Pew Research Center polling on public attitudes towards the future (and present) of work

Aaron Smith
Associate Director, Research
Who we are

• Non-profit research center performing data-driven social science research
• Independent subsidiary of the Pew Charitable Trusts
• Non-advocacy, don’t make policy recommendations or give advice
• Provide facts and data that enrich the public dialog around important issues
• Founded on public opinion polling, but methods include demographic research, content analysis and many other types of data analysis
• Topical areas include political opinions/attitudes, social trends, global attitudes, internet/science/tech (that’s my team), and more
• Have been studying the social impact of the internet and other digital technologies since early 2000, and tracking various aspects of Americans’ use of social media since 2005
VIEWS FROM TODAY: A FEW NOTES ABOUT WORKERS’ ATTITUDES TOWARDS EMPLOYMENT TODAY
Job market has been increasingly rewarding high levels of preparation, social/analytic skills

Workers see job environment as more challenging than in past, with more stresses to come – & constant training as a necessity

% saying each aspect of work is ___ compared with 20 to 30 years ago and will be ___ 20 to 30 years from now

Need to improve skills

<table>
<thead>
<tr>
<th>Less often</th>
<th>About the same</th>
<th>More often</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compared with past</td>
<td>9</td>
<td>22</td>
</tr>
<tr>
<td>Anticipating the future</td>
<td>5</td>
<td>22</td>
</tr>
</tbody>
</table>

54% think training and skills development throughout their career will be essential, another 33% think it will be important

Workers’ top successful traits: how to use tech, but also soft skills and training

<table>
<thead>
<tr>
<th>Trait</th>
<th>Extremely important</th>
<th>Very important</th>
<th>Somewhat important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Having a detailed understanding of how to use computer technology</td>
<td>40</td>
<td>45</td>
<td>12</td>
</tr>
<tr>
<td>Being able to work with people from many different backgrounds</td>
<td>35</td>
<td>49</td>
<td>12</td>
</tr>
<tr>
<td>Training in writing and communicating</td>
<td>37</td>
<td>48</td>
<td>13</td>
</tr>
<tr>
<td>Access to training to keep skills up to date</td>
<td>33</td>
<td>49</td>
<td>16</td>
</tr>
</tbody>
</table>

Workers in the U.S. place much of the burden on themselves for keeping skills up to date

<table>
<thead>
<tr>
<th>Group</th>
<th>A lot of</th>
<th>Some</th>
<th>Only a little</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals themselves</td>
<td>72%</td>
<td>22%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Public K-12 education system</td>
<td>60%</td>
<td>28%</td>
<td>7%</td>
<td>3%</td>
</tr>
<tr>
<td>Colleges and universities</td>
<td>52%</td>
<td>35%</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>Employers</td>
<td>49%</td>
<td>39%</td>
<td>8%</td>
<td>3%</td>
</tr>
<tr>
<td>State governments</td>
<td>40%</td>
<td>35%</td>
<td>15%</td>
<td>9%</td>
</tr>
<tr>
<td>Federal government</td>
<td>35%</td>
<td>34%</td>
<td>18%</td>
<td>11%</td>
</tr>
</tbody>
</table>

The current generation of workforce tech has benefited certain workers more than others

% of workers in each group who say that technology has generally...

- Made their work more interesting
- Increased their opportunities for advancement

See same trends when we ask about specific tools

% of workers in each group who say these technologies have had a ___ impact on their job or career

<table>
<thead>
<tr>
<th>Technology</th>
<th>College grad+</th>
<th>Some college</th>
<th>HS or less</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word processing or spreadsheet software</td>
<td>2</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Smartphones</td>
<td>10</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td>Email or social media</td>
<td>16</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td>Software that manages daily schedules</td>
<td>5</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>Customer self-service technologies</td>
<td>9</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>Industrial robots</td>
<td>7</td>
<td>18</td>
<td>19</td>
</tr>
</tbody>
</table>

The role of digitally-mediated “gig work”

As of 2016...

• 8% of Americans had earned money in the last year from an online job/work platform (mostly online tasks)
• 18% had earned money by selling things online (mostly used or second-hand goods)

Two types of job/work platform workers

• One group consists largely of relatively well-off people doing mostly online tasks for fun or to kill time
• The other group has lower levels of income/education, does mostly physical tasks, is much more reliant on income they earn, and is more motivated by things like a need to control own schedule, or lack of other jobs

Source: Survey conducted July 12-Aug. 8, 2016
Also some key differences within labor platforms

% of U.S. adults who...

- Earned money in the last year from online job platforms
  - 8%
  - 92% did not earn money in this way

Of that share, % saying that income is...

- Essential or important: 56%
- Nice to have: 42%

% who do...

- Online tasks: 49%
- Ride hailing: 32%
- Cleaning/laundry: 25%

% who have these motivations

- Need to control own schedule: 45%
- Just for fun or for something to do: 28%
- Lack of other jobs where they live: 25%
- To gain work experience: 24%

% who...

- Have household incomes under $30K: 57%
- Have high school degrees or less: 52%
- Think of themselves as employees of the site they use to find work: 39%
- Are employed full time: 36%
- Are white: 36%

Source: Survey conducted July 12-Aug. 8, 2016
Public sees certain benefits to tech-enabled gig jobs, but also expresses concerns (as well as uncertainty)

<table>
<thead>
<tr>
<th>Statement</th>
<th>No</th>
<th>Yes</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are great for people who want flexible work schedules</td>
<td>6</td>
<td>68</td>
<td>26</td>
</tr>
<tr>
<td>Are good for older people who don't work full time</td>
<td>10</td>
<td>54</td>
<td>36</td>
</tr>
<tr>
<td>Are good entry-level jobs for those entering workforce</td>
<td>21</td>
<td>37</td>
<td>41</td>
</tr>
<tr>
<td>Let companies take advantage of workers</td>
<td>32</td>
<td>23</td>
<td>46</td>
</tr>
<tr>
<td>Place too much financial burden on workers</td>
<td>29</td>
<td>21</td>
<td>50</td>
</tr>
<tr>
<td>Are the kind of jobs people can build careers out of</td>
<td>41</td>
<td>16</td>
<td>43</td>
</tr>
</tbody>
</table>

Source: Survey conducted July 12-Aug. 8, 2016
VIEWS OF TOMORROW: PREDICTIONS AND ATTITUDES TOWARDS ADVANCES IN WORKFORCE AUTOMATION
Elite views of automation impact on jobs are varied to say the least.
Beyond elites, how do average Americans view this issue?

Methodology

• Nationally representative survey of 4,135 U.S. adults, conducted May 1-15, 2017 using our American Trends Panel

• Examine how automation (and technology more broadly) is currently impacting American workers

• Overall goals of survey were to examine...
  • Awareness of these developments
  • Attitudes and expectations towards trends in automation
  • Primary hopes and fears around these developments
  • Receptiveness towards common policies and regulations
  • Sense that their own job is at risk

• Not predictive → paints an early picture of how Americans are feeling at the dawn of these new developments
A share of Americans are already feeling the impact – particularly in reduced pay/hours

% in each group who say they have ___ because of automation of their job duties by their employer

The framing scenario for our “future of automation and jobs” questions

“New developments in robotics and computing are changing the nature of many jobs. Today, these technologies are mostly being used in certain settings to perform routine tasks that are repeated throughout the day. But in the future, robots and computers with advanced capabilities may be able to do most of the jobs that are currently done by humans today.”
Mixed levels of awareness, sense that this outcome is likely

% of U.S. adults who say they have heard, read or thought ___ about the idea that robots and computers may be able to do many jobs currently done by humans

- A lot: 24
- A little: 61
- Nothing at all: 14

% who say this concept seems ___ realistic

- Extremely: 20
- Somewhat: 57
- Not very: 17
- Not at all: 5

Much more worry than enthusiasm about this concept

### Top expected outcomes: greater inequality, no new job explosion

#### Possible Negative Outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>No, not likely</th>
<th>Yes, likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inequality between rich and poor will be much worse than today</td>
<td>23%</td>
<td>76%</td>
</tr>
<tr>
<td>People will have a hard time finding things to do with their lives</td>
<td>36%</td>
<td>64%</td>
</tr>
</tbody>
</table>

#### Possible Positive Outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>No, not likely</th>
<th>Yes, likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economy as a whole will be much more efficient</td>
<td>56%</td>
<td>43%</td>
</tr>
<tr>
<td>People can focus less on work and more on what really matters</td>
<td>57%</td>
<td>42%</td>
</tr>
<tr>
<td>Humans would find jobs more meaningful and appealing</td>
<td>59%</td>
<td>40%</td>
</tr>
<tr>
<td>Economy will create many new, better-paying human jobs</td>
<td>75%</td>
<td>25%</td>
</tr>
</tbody>
</table>

Side note: job loss concerns also prominent re: driverless vehicles

### POSSIBLE POSITIVE OUTCOMES

<table>
<thead>
<tr>
<th>Outcome</th>
<th>No, not likely</th>
<th>Yes, likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elderly and disabled people will be able to live more independently</td>
<td>25%</td>
<td>75%</td>
</tr>
<tr>
<td>There would be much less traffic in major cities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### POSSIBLE NEGATIVE OUTCOMES

<table>
<thead>
<tr>
<th>Outcome</th>
<th>No, not likely</th>
<th>Yes, likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Many people who drive for a living would lose their jobs</td>
<td>19%</td>
<td>81%</td>
</tr>
</tbody>
</table>

### OUTCOMES THAT ARE NEITHER POSITIVE NOR NEGATIVE

<table>
<thead>
<tr>
<th>Outcome</th>
<th>No, not likely</th>
<th>Yes, likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most people would never learn how to drive on their own</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>Owning a car would become much less important to people</td>
<td>56%</td>
<td>43%</td>
</tr>
</tbody>
</table>

Strong support for policies that limit impact of automation

- If machines were limited to doing dangerous or unhealthy jobs:
  - Strongly oppose: 11
  - Oppose: 3
  - Favor: 38
  - Strongly favor: 47

- If people could pay extra to interact with a human when buying something:
  - Strongly oppose: 24
  - Oppose: 13
  - Favor: 41
  - Strongly favor: 22

- If the govt offered all Americans a guaranteed income that would meet their basic needs:
  - Strongly oppose: 21
  - Oppose: 18
  - Favor: 30
  - Strongly favor: 31

- If the govt created a national service program that would pay people to perform tasks:
  - Strongly oppose: 29
  - Oppose: 12
  - Favor: 37
  - Strongly favor: 21

Strong partisan differences on some – but not all – of these policies and regulations


% in each group who favor the following policies in the event that robots/computers can do many human jobs...

- Machines do dangerous or unhealthy jobs only
  - Democrat/lean Dem: 85%
  - Republican/lean Rep: 86%

- All citizens guaranteed a basic income
  - Democrat/lean Dem: 77%
  - Republican/lean Rep: 38%

- National service program for displaced workers
  - Democrat/lean Dem: 66%
  - Republican/lean Rep: 46%

- People can pay extra to interact with a human
  - Democrat/lean Dem: 63%
  - Republican/lean Rep: 61%
Public split on who should be responsible for displaced workers

But is more supportive on limits to # of jobs replaced

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Should be limits on # of jobs businesses can replace with machines, even if they are better and cheaper than humans</th>
<th>Businesses are justified in replacing human workers if machines can do job better and at lower cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. adults</td>
<td>58</td>
<td>41</td>
</tr>
<tr>
<td>College grad+</td>
<td>41</td>
<td>59</td>
</tr>
<tr>
<td>Some college</td>
<td>59</td>
<td>40</td>
</tr>
<tr>
<td>High school or less</td>
<td>70</td>
<td>27</td>
</tr>
<tr>
<td>Republican/lean Rep</td>
<td>54</td>
<td>44</td>
</tr>
<tr>
<td>Democrat/lean Dem</td>
<td>60</td>
<td>39</td>
</tr>
</tbody>
</table>

Certain occupations viewed as more at risk than others – but “my own job” is seen as relatively safe

<table>
<thead>
<tr>
<th>Job</th>
<th>Not at all</th>
<th>Not very</th>
<th>Somewhat</th>
<th>Very</th>
<th>NET likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast food worker</td>
<td>6%</td>
<td>17%</td>
<td>39%</td>
<td>38%</td>
<td>77%</td>
</tr>
<tr>
<td>Insurance claims processor</td>
<td>7%</td>
<td>27%</td>
<td>44%</td>
<td>22%</td>
<td>65%</td>
</tr>
<tr>
<td>Software engineer</td>
<td>12%</td>
<td>35%</td>
<td>38%</td>
<td>15%</td>
<td>53%</td>
</tr>
<tr>
<td>Legal clerk</td>
<td>12%</td>
<td>38%</td>
<td>36%</td>
<td>13%</td>
<td>50%</td>
</tr>
<tr>
<td>Construction worker</td>
<td>19%</td>
<td>39%</td>
<td>32%</td>
<td>10%</td>
<td>42%</td>
</tr>
<tr>
<td>Teacher</td>
<td>26%</td>
<td>38%</td>
<td>26%</td>
<td>10%</td>
<td>36%</td>
</tr>
<tr>
<td><strong>Own job or profession</strong></td>
<td><strong>30%</strong></td>
<td><strong>40%</strong></td>
<td><strong>23%</strong></td>
<td><strong>7%</strong></td>
<td><strong>30%</strong></td>
</tr>
<tr>
<td>Nurse</td>
<td>34%</td>
<td>46%</td>
<td>16%</td>
<td>4%</td>
<td>20%</td>
</tr>
</tbody>
</table>

% of U.S. adults who think it likely that the following jobs will be replaced by robots or computers in their lifetimes.
FWIW, we see the same trend when we ask people who could do their jobs now.
Across many demographic groups and job categories, relatively few think their own job will be automated in the future.

% of workers in each sector who think it very/somewhat likely that their job will be replaced by machines their lifetime

- Hospitality, Service: 42%
- Retail: 41%
- Banking, finance, insurance: 41%
- Gov't, Public admin, Military: 28%
- Info/Technology: 27%
- Manufacturing, Construction: 26%
- Health care: 24%
- Education: 18%

Across many demographic groups and job categories, relatively few think their own job will be automated in the future.

% of workers in each group who think it very/somewhat likely that their job will be replaced by machines their lifetime

One exception: those who have already felt the impact of automation in their own careers

This “impacted by automation” group differs in other ways as well

Compared w/ rest of population, they are more likely to...

• Have heard “a lot” about machines taking many jobs (45% vs. 23%)
• View concept as “extremely” realistic (33% vs. 20%)
• Express enthusiasm about concept (18% vs. 5%)
• Strongly favor a universal basic income (45% vs. 30%)

*Ultimately, automation doesn’t become “real” for people until they experience it themselves in their own lives – at which point their views shift quite dramatically.*
Thank you! Questions?

Aaron Smith
Associate Director, Research
asmith@pewresearch.org
@aaron_w_smith

Questions:

1) Impact/intersection between this and populism?

2) What elements of technology could support social cohesion?