

# VULNERABILITY SCENARIOS

## Driver Forecasts #1: Economy & Jobs

July 2010

### Background

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The state of the economy and the availability of jobs are central to vulnerability. Populations can be made or kept vulnerable by lack of jobs, sporadic work availability, lack of qualifications for existing jobs, or pay scales they do not provide a living wage. Recent decades have been challenging for vulnerable populations in the United States, as incomes have been stagnant or falling in the face of an eroding manufacturing base, de-unionization, expanding low-wage work, competition from emerging markets, automation, and the growth of knowledge work.<sup>1</sup> For male high school dropouts, for example, real wages fell 16% from 1979 to 2007. Job opportunities have fallen in middle-wage, middle-skill blue-collar and white-collar work.<sup>2</sup> Overall, income mobility has been falling since the 1970s.<sup>3</sup>

The severe recession that began in 2008 reinforced these trends, boosting unemployment past 10%, decreasing the total number of workers from 138.0 million to 129.8 million,<sup>4</sup> and lifting to 17.1% the percentage of Americans who are either unemployed and underemployed.<sup>5</sup> Nearly half the unemployed have been out of work long enough to be counted as long-term jobless, which makes this recession different from those in recent memory.<sup>6</sup> Even before the recession, a quarter of the American workforce was said to earn only poverty-level wages, leaving them with little economic margin for error.<sup>7</sup>

The next two decades will provide new challenges. The U.S. will face ever-stronger competition from emerging markets such as China, India, and Brazil. Many kinds of work will be fully detached from geographic location—and not just “knowledge work” as defined in 2010 but jobs as diverse as remote

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<sup>1</sup> Amy Rynell, “Causes of Poverty: Findings from Recent Research,” The Heartland Alliance and Mid-America Institute on Poverty, October 2008, <http://www.heartlandalliance.org/whatwedo/advocacy/reports/causes-of-poverty.pdf>.

<sup>2</sup> David Autor, *The Polarization of Job Opportunities in the U.S. Labor Market*, Center for American Progress and The Hamilton Project, April 2010, 27, 1.

<sup>3</sup> Paul Starobin, “Misfit America,” *Atlantic Monthly*, January-February 2006, 144-145.

<sup>4</sup> David Autor, *The Polarization of Job Opportunities in the U.S. Labor Market*, Center for American Progress and The Hamilton Project, April 2010, 1.

<sup>5</sup> Daniel Indiviglio, “290,000 More Jobs, but Unemployment Rate Rises to 9.9%,” *The Atlantic*, May 7, 2010, <http://www.theatlantic.com/business/archive/2010/05/290-000-more-jobs-but-unemployment-rate-rises-to-99/56356/>.

<sup>6</sup> “Something's not working,” *The Economist*, April 29, 2010, [http://www.economist.com/business-finance/displaystory.cfm?story\\_id=16010303](http://www.economist.com/business-finance/displaystory.cfm?story_id=16010303).

<sup>7</sup> Amy Rynell, “Causes of Poverty: Findings from Recent Research,” The Heartland Alliance and Mid-America Institute on Poverty, October 2008, <http://www.heartlandalliance.org/whatwedo/advocacy/reports/causes-of-poverty.pdf>.

monitoring, robot operation, and fast-food order taking—and it will thus be technologically possible to outsource growing fractions of all kinds of jobs.

Other trends are also decentralizing and fragmenting work. Information technology is enabling the proliferation of knowledge “piecework,” which is sometimes low-paying. Writers may be paid only a few dollars for a short article, for instance.<sup>8</sup> The technology for decentralized, do-it-yourself manufacturing is developing, and falling in price. It will increasingly allow manufacturing at distributed centers and even in offices and homes, with copier-sized machines able to produce complex objects based on digital models.<sup>9</sup>

Uncertainties that may influence the economic factors of vulnerability over the next two decades include U.S. competitiveness, the degree and nature of outsourcing, educational and social preparation of workforce, the impact of the national debt, government policies and actions, the impact of resource costs and availability, and views of the relationship of the economy to society. In many forums across the country and around the world, experts are discussing “what went wrong” and what can be done to make the global economic system more effective and resilient. New thinking on economics, as well as action at the national and community levels to implement it, will play an immense role in shaping the future of vulnerability.

## Forecasts

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*The Alpha forecasts represent expectable or “most likely” futures, the Beta forecasts envision challenging possibilities (e.g., what could go wrong), and the Delta forecasts represent visionary or surprisingly successful futures that would have a positive impact on reducing vulnerability.*

### ***Alpha Forecast – Economy and Jobs 2030***

The United States continues to make economic growth, measured by GDP, its central goal, but with mixed success as competition from emerging economies intensifies. Lack of educational preparation leaves swaths of the workforce unprepared to meet competition from overseas workers or automation, and income inequality rises. Specific forecasts for this future include:

- Unemployment returns to its historical average by 2013, but localized unemployment remains above 15% in some areas throughout the 2010’s. Depressed housing prices trap many would-be workers in high-unemployment areas for years.<sup>10</sup>
- The American economy remains a world leader in many areas, including science, innovation, information technology, health, and media.

<sup>8</sup> Dan Fletcher, “Building the Web’s Biggest, Smartest, Scariest Article Machine,” *Time*, March 22, 2010, 61-62.

<sup>9</sup> Chris Anderson, “In the Next Industrial Revolution, Atoms Are the New Bits,” *Wired*, January 25, 2010, [http://www.wired.com/magazine/2010/01/ff\\_newrevolution/](http://www.wired.com/magazine/2010/01/ff_newrevolution/); Lawrence Downes, “Geeks on a Train,” *New York Times*, April 10, 2010, <http://www.nytimes.com/2010/04/11/opinion/11sun4.html?th&emc=th>.

<sup>10</sup> “Something’s not working,” *The Economist*, April 29, 2010, [http://www.economist.com/business-finance/displaystory.cfm?story\\_id=16010303](http://www.economist.com/business-finance/displaystory.cfm?story_id=16010303).

- Government debt crimps spending on areas such as infrastructure and innovation that could bolster the economy, with more and more spending devoted to health care, Social Security and defense. Entitlement spending benefits many vulnerable populations, but other programs, such as those for training and education support, lose ground.
- Comparative U.S. competitiveness falls in every area of economic activity, as emerging market competitors increase the sophistication of both manufacturing and services and field increasingly adept corporate champions.
- U.S. manufacturing employment falls from 9% in 2008 to 7% in 2020 and 5% in 2030.<sup>11</sup> Manufacturing work requires increasingly high levels of education and skill.
- Widely varying levels of educational quality produce a workforce that ranges from world-class to deeply underprepared, and the latter suffer most in the increasingly competitive environment.
- Ninety million Americans had some form of educational deficit that affected employability in 2010.<sup>12</sup> Efforts to educate and train adults remain inadequate and the number with such deficits grows.
- Automation replaces many jobs, in manufacturing, services, and some simpler “knowledge work.” More job losses are structural, and are not replaced, though the total workforce continues to rise. Those with less education and resources find it more difficult to make repeated transitions to new work.
- Energy costs rise, hindering economic growth.

### ***Beta Forecast – Economy and Jobs 2030***

As effects of the Great Recession linger, the U.S. faces intensifying economic competition on every front. Wages fall across much of the income spectrum, and productivity innovations increase output but provide little benefit to workers. Specific forecasts for this future include:

- Economic impacts of the Great Recession, including high unemployment, linger throughout the 2010's. Many workers never regain their pre-recession earning power, and earnings are still depressed for millions as the decade nears its close.<sup>13</sup> Many of the recession's job losses prove to be structural.<sup>14</sup>
- Rising globalized competition depresses American wages across a broad swath of the workforce, as everyone from assembly line workers to lawyers comes under price pressure.
- Structural unemployment rises in the face of competition, outsourcing, automation, government downsizing, and an ill-prepared workforce, with particularly severe consequences for low-skill, low-wage workers.

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<sup>11</sup> Extrapolation from: Bureau of Labor Statistics, “Employment by major industry sector,” BLS.gov, December 10, 2009, [http://www.bls.gov/emp/ep\\_table\\_201.htm](http://www.bls.gov/emp/ep_table_201.htm).

<sup>12</sup> Christopher Connell, “Back to school for jobless dropouts,” *Washington Post*, April 13, 2010, A4.

<sup>13</sup> “Something's not working,” *The Economist*, April 29, 2010, [http://www.economist.com/business-finance/displaystory.cfm?story\\_id=16010303](http://www.economist.com/business-finance/displaystory.cfm?story_id=16010303); David Autor, *The Polarization of Job Opportunities in the U.S. Labor Market*, Center for American Progress and The Hamilton Project, April 2010, 1.

<sup>14</sup> Catherine Rampell, “In Job Market Shift, Some Workers Are Left Behind,” *New York Times*, May 12, 2010, <http://www.nytimes.com/2010/05/13/business/economy/13obsolete.html?pagewanted=1>.

- In services, automation reduces employment in areas such as insurance, health care, and law, while many jobs go abroad, especially to places such as South Asia with substantial English-speaking populations.
- Strained by interest payments, entitlements and deficits, government budgets are slashed.<sup>15</sup> Vulnerable populations lose job training, educational funding, job-transition support, and transportation subsidies, reducing their economic prospects.
- Government employment falls, and public sector wages are squeezed, as debt service and entitlement obligations impact public spending.
- American scientific competitiveness falls due to underinvestment and decline in the quality of science education driven by hostility to science in some quarters around issues such as climate change and evolution.<sup>16</sup>
- Debt service pinches credit availability in the private sector, hampering innovation and business in general.<sup>17</sup>
- Economic growth is suppressed by spiking energy prices, as “Peak Oil” arrives and oil supply declines while demand continues to rise, before alternatives can come online.
- Manufacturing employment falls from 9% in 2008 to 6% in 2020 and 4% in 2030, due to globalized trade and automation.
- Flexible and decentralized work structures are used to extract maximum productivity from workers in all kinds of industries, from white collar knowledge work to manufacturing, while minimizing their paid time and benefits.<sup>18</sup>

### *Delta Forecast – Economy and Jobs 2030*

Responding to competition, American society focuses on creating a globally competitive workforce and structures that support innovation, while also facilitating local, sustainable economies. New economic thinking challenges existing assumptions about what an economy is for, how it should operate, and who should benefit? Consensus emerges around a more egalitarian income distribution and more genuinely equal opportunity based on lifelong education and adequate rewards for work. Specific forecasts for this future include:

- Heightened global competition forces a sustained, focused societal response that includes education, innovation support, and infrastructure upgrades. The United States remains highly competitive, harnessing entrepreneurship, creativity, and a world-class educational system.
- Manufacturing employment falls from 9% in 2008 to 8% in 2020 but then rises back to 9% by 2030.<sup>19</sup> Decentralized manufacturing, support for cutting-edge industries, and rising transportation costs all boost more localized and US-based production.<sup>20</sup>

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<sup>15</sup> Robert J. Samuelson, “Why Greece Matters,” *Washington Post*, May 10, 2010, A17.

<sup>16</sup> Keith B. Richburg, “U.S. Experts Bemoan Nation’s Loss of Stature in the World of Science,” *Washington Post*, May 29, 2008, A4.

<sup>17</sup> “The biggest bill in history,” *The Economist*, June 13, 2009, 13.

<sup>18</sup> Dan Fletcher, “Building the Web’s Biggest, Smartest, Scariest Article Machine,” *Time*, March 22, 2010, 61-62.

<sup>19</sup> Extrapolation from: Bureau of Labor Statistics, “Employment by major industry sector,” BLS.gov, December 10, 2009, [http://www.bls.gov/emp/ep\\_table\\_201.htm](http://www.bls.gov/emp/ep_table_201.htm).

<sup>20</sup> Chris Anderson, “In the Next Industrial Revolution, Atoms Are the New Bits,” *Wired*, January 25, 2010, [http://www.wired.com/magazine/2010/01/ff\\_newrevolution](http://www.wired.com/magazine/2010/01/ff_newrevolution).

- Shifting concepts of personal and societal happiness put more emphasis on adequacy and equality as a central goal of economic life, including pay structures.<sup>21</sup> New metrics incorporate non-economic indicators of health and well-being,<sup>22</sup> supported by “happiness studies” that captured the interaction of happiness with work, income, society, and community.<sup>23</sup> New research documented the value of living in a more equitable society – even for those at the top.
- This invigorated attention to quality of life is reflected in more attention to adequately paid, local jobs not subject to outsourcing. These range from local retail jobs to regional farming jobs, and are supported by some local currency systems.
- The long increase in income inequality begins to be addressed, in part by a “rising tide” tax code that automatically adjusted tax rates based on shifts in shares of national income. Thus, for instance, if the top 5% gain a larger share of income, their share of taxes increases to compensate, diverting more resources to public purposes.<sup>24</sup>
- A strengthened social safety net increases government support for basic education and adult skills training, as well as secondary programs to support workers, such as transportation subsidies and daycare. Other components include subsidized savings programs that begin at birth.
- Government-private job programs focus on skill development and infrastructure building or rebuilding, including an initial push on “green jobs” that laid the groundwork for energy sustainability. Training in areas such as weatherization, home audits, and installation of renewable energy systems equipped more people to work in these areas and even form small businesses, while giving them a sense that they had an important role to play in the transition to a clean energy future and a sustainable society.
- Consumer value shifts, new business structures, and government facilitation through means such as tax structures enhance economic localism and the pursuit of local sustainability. In business, for instance, regional stock exchanges were developed to invest in local enterprises.<sup>25</sup>
- The movement for a living wage combines the concept of eradicating poverty with the desire to reward work.<sup>26</sup> A national “living wage” is established in 2023 after several states created state mandates between 2012 and 2020.
- Technology-supported decentralization of work of all kinds allows for new flexibility and new, highly tailored income sources for people at many income levels. Depending on their skill levels, people can do anything from monitoring security video or custom knitting to sophisticated quantitative modeling, all remotely and at any level of time commitment desired.
- More workforce flexibility emerges after 2014 as health care insurance reform begins to disconnect health care coverage from a particular employer. Entrepreneurship is bolstered.
- Efficiency and new energy technologies keep energy costs relatively stable.

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<sup>21</sup> Shankar Vedantam, “Financial Hardship and the Happiness Paradox,” *Washington Post*, June 23, 2008, A2.

<sup>22</sup> “Measuring what matters,” *The Economist*, September 19, 2009, 88; “Grossly distorted picture,” *The Economist*, February 11, 2006, 72.

<sup>23</sup> Richard Layard, “Now is the time for a less selfish capitalism,” *Financial Times*, March 12, 2009, 15.

<sup>24</sup> Stephen Mihm, “Rising-Tide Tax System, The,” *New York Times Magazine*, December 14, 2008, 70.

<sup>25</sup> Amy Cortese, “Locavestors,” *New York Times Magazine*, December 14, 2008, 63.

<sup>26</sup> Harry J. Holzer, “Living Wage Laws: How Much Do (Can) They Matter?” Brookings Institution, December 2008, [http://www.brookings.edu/~media/Files/rc/reports/2008/1210\\_living\\_wage\\_holzer/living\\_wage\\_report.pdf](http://www.brookings.edu/~media/Files/rc/reports/2008/1210_living_wage_holzer/living_wage_report.pdf).