U.S. COMPETITIVENESS: BUILDING AMERICA’S MIDDLE SKILLS

Joseph B. Fuller, Harvard Business School
GE Foundation Business Leader Call
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HBS’ U.S. COMPETITIVENESS PROJECT: DEFINING COMPETITIVENESS

The United States is a competitive location to the extent that firms operating in the U.S. are able to compete successfully in the global economy while supporting high and rising wages and living standards for the average American.

Note: Data unavailable for mine cutting and channeling machine operators for 1999, flight attendants, airline pilots, co-pilots, and flight engineers for 2000-2006, and actors, dancers, musicians and singers, and entertainers and performers, sports and related workers, all other for 2004-2010. Data unavailable for dancers, entertainers, musicians and actors for 2013.

THE LOW-WAGE RECOVERY

Job losses during the Recession

- Higher-wage industries (41%)
- Mid-wage industries (37%)
- Lower-wage industries (22%)

Employment growth over past four years

- Higher-wage industries (30%)
- Mid-wage industries (26%)
- Lower-wage industries (44%)

UNDEREMPLOYMENT AND UNEMPLOYMENT RATES FOR RECENT COLLEGE GRADUATES, 2003-2012

## CREDENTIALS GAPS IN MIDDLE-SKILL ROLES

<table>
<thead>
<tr>
<th>Occupation Title</th>
<th>Credentials Gap</th>
<th>% Job Holders with BA+</th>
<th>% Postings Requiring Bachelor’s Degree</th>
<th>2013 Job Postings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Secretaries and Executive Assistants</td>
<td>46%</td>
<td>19%</td>
<td>65%</td>
<td>65,046</td>
</tr>
<tr>
<td>First-Line Supervisors of Production and Operating Workers</td>
<td>45%</td>
<td>17%</td>
<td>62%</td>
<td>72,117</td>
</tr>
<tr>
<td>Transportation, Storage, and Distribution Managers</td>
<td>42%</td>
<td>32%</td>
<td>74%</td>
<td>23,515</td>
</tr>
<tr>
<td>Credit Authorizers, Checkers, and Clerks</td>
<td>40%</td>
<td>26%</td>
<td>66%</td>
<td>2,466</td>
</tr>
<tr>
<td>Training and Development Specialists</td>
<td>25%</td>
<td>50%</td>
<td>75%</td>
<td>54,605</td>
</tr>
<tr>
<td>Human Resources Assistants, Except Payroll and Timekeeping</td>
<td>22%</td>
<td>29%</td>
<td>51%</td>
<td>28,337</td>
</tr>
</tbody>
</table>

Source: “Moving the Goalposts: How Demand for a Bachelor’s Degree is Reshaping the Workforce,” Burning Glass Technologies, September 2014.
### HBS Survey Findings: Employers’ Approaches to Hiring Decisions

#### Your firm prefers to invest in new technology to perform work rather than hire or retain employees

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Somewhat Agree</th>
<th>Neither Agree</th>
<th>Somewhat Disagree</th>
<th>Strongly Agree</th>
<th>N/A</th>
<th>Do Not Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>17%</td>
<td>29%</td>
<td>19%</td>
<td>17%</td>
<td>9%</td>
<td>6%</td>
<td>4%</td>
</tr>
</tbody>
</table>

#### Your firm prefers to rely on vendors that can be outsourced rather than hire additional employees

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Somewhat Agree</th>
<th>Neither Agree</th>
<th>Somewhat Disagree</th>
<th>Strongly Agree</th>
<th>N/A</th>
<th>Do Not Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>15%</td>
<td>34%</td>
<td>15%</td>
<td>21%</td>
<td>9%</td>
<td>4%</td>
<td>3%</td>
</tr>
</tbody>
</table>

#### Compared to three years ago, your firm’s U.S. operations use part-time workers...

<table>
<thead>
<tr>
<th>More</th>
<th>About the Same</th>
<th>Less U.S. Operations Established &lt;3 Years Ago</th>
<th>Do Not Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>49%</td>
<td>10%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Note: Percentages do not sum to 100% because of rounding.

DEFINING MIDDLE SKILLS: RELATIONSHIP BETWEEN EDUCATION AND SALARY FOR TOP MIDDLE SKILLS OCCUPATIONAL GROUPS

<table>
<thead>
<tr>
<th>Occupation Family</th>
<th>Online Middle Skills Postings (2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales and Related</td>
<td>1,910,430</td>
</tr>
<tr>
<td>Office/Admin Support</td>
<td>1,481,060</td>
</tr>
<tr>
<td>Healthcare</td>
<td>1,209,143</td>
</tr>
<tr>
<td>Transportation/Material Moving</td>
<td>611,205</td>
</tr>
<tr>
<td>Installation, Maintenance and Repair</td>
<td>446,637</td>
</tr>
<tr>
<td>Production</td>
<td>363,544</td>
</tr>
<tr>
<td>IT</td>
<td>344,393</td>
</tr>
<tr>
<td>Business/Finance</td>
<td>284,945</td>
</tr>
<tr>
<td>Management</td>
<td>148,029</td>
</tr>
</tbody>
</table>

Source: Burning Glass Technologies.
Which occupations are critical to U.S. competitiveness?

**Y: Value to U.S. Business**
- Analysis Based on:
  - Industry Labor Productivity
  - Industry Economic Multiplier
  - Occupation Criticality to Business Model

**X: Career Lifetime Value**
- Analysis Based on:
  - Compensation
  - Future Earning Potential (Opportunity for Advancement)
Note: The number of construction and extraction jobs is an estimate.
Analysis of the Middle Skills Jobs Market is a combined effort between Harvard Business School, Accenture and Burning Glass. All rights reserved.
Helpdesk/Entry-Level Computer Support

$44,826
54% of postings sub-BA

Pharmacy Technician

$29,650
BA not required

• Possible next steps: IT recruiter, help desk manager, advanced computer support, network support
  • Salaries ranging $61,000-$78,000
  • Often posted with BA requirement
  • Significant overlap in certifications required

• Little upward mobility (bimodal ecosystem of pharmacists and technicians)
  • Certifications rarely port to other clinical jobs
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MIDDLE SKILLS ECOSYSTEM: CLOSING THE GAP BETWEEN SUPPLY AND DEMAND
CLOSING THE MIDDLE SKILLS GAP BY TAKING ACTION: RECOMMENDATIONS FOR THREE KEY CONSTITUENCIES

BUSINESS LEADERS

• Apply supply chain management principles to sourcing middle-skills talent
• Invest in suppliers for jobs that are critical or hard to fill; develop ongoing relationships with preferred sources of talent
• Overhaul hiring practices pertaining to middle-skills workers
• Develop understanding of total costs of job openings and turnover
• Conduct workforce planning to identify strategically relevant middle-skills capabilities; avoid “just-in-time” hiring
• Use in-depth apprenticeship programs to pre-qualify candidates and cultivate interest
• State skills requirements clearly to educators and intermediaries, in partnership with other employers
• Identify core capabilities, not merely technical qualifications

EDUCATORS

• Forge supply-chain partnerships with employers
• Invest in reliable job market information
• Shift resources to reflect the current job market and emerging trends
• Broaden curriculum to incorporate soft skills
• Focus on career lifetime value and ladders of advancement

POLICYMAKERS

• Invest in state-of-the-art information systems about the job market
• Support SME’s
• Encourage collaboration between companies
• Identify and propagate proven models
• Remove barriers to innovation
• Align agencies around job creation
• Embrace middle-skills jobs publicly
FURTHER RESOURCES

• www.hbs.edu/competitiveness
  – 2013–14 alumni survey report
  – Report on middle-skills gaps, with Accenture and Burning Glass (November 2014)

• White paper on supply-chain thinking in talent pipeline management, with U.S. Chamber of Commerce (Nov. 19, 2014)