

# Help Wanted:

## Projections of Jobs and Education Requirements through 2018

Council of Graduate Schools  
Graduate Education Research and Policy Forum

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GEORGETOWN UNIVERSITY

Center on Education and the Workforce

# 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 Wage analysis at our Center, supported by unpublished work of Neumark and Johnson (2010), show we do not have too many degrees.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 life style 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



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## 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.<sup>2</sup>

	1968–1971	1988–1991	2004–2007
High school dropouts	58%	29%	19%
High school graduates	34%	52%	47%
Some college/Associate’s degree	6%	16%	30%
Bachelor’s degree or better	1%	3%	4%

Author’s analysis of March CPS data, various years



## The Economy Evolves – Recession might accelerate ongoing trend

	Master's or better (2008)	Master's or better (2018)	Total jobs (2018)	Graduate growth (2008-18)	Graduate percentage (2018)
Healthcare practitioners and technical occupations	2,115,500	2,667,100	8,813,200	26%	30%
Education	3,597,400	4,113,000	10,234,200	14%	40%
Community and Arts	1,031,500	1,126,300	5,209,000	9%	22%
Stem+	1,865,500	2,261,800	8,553,300	21%	26%
Managerial and Professional Office	3,313,700	3,771,600	17,684,000	14%	21%
Sales and office support	1,439,400	1,498,600	43,543,100	4%	3%
Healthcare support occupations	50,000	95,100	4,826,200	90%	2%
Low skill food and personal services	420,100	472,300	27,995,600	12%	2%
Blue collar	352,700	337,900	34,641,400	-4%	1%
<b>Total</b>	<b>14,185,800</b>	<b>16,343,700</b>	<b>161,500,000</b>	<b>15%</b>	<b>10%</b>





## The majority of higher education today is occupational

### Degrees and Awards Earned by Fields of Study

	Less than 1 year	Associate Degrees	Bachelor's Degrees	Master's Degrees
Occupational	99%	96%	72%	90%
Academic	1%	4%	28%	10%

Source: U.S. National Center for Education Statistics, Digest of Education Statistics

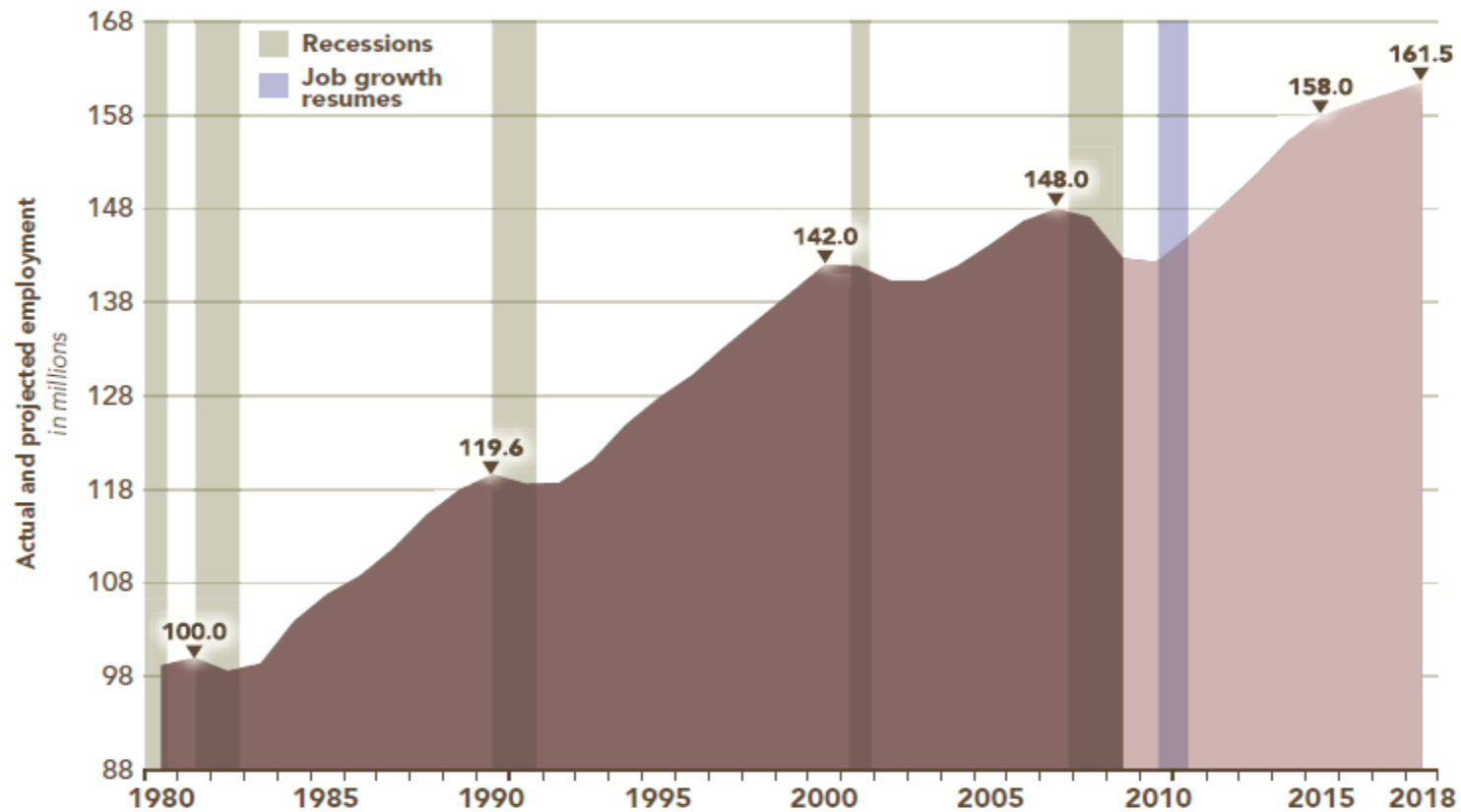


# Yes it is bad but like other recessions – growth will resume

FIGURE 1.3

Employment growth is set to resume in 2011, but the economy will not reach full employment until 2015. (*non-farm payroll employment, plus self-employed*)

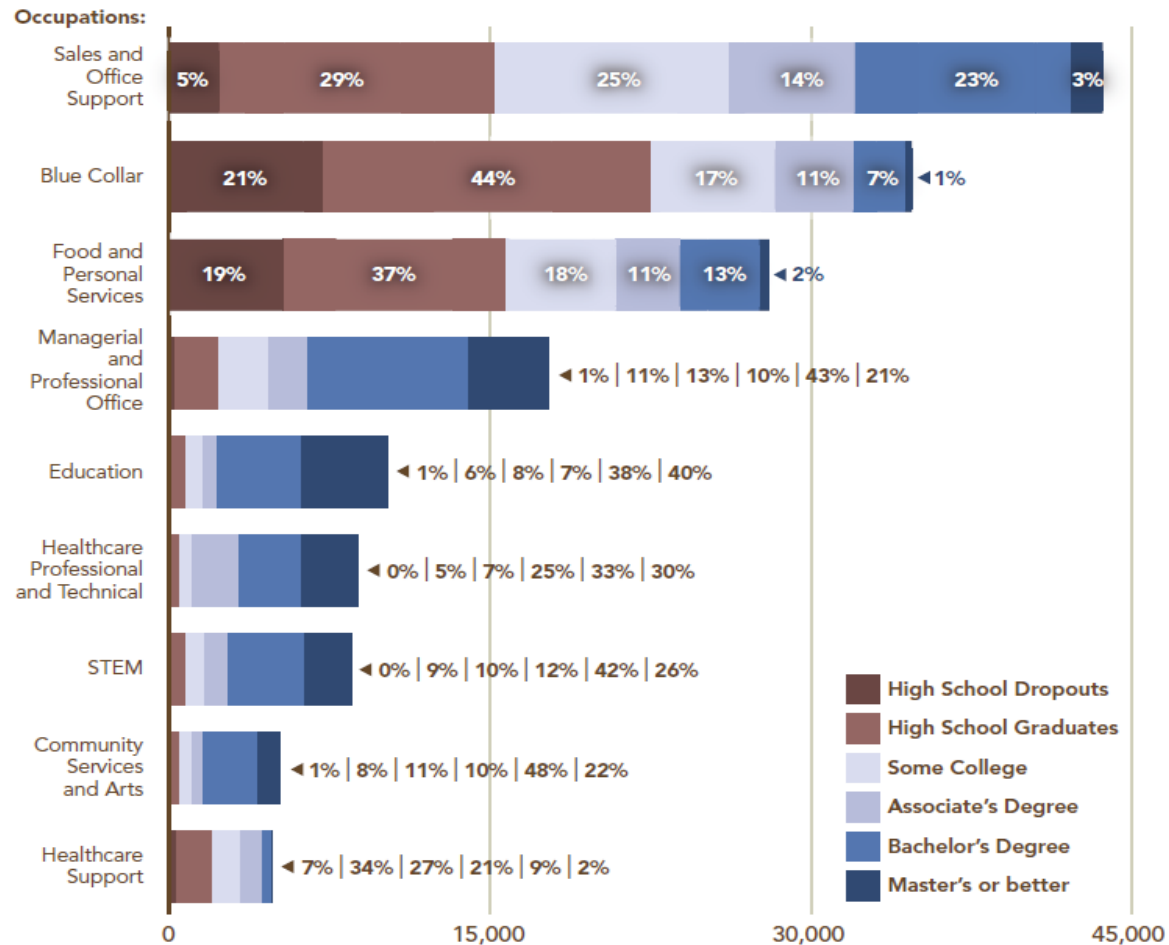
Source: Authors' analysis of March CPS data, various years; Center on Education and the Workforce forecast of educational demand through 2018.



# Fastest growing occupations use education most intensely

Occupational employment in 2018 and educational demand within occupations

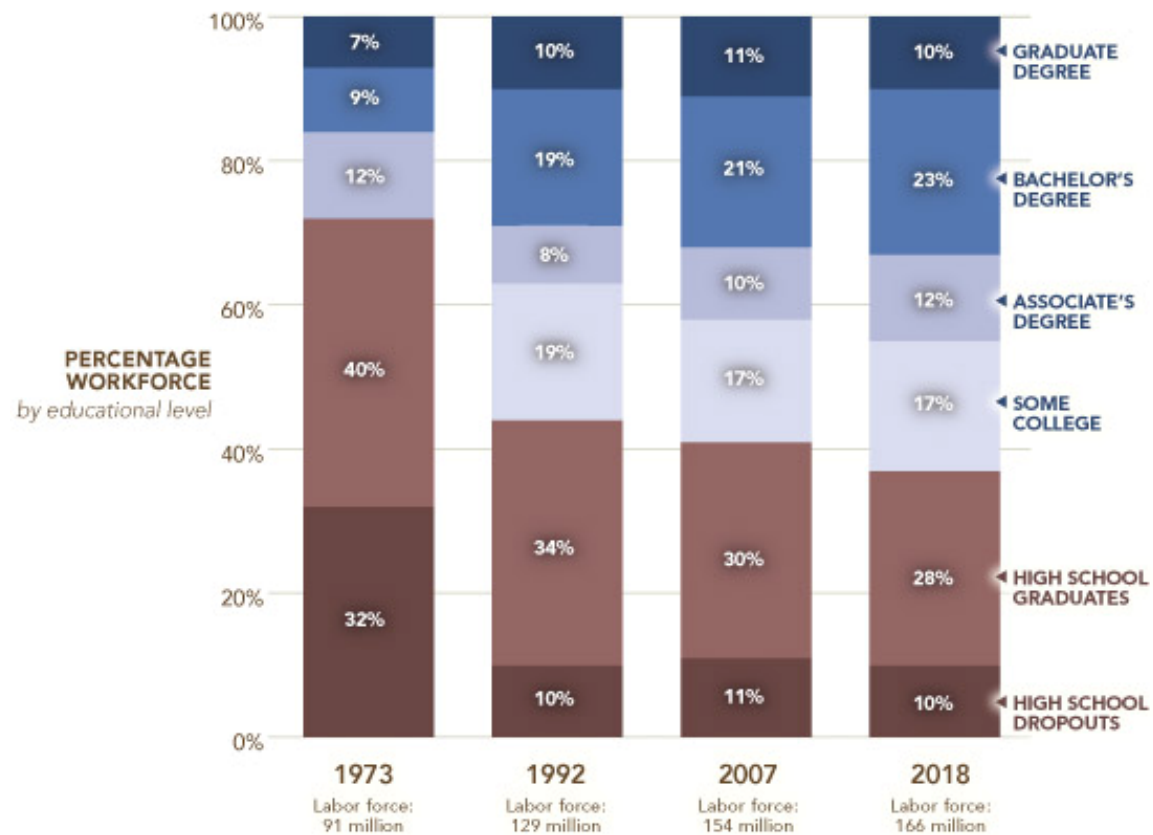
Source: Center on Education and the Workforce forecast of educational demand through 2018



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?

BY 2018, 30 MILLION NEW AND REPLACEMENT JOBS WILL REQUIRE SOME COLLEGE OR ABOVE

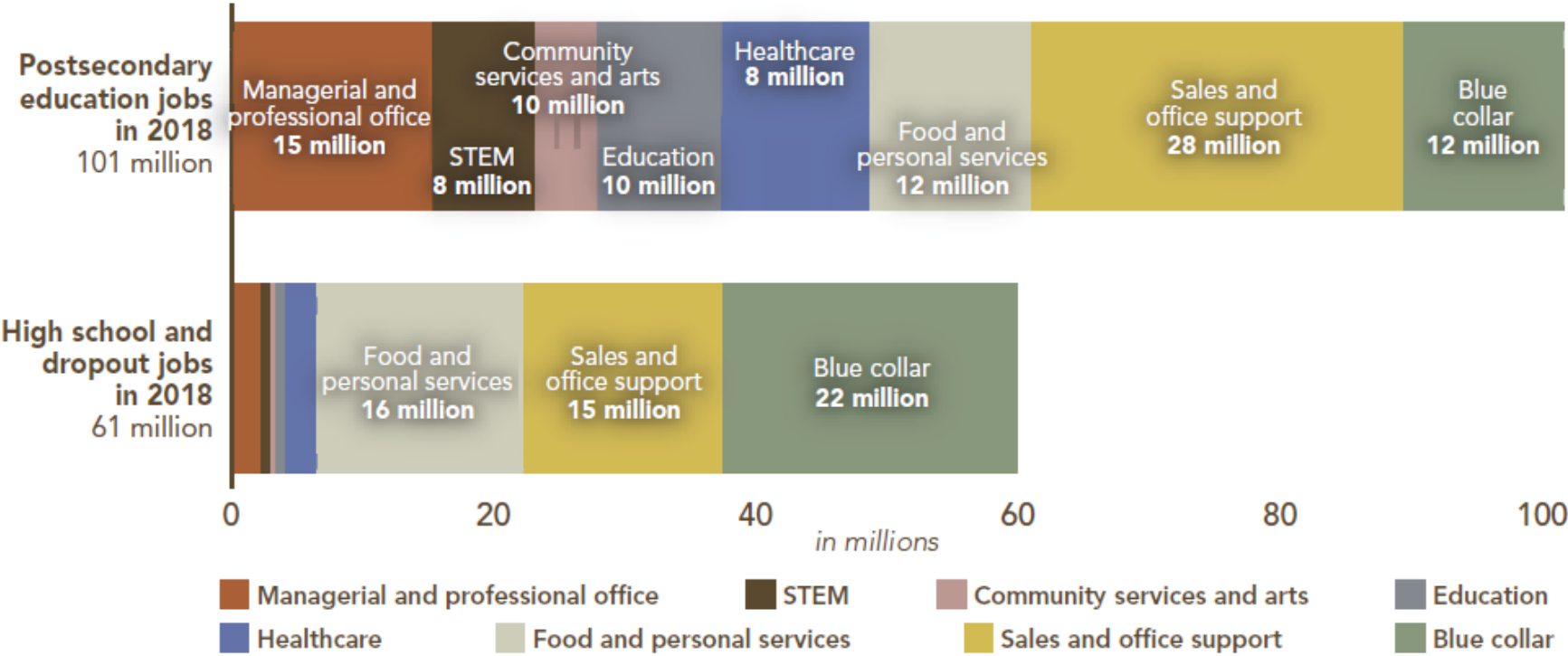


# Workers with high school and less will continue concentrate in declining occupations or those paying low wages; or both

FIGURE 1

Postsecondary education provides access to occupations across the economy, while workers with a high school diploma or less are largely limited to three occupational clusters that are either declining or pay low wages.

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

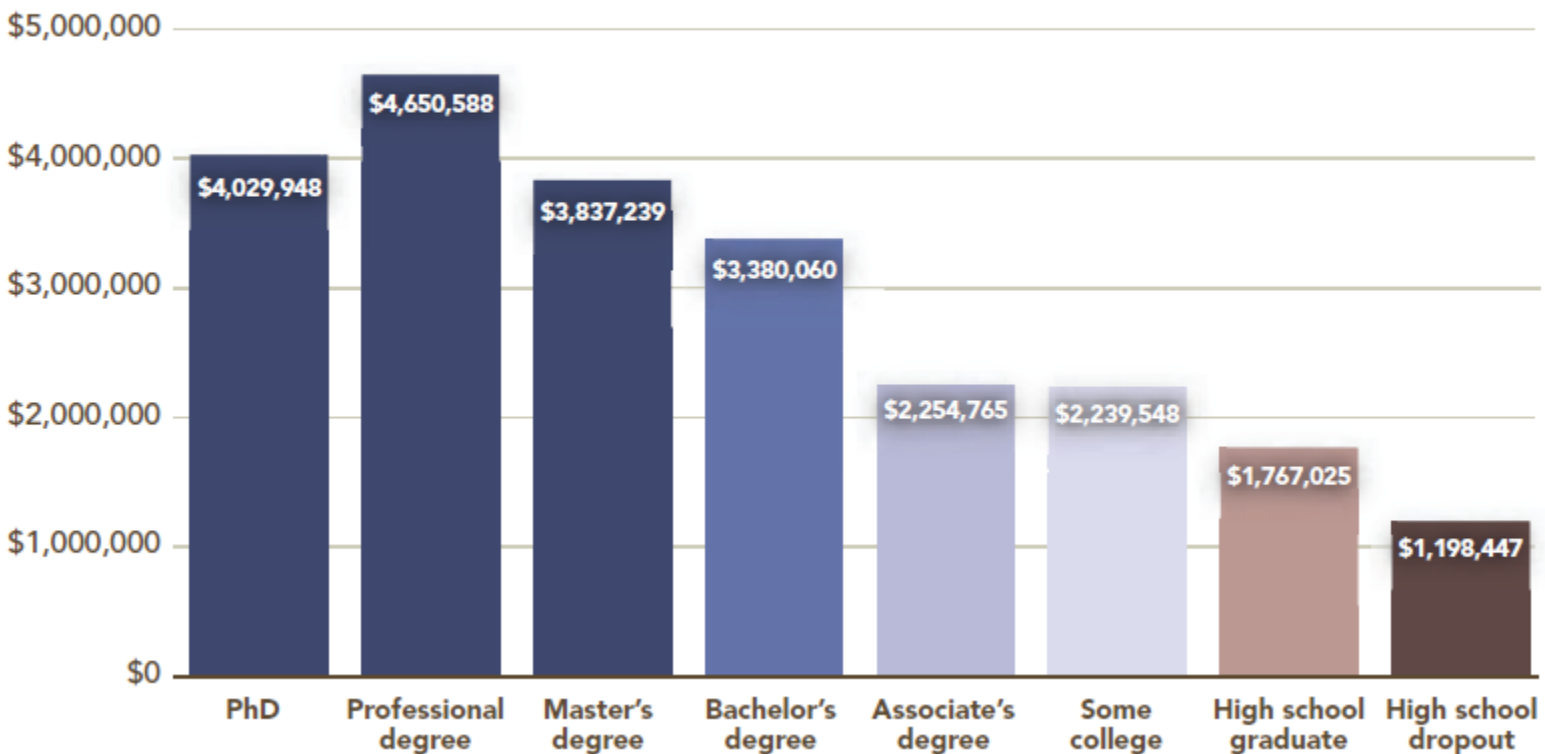


# Life-time earnings are much higher for workers with postsecondary education

FIGURE V

Estimated average lifetime earnings by education level. (in current dollars)

Source: Authors' analysis of March CPS data, 2008

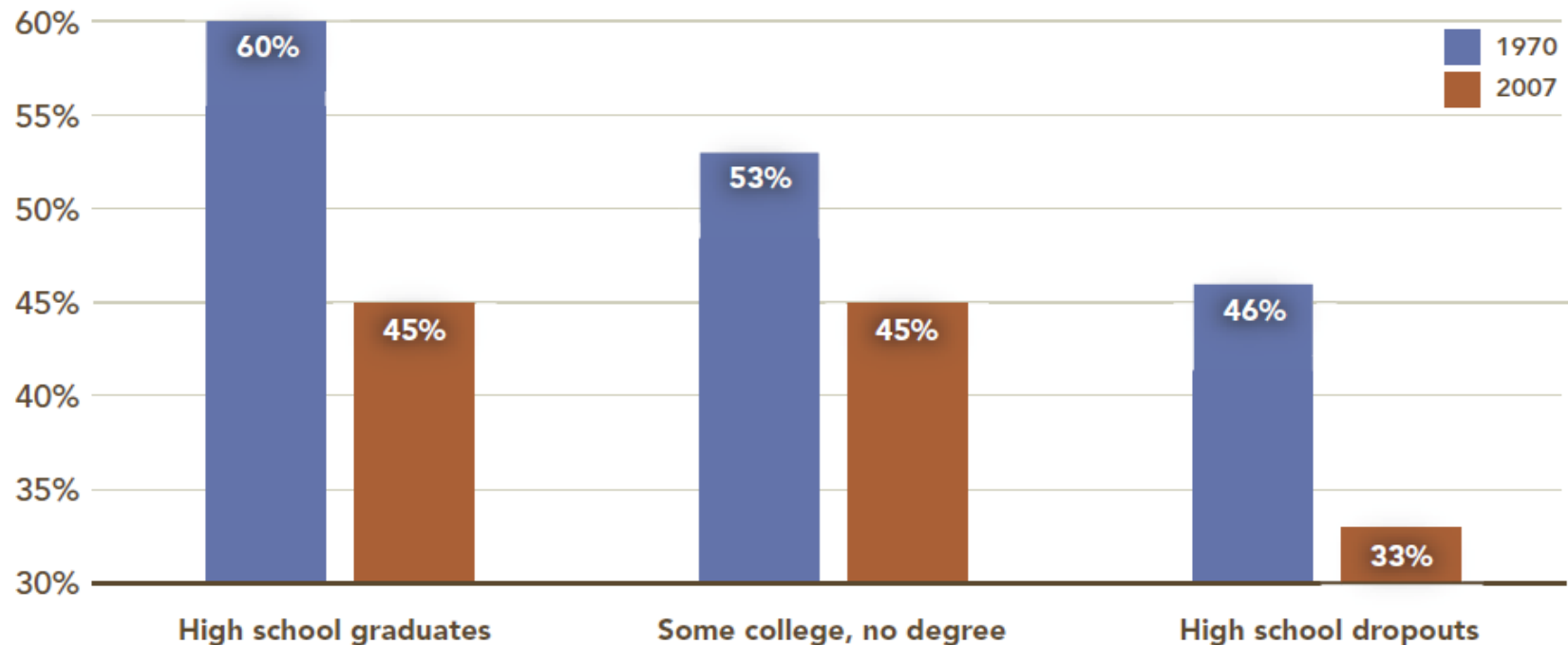


# Its just not our grandfather's high school economy anymore. Economic opportunity is now defined by postsecondary education

FIGURE 3

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

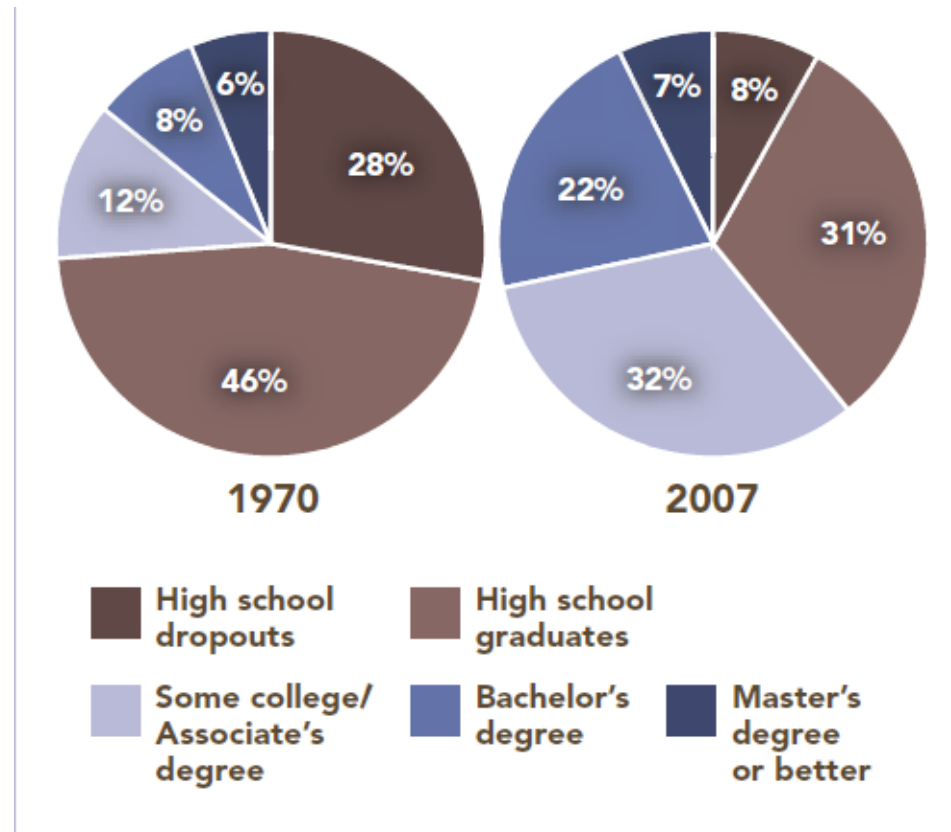
Source: Authors' analysis of March CPS data, various years; Center on Education and the Workforce forecast of educational demand to 2018



\*Middle class is defined as the middle four family income deciles (\$30,000-79,000).



# The high school economy has become the college economy





For more information

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<http://cew.georgetown.edu/jobs2018>

