Help Wanted:
Projections of Jobs and Education Requirements through 2018

Council of Graduate Schools
Graduate Education Research and Policy Forum

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What do we find?

Increasing Postsecondary Education Demand

• 63% of all employment will require postsecondary education
• More than 30 million of the estimated 47 million new and replacement jobs will require postsecondary education
• Changing occupational composition benefits workers with postsecondary education
• The fastest growing occupations have some of the highest levels of postsecondary requirements

We will fall short at least 3 million postsecondary degrees

• We will need an additional 4.7 million postsecondary vocational certificates
• Estimated 1-1.5 million shy on certificates
We are in coming out of a recession, should we believe in more jobs, let alone the need for more post secondary? **Yes, of course**

1. The long run trend in the United States is increasing demand for workers with postsecondary education
2. Postsecondary wages have held strong and have grown while high school wages have been flat
3. Katz and Goldin suggest we’ve been under-producing postsecondary degrees for at least 30 years
4. Over-qualification is not as significant. Wage analysis at our Center, supported by unpublished work of Neumark and Johnson (2010), show we do not have too many degrees. The Murray and Vedder arguments are incorrect. (Why would employers pay for what they don’t need?)
5. Autor et al. detail work tasks are becoming more complex, our work with O*Net reinforces this
Why do we care?

• Achieving the American Dream of a middle class lifestyle is increasingly determined by educational attainment

• Occupational shifts in the economy and increasing demand for skills create opportunity for workers

• Access to postsecondary education is increasingly the key to economic opportunity, family sustaining earnings, and middle class incomes
The Evidence
Help Wanted: Projections of Education Requirements Through 2018

Builds projections of education demand using BLS’s robust employment projections, augmented with additional data on the recession, macroeconomic expectations and industry trends.

Model uses time trend information to capture changing skill requirements within occupations as well as demand changes brought about by changes in composition.

Enables an analysis of:

• Education demand by occupation and industry

• Will soon be enhanced with a detailed sub-state analysis.
Our report documents a method to project educational demand

For example our projections model accounts for up-skilling such as that observed for those who were once ‘auto mechanics and repairmen’ and are now “automotive technicians”.

**EXHIBIT A** Distribution of education among auto mechanics in three eras.\(^2\)

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>High school dropouts</td>
<td>58%</td>
<td>29%</td>
<td>19%</td>
</tr>
<tr>
<td>High school graduates</td>
<td>34%</td>
<td>52%</td>
<td>47%</td>
</tr>
<tr>
<td>Some college/Associate’s degree</td>
<td>6%</td>
<td>16%</td>
<td>30%</td>
</tr>
<tr>
<td>Bachelor’s degree or better</td>
<td>1%</td>
<td>3%</td>
<td>4%</td>
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Author’s analysis of March CPS data, various years
The Economy Evolves –
Recession might accelerate ongoing trend

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<tbody>
<tr>
<td>Healthcare practitioners and technical occupations</td>
<td>2,115,500</td>
<td>2,667,100</td>
<td>8,813,200</td>
<td>26%</td>
<td>30%</td>
</tr>
<tr>
<td>Education</td>
<td>3,597,400</td>
<td>4,113,000</td>
<td>10,234,200</td>
<td>14%</td>
<td>40%</td>
</tr>
<tr>
<td>Community and Arts</td>
<td>1,031,500</td>
<td>1,126,300</td>
<td>5,209,000</td>
<td>9%</td>
<td>22%</td>
</tr>
<tr>
<td>Stem+</td>
<td>1,865,500</td>
<td>2,261,800</td>
<td>8,553,300</td>
<td>21%</td>
<td>26%</td>
</tr>
<tr>
<td>Managerial and Professional Office</td>
<td>3,313,700</td>
<td>3,771,600</td>
<td>17,684,000</td>
<td>14%</td>
<td>21%</td>
</tr>
<tr>
<td>Sales and office support</td>
<td>1,439,400</td>
<td>1,498,600</td>
<td>43,543,100</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Healthcare support occupations</td>
<td>50,000</td>
<td>95,100</td>
<td>4,826,200</td>
<td>90%</td>
<td>2%</td>
</tr>
<tr>
<td>Low skill food and personal services</td>
<td>420,100</td>
<td>472,300</td>
<td>27,995,600</td>
<td>12%</td>
<td>2%</td>
</tr>
<tr>
<td>Blue collar</td>
<td>352,700</td>
<td>337,900</td>
<td>34,641,400</td>
<td>-4%</td>
<td>1%</td>
</tr>
<tr>
<td>Total</td>
<td><strong>14,185,800</strong></td>
<td><strong>16,343,700</strong></td>
<td><strong>161,500,000</strong></td>
<td><strong>15%</strong></td>
<td><strong>10%</strong></td>
</tr>
</tbody>
</table>
The majority of higher education today is occupational

Degrees and Awards Earned by Fields of Study

<table>
<thead>
<tr>
<th></th>
<th>Less than 1 year</th>
<th>Associate Degrees</th>
<th>Bachelor’s Degrees</th>
<th>Master’s Degrees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational</td>
<td>99%</td>
<td>96%</td>
<td>72%</td>
<td>90%</td>
</tr>
<tr>
<td>Academic</td>
<td>1%</td>
<td>4%</td>
<td>28%</td>
<td>10%</td>
</tr>
</tbody>
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Source: U.S. National Center for Education Statistics, Digest of Education Statistics
Yes it is bad but like other recessions – growth will resume.
Fastest growing occupations use education most intensely

Occupational employment in 2018 and educational demand within occupations
Source: Center on Education and the Workforce forecast of educational demand through 2018
The historic trend in the US is increasing demand for education and training beyond high school. Why should we be surprised that the future is similar?
Workers with high school and less will continue concentrate in declining occupations or those paying low wages; or both.
Life-time earnings are much higher for workers with postsecondary education.
It’s just not our grandfather’s high school economy anymore. Economic opportunity is now defined by postsecondary education.

**FIGURE 3**

People who do not complete postsecondary education are falling out of the middle class.*

Source: Authors’ analysis of March CPS data, various years; Center on Education and the Workforce forecast of educational demand to 2018

*Middle class is defined as the middle four family income deciles ($30,000-79,000).
The high school economy has become the college economy
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http://cew.georgetown.edu/jobs2018