



# WINNERS AND LOSERS: THE FUTURE OF WORK

Ruth Milkman, CUNY Graduate Center (USA)

*Symposium on New Social Inequalities and the Future of Work*

19 June 2018, The University of Queensland

# TECHNOLOGICAL THREATS TO JOBS AND TRADITIONAL FORMS OF EMPLOYMENT

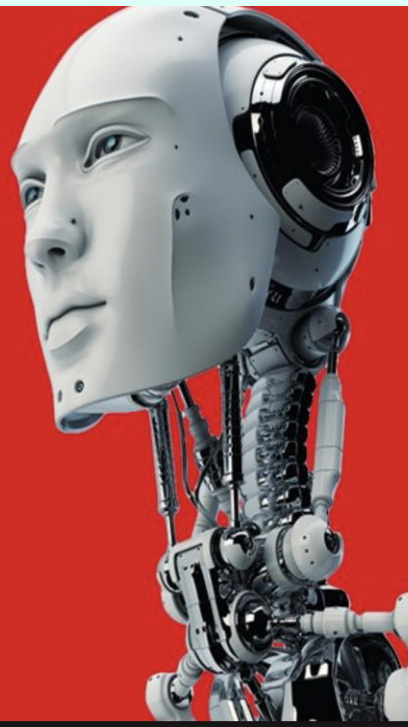
- Warnings abound that robotics and AI could soon lead to massive unemployment
- The platform-based “gig” economy and non-standard work are often presumed to be the key forces undermining employment security and traditional labor protections
- These ARE important developments to watch; they are disrupting labor markets, but they won’t create mass unemployment
- AI, robotics and “gig” economy employers (like Uber) are “shiny objects” that distract attention from less dramatic but more critical workplace transformations.



BE AFRAID, BE VERY AFRAID:  
THE ROBOTS ARE COMING  
AND THEY WILL DESTROY  
OUR LIVELIHOODS

# A JOBLESS FUTURE?

Anything you can do,  
AI can do better





# THE FUTURE OF EMPLOYMENT: HOW SUSCEPTIBLE ARE JOBS TO COMPUTERISATION?\*

Carl Benedikt Frey<sup>†</sup> and Michael A. Osborne<sup>‡</sup>

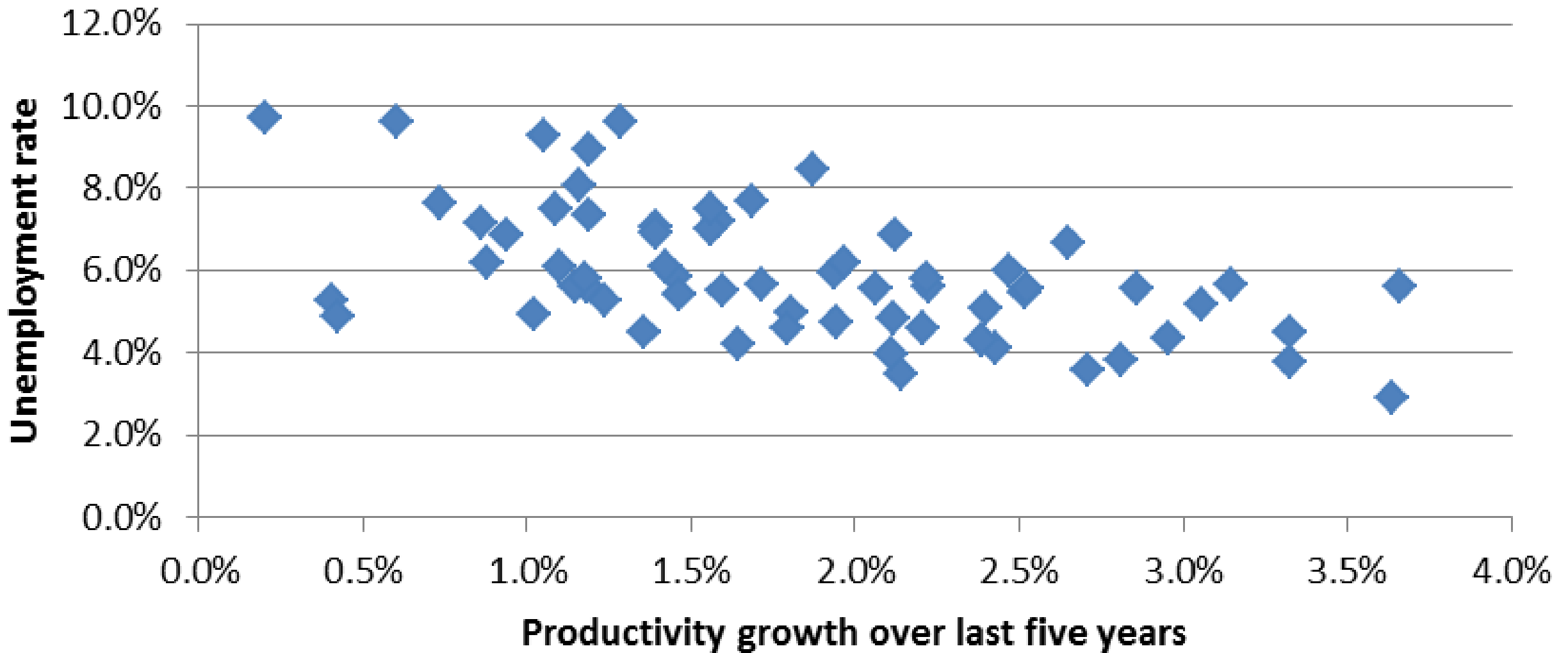
September 17, 2013

“We examine expected impacts of future computerisation on US labour market outcomes.... According to our estimates, about 47 percent of total US employment is at risk.”

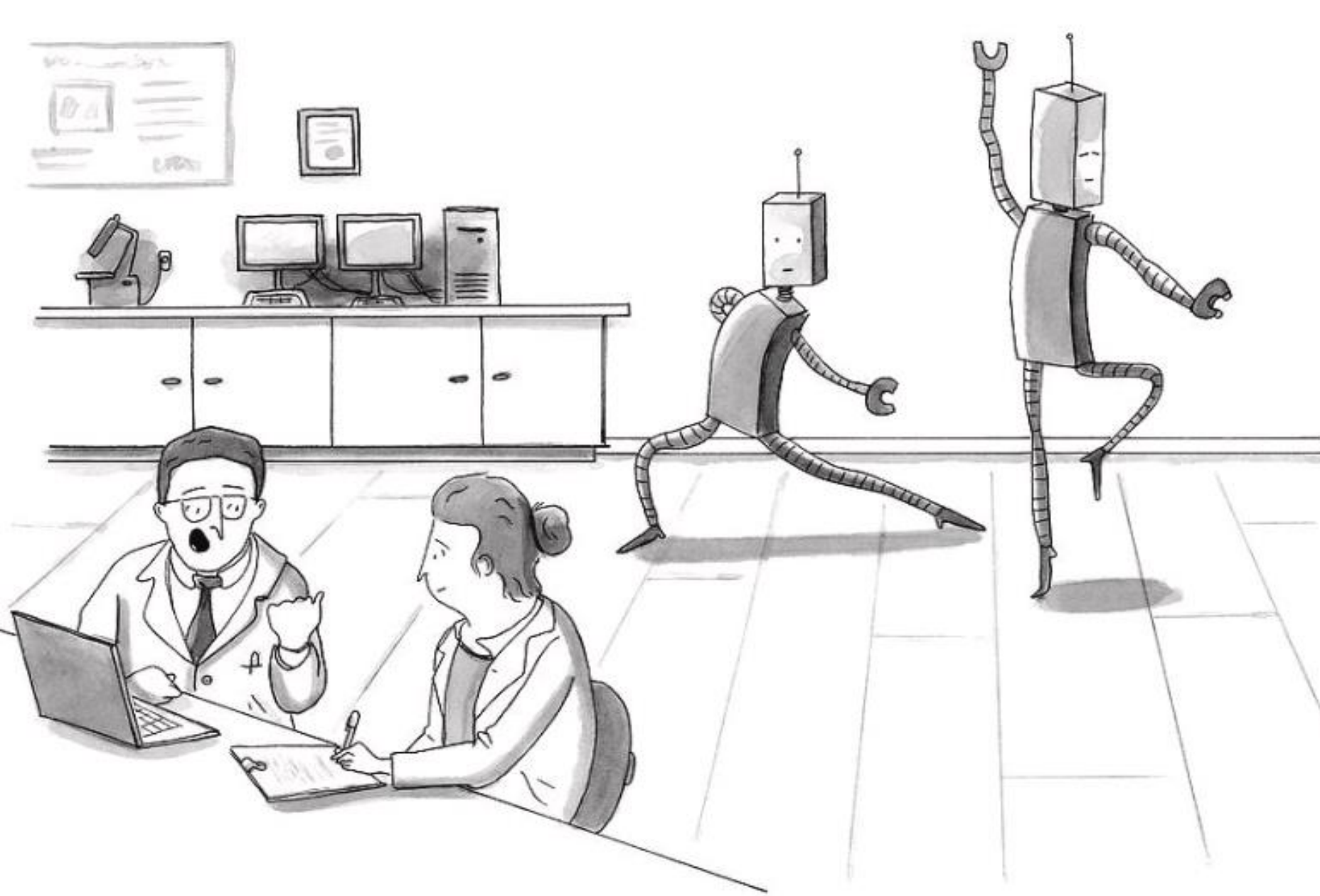
# BAD NEWS AND GOOD NEWS

- New technology (robots, AI, etc) WILL eliminate jobs in some sectors, and that WILL create economic hardship for many workers.
- But the likelihood that the OVERALL number of jobs will be reduced by new technologies is very very low.
- The history of automation is as long as the history of capitalism itself. In 1810, over 80% of U.S. workers were in agriculture; today less than 2% are. Workers moved into manufacturing (and later services).
- Other innovations – railways, electricity, earlier waves of computer-based automation – also raised alarms about mass unemployment.
- But instead these innovations raised productivity, making goods and services cheaper, which in turn increased demand - ultimately stimulating new forms of employment and economic growth.

# Faster technology adoption *not* associated with higher unemp rate, 1953-2016



- Technology is *always* changing the labor market, but most changes are gradual, and easily absorbed.
- Most automation is *partial*. Typically what gets automated is not a complete job, but specific tasks. An OECD study that re-analyzed the Frey-Osborne data, counting a job as vulnerable if 70% or more of the tasks in it can be automated, found 9% (vs. 47%) of jobs were vulnerable.
- Even in the most vulnerable sectors, change is likely to be phased in over time. For example, the 2 million non-autonomous tractor-trailers now on the roads may eventually be replaced by (far more expensive) autonomous trucks, but that won't happen overnight.



Navid

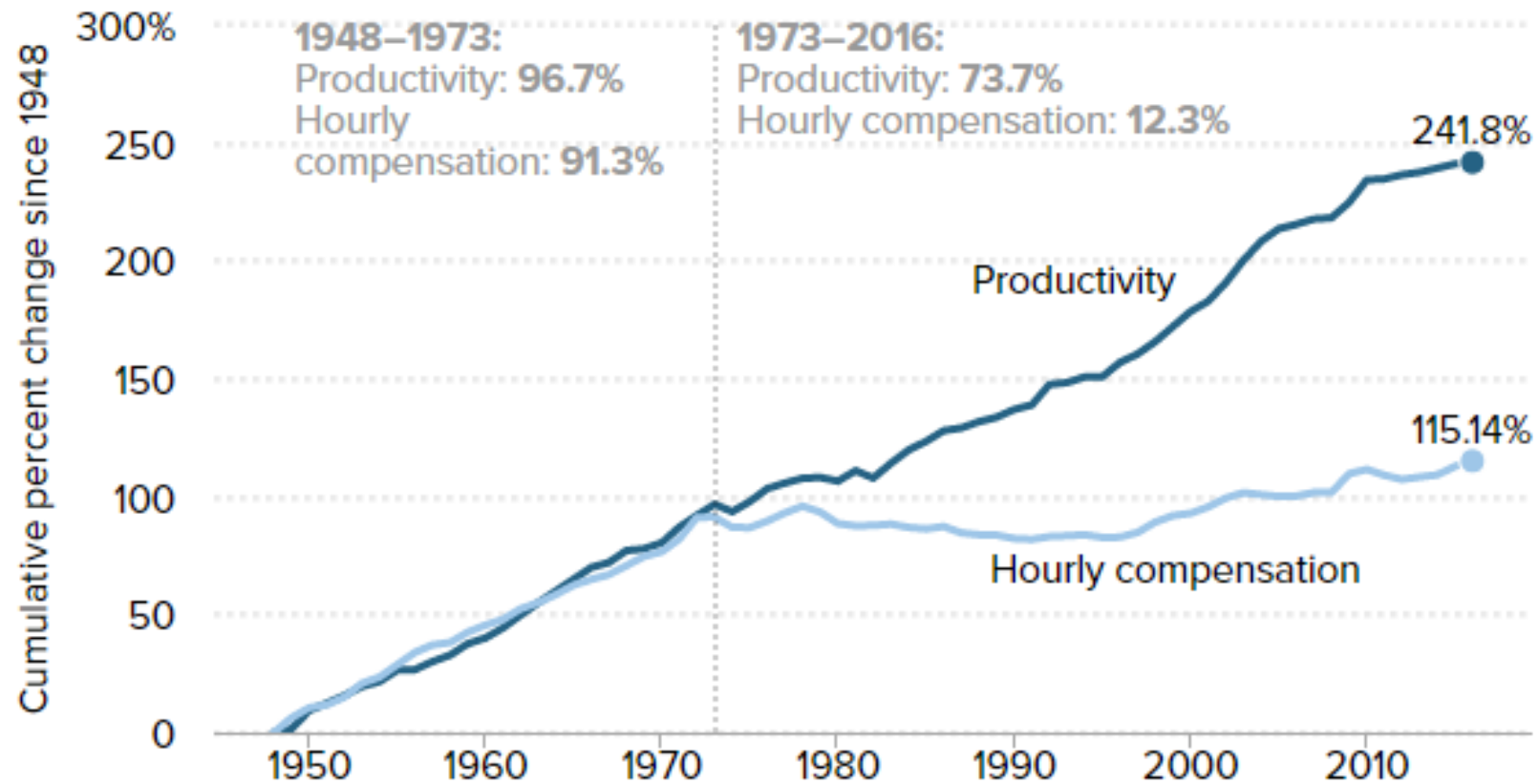
*“They don’t appear to want to take over. They just want to dance.”*



# NOR IS TECHNOLOGY DRIVING RISING INEQUALITY

**The gap between productivity and a typical worker's compensation has increased dramatically since 1973**

Productivity growth and hourly compensation growth, 1948–2016



# WHAT ABOUT THE "GIG" ECONOMY?

- The best data available are from Katz and Krueger 2016, who found a 50% rise –from 10.7% to 15.8% in the share of all U.S. workers in “alternative work arrangements” (AWA) from 2005 to 2015. This includes:
  - Temporary help agency workers
  - On-call workers
  - Contract company workers
  - Independent contractors/freelancers
  - Workers in the platform-based “gig economy”
- They show that ALL the net employment growth in that decade was in AWA
- But only 0.5% of all employed workers in 2015 were in the “gig economy.”
- A U.S. Bureau of Labor Statistics study released this month reported a DECLINE in the share of the labor force in non-platform AWA between 2005 and 2017
- In general, the data on these shifts is limited in both quality and quantity.

# THE REAL ISSUE FOR THE FUTURE OF WORK: POWER RELATIONS BETWEEN WORKERS & EMPLOYERS

- Rise in subcontracting, both domestic and global, driven by financialization and firms' focus on "core competencies" under pressure from Wall Street. (Weil's "fissured workplace")
- Risk-shifting (Hacker) from large firms to franchisees/subcontractors, to reduce wage bill; often inducing cutthroat competition — in contrast to internal labor markets in mid-20<sup>th</sup> century firms.
- Risk-shifting directly to workers, converting many "employees" to "independent contractors" (unprotected by basic labor/employment laws).
- These changes are part of a larger POWER SHIFT from labor to capital, driven by the 3 Ds.

# DEINDUSTRIALIZATION

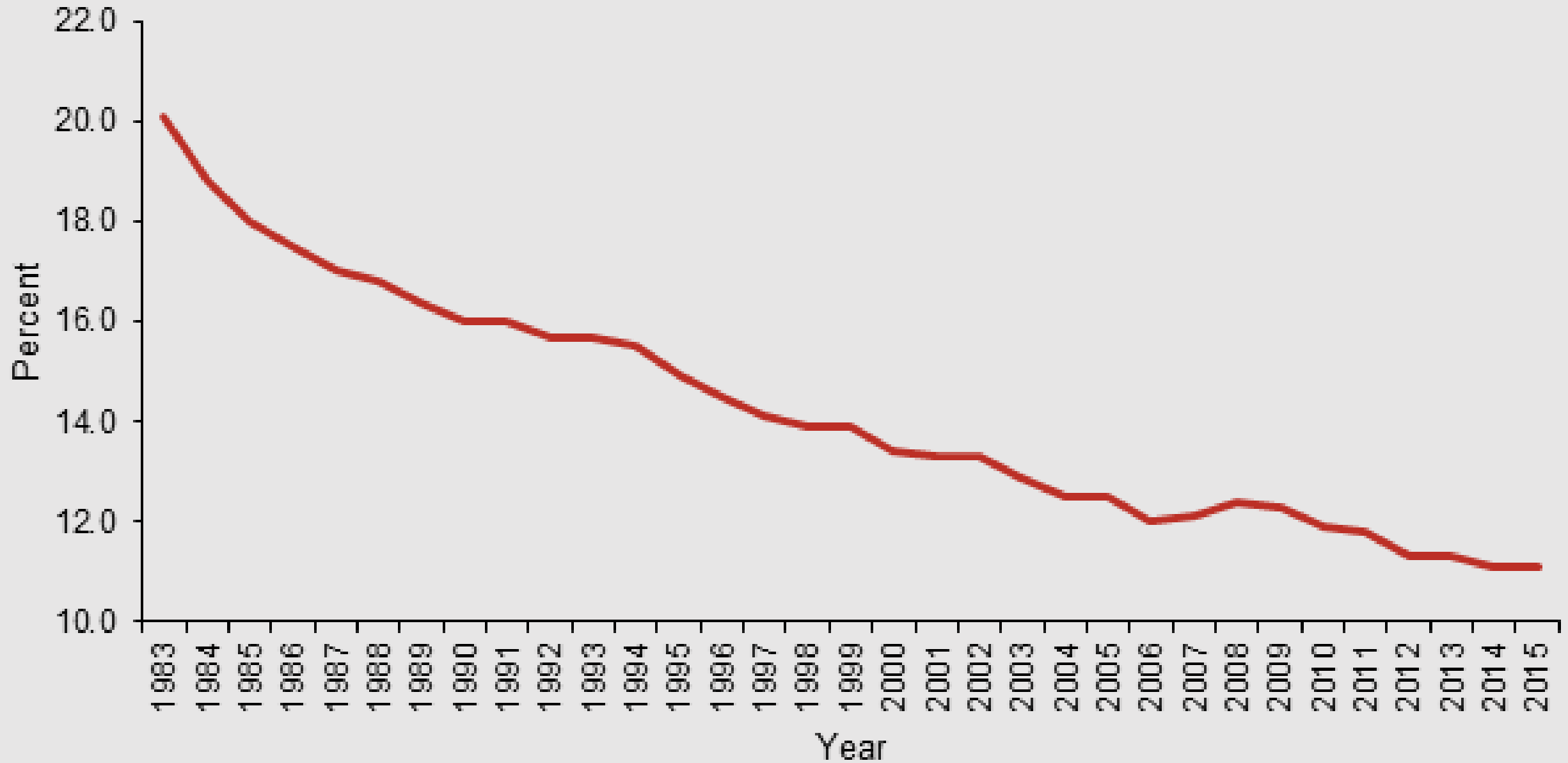
- As transportation and communication costs fell starting in the 1970s, employers could more easily shift manufacturing jobs (and later some service jobs) from wealthy to developing countries.
- At the same time, new technologies led to rising productivity and reduced employment (worldwide) in the manufacturing that remained
- U.S. manufacturing output sextupled since 1945, while manufacturing employment declined sharply. Job growth is now concentrated in services, where many jobs are poorly paid and non-union.



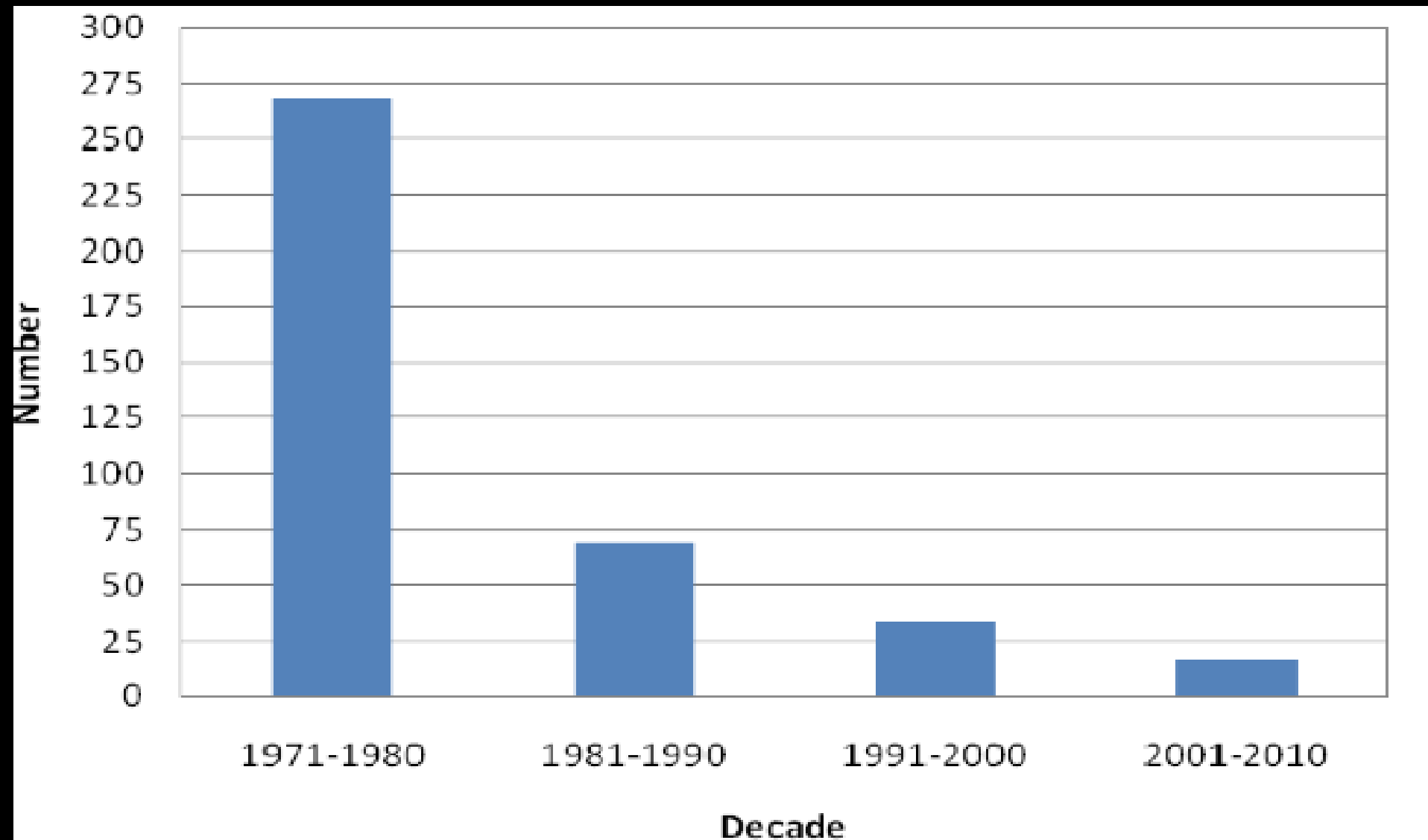
# DEUNIONIZATION

- Employers systematically “avoided” unionization in nonunion settings starting in the late 1970s.
- Where unions were already present, employers actively sought to weaken or eliminate them in this period.
- U.S. labor law became dysfunctional, and in practice, increasingly tilted in favor of employers.
- Strikes declined dramatically as hiring “replacement workers” became standard practice. Many of the strikes that did occur were management-initiated.
- By 2017, only 10.7% of all U.S. workers, and 6.5% in the private sector, were union members.

# Figure 1: Union Membership Rate



# AVERAGE ANNUAL MAJOR U.S. WORK STOPPAGES, BY DECADE



# DEREGULATION

- The late 1970s launched a wave of deregulation in many key industries, including transportation (trucking, airlines), telecommunications, banking/finance.
- Privatization also took off in this period (another form of deregulation)
- State capacity to enforce labor and employment regulations was also systematically reduced.

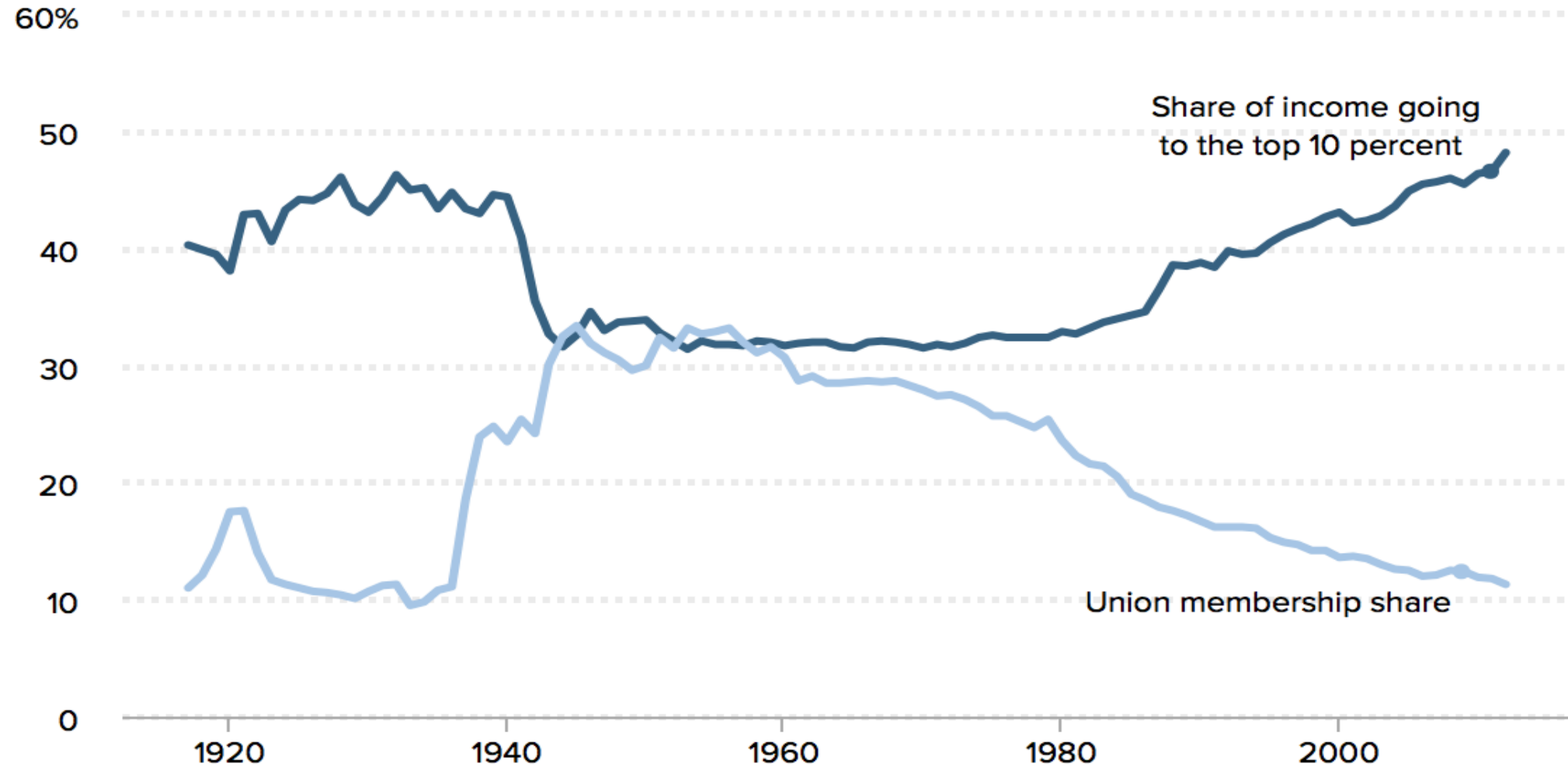


## RESULTS OF THE 3DS

- Radically restructured U.S. labor market, with “missing middle,” destroying well-paid jobs, especially for the non-college educated.
- Skyrocketing inequality and rising precarity.
- Downward pressure on wages and benefits.
- Increased demand for low-wage labor, often supplied by immigrants from the global South.

# Decline in union membership mirrors income gains of top 10%

Union membership and share of income going to the top 10%, 1917–2012



# TECHNOLOGY AND WORKPLACE POWER

Changes in technology can enhance employer power.  
For example:

- Technology that allows for micro-tracking of workers
- Employers asserting that workers connected via digital platforms are not employees
- Technology that allows for just-in-time scheduling
- But it's not necessarily all anti-worker:
  - Online job applications may *reduce* discrimination in hiring
  - Online platforms can help to organize previously isolated workers, like domestic workers.

# WINNERS AND LOSERS

- The “Skills-Based Technological Change” hypothesis posits that less-educated workers will be the main losers, as new technologies can most easily replace the least skilled jobs.
- But the evidence for SBTC is weak, and many skilled jobs (lawyers, x-ray technicians) are also being automated
- Inequality between non-college-educated and college-educated workers HAS skyrocketed, but technological change is at best a minor factor
- Key sectors where job growth is concentrated, e.g. carework, rely largely on less-educated workers, and are not likely to be automated in the foreseeable future.
- Gender, race/ethnicity, immigration status and age inequalities remain highly salient features of labor markets, and help shape the determination of “winners” and “losers.”



# GENDER SEGREGATION PERSISTS (ESPECIALLY IN NON-PROFESSIONAL JOBS) AND INTERACTS WITH WORKPLACE TRANSFORMATION

- De-industrialization disproportionately affected male workers in recent decades; female-dominated service jobs were less affected.
- Private-sector de-unionization also affected men more than women, who are overrepresented in the still highly unionized public sector; nearly eliminating the gender gap in unionization rates in the U.S.
- Of the top 15 occupations projected to grow most in the next decade, 11 are female-dominated.
- 11 have annual salaries less than \$35,000 and do not require college education
- These 15 occupations are unlikely candidates for automation

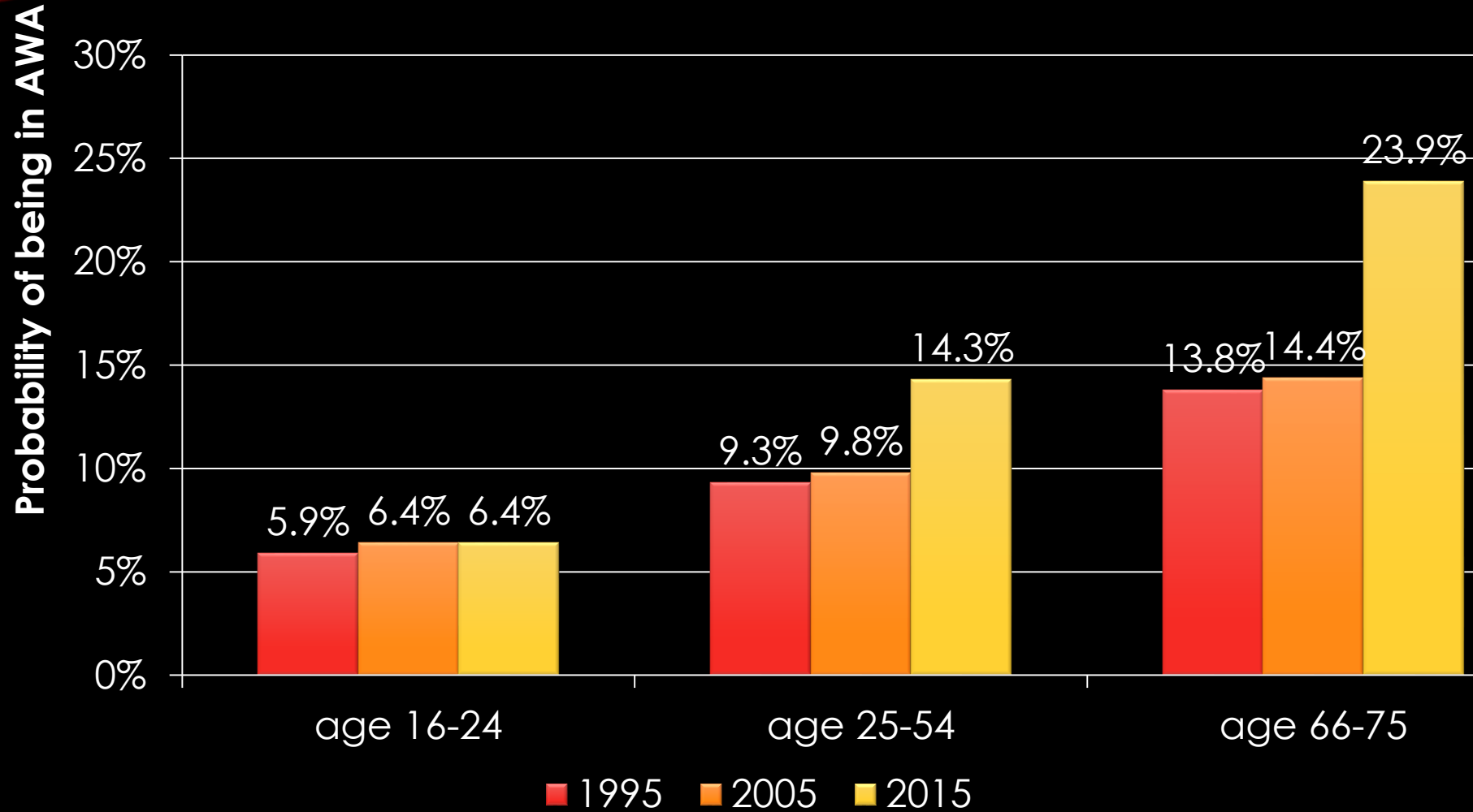
# OCCUPATIONS WITH THE MOST JOB GROWTH, PROJECTED TO 2026 (1000S)

Occupation	2016 employment	2026 employment	Percent change	Median annual wage in 2016
Personal care aides	2,016	2,770	37.4%	\$21,920
Food preparation & serving (incl. fast food)	3,452	4,032	16.8%	\$19,440
Registered nurses	2,955	3,392	14.8%	\$68,450
Home health aides	912	1,337	46.7%	\$22,600
Software developers	831	1,084	30.5%	\$100,080
Janitors & cleaners (not incl. maids & housekeepers)	2,385	2,618	9.8%	\$24,190
General and operations managers	2,263	2,469	9.1%	\$99,310
Laborers & material movers, hand	2,628	2,829	7.6%	\$25,980
Medical assistants	634	819	29.1%	\$31,540
Waiters and waitresses	2,601	2,783	7.0%	\$19,990
Nursing assistants	1,510	1,674	10.9%	\$26,590
Construction laborers	1,217	1,370	12.6%	\$33,430
Cooks, restaurant	1,232	1,377	11.8%	\$24,140
Accountants and auditors	1,398	1,538	10.0%	\$68,150
Customer service representatives (& call centers)	2,785	2,921	4.9%	\$32,300

# DEMOGRAPHICS OF “ALTERNATIVE WORK ARRANGEMENTS”

- AWA's share is higher and growing faster among women than men:
  - for women (all ages) it doubled - from 8.3% in 2005 to 17% in 2015
  - for men (all ages) it grew more modestly - from 11.5% to 14.7%.
- AWA has a sharp age gradient: its prevalence is highest and growth fastest for older workers, followed by “prime-age” workers. Growth is nearly flat for the youngest group (age 16-24).
- Young workers (16-24) are more likely to work part-time.
- Workers of color (African Americans and Latinos) are more likely to be in temporary agency jobs than white workers.
- Low-wage immigrants, especially the unauthorized, are concentrated in the informal sector, another type of non-standard work. Legal violations are widespread, payment “off the books” is commonplace, and much of this work is under the radar of official statistics and labor market surveys.

# AGE AND "ALTERNATIVE WORK ARRANGEMENTS"



Data from Katz and Krueger 2016



# AWAS HAVE HELPED STIMULATE “ALT-LABOR” ORGANIZING

- “Worker centers” – now 200+ in the U.S. – organize and advocate in precarious, casualized occupations like day labor and domestic work, that were never unionized, as well as in sectors that unions have abandoned or neglected, like restaurants, retail.
- Also in sectors where workers are nominally self-employed (and thus not covered by labor law) like taxi driving and street vending
- Many focus “naming and shaming” campaigns on wage theft and other legal violations, also engage in immigrant rights advocacy as well.
- More success at the discursive level than practically, but some progress on the ground
- Initially greeted skeptically by traditional unions, but now supported by many of them.
- But face major challenges involving resources/scale, sustainability, and limited to Blue states and cities.

# OTHER LABOR MOVEMENT RESPONSES

- Traditional unions refuse to die, and a few are adopting “alt-labor” tactics, as in the SEIU’s “Fight for \$15.”
- Another set of organizing efforts makes demands on the state rather than on employers (Paid Sick Days, minimum wage improvements)
- Millennial generation professionals are increasingly unionizing – most notably on-line journalists, adjunct faculty, and teachers
- Even in its weakened state, organized labor remains the only large-scale organized force challenging growing inequality
- The critical challenge for the future is to find restore worker power, not to try to stop automation or alternative work arrangements

# PUBLIC POLICY WISH LIST

- For those who face technological displacement:
  - Job training
  - Safety net, possibly including UBI
- For workers generally, a “Good Jobs Agenda”:
  - Policies that facilitate unionization and alt-labor organizing
  - Improving labor standards and enforcement of existing standards
  - Promoting full employment
  - Managing globalization so that it doesn’t undermine workers’ leverage
  - Progressive tax policies
  - Etc.