THE COMPLETE IDIOT'S GUIDE TO
Techniques and recipes for home-fresh, delicious sausage
Sausage Making
Jeff King and Jeanette Hurt

Quantifying “labor supply”

Household survey data (LAUS, CPS, ACS, state-specific surveys)

- Unemployed
- Employed: how many are looking for a new job?
  - American Time Use Survey: around 4%

Administrative data

- Unemployment insurance recipients: how many are seeking work?
  - State-by-state differences in job search requirements
- State job matching systems (Wagner-Peyser)
  - E.g. “registered job applicants”
  - State-by-state differences in data quality

Quantifying “labor demand”

Employer survey data (JOLTS, state-specific surveys)

- Job openings

Proprietary data (Conference Board, et al.)

- Online job postings / “real-time LMI”
  - These data have well-known biases. Need to benchmark to representative surveys.

Administrative data

- State job matching systems (Wagner-Peyser)
  - Employer-provided and/or web-scraped job postings
  - State-by-state differences in data quality

Quantifying “mismatch” and “labor needed”

“Mismatch” = deviation from optimal allocation of supply & demand

Labor needed:

- Amount of labor supply needed to attain aggregate supply-demand rate
  - Assumption: instantaneous matching of labor supply and demand

- Sahin et al. (2014): “Mismatch Unemployment”, American Economic Review
  - Assumption: matching is impeded by within-market frictions (job search / recruiting)

Şahin, Ayşegül, Joseph Song, Giorgio Topa, and Giovanni L. Violante. 2014. "Mismatch Unemployment." American Economic Review, 104 (11): 3529-64.

Who is in your state's "Talent Pipeline"?

What type of "pipeline" are we concerned about?

- Educational programs?
- Occupational pathways?
- What's the connection between educational programs and specific occupations?

Which "section" of the pipeline?

- K-12?
- Community colleges? Four-year colleges/universities?
- All providers? Or just state-controlled entities?

Which people in the pipeline?

- All enrollees? Or just those who graduate?
- All students? Or just specific populations or academic programs?

Thank you!

Contact info:

Andrew Berger-Gross
Senior Economist
andrewbg@nccommerce.com
(919) 707-1504