The 2010 Jobs Crossroad: Meltdown or Resurgence?

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2010 Jobs Crossroad

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Evolution of the Great Recession

Low Interest Rates

- Construction Boom
- Proliferation of Sub Prime
- Asset Backed Securities

- Falling House Prices
- Housing Collapse
- Credit Crisis
Global Talent Enigma – Reading the Cards

David Cowles Artwork

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Global Talent Enigma Issues

I. Technology Paradox
II. People Paradox
III. Globalization Paradox
Issues
I. Technology Paradox

Technology, the future of your job and other misplaced panics
Unskilled Jobs Are Disappearing

## Technology Forecast Timeline

<table>
<thead>
<tr>
<th>Energy &amp; Environment</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precision Farming</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green Business</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquaculture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative Energy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distributed Power</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desalinization</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Information Technology</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broadband</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grid Computing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligent Interface</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantum Computing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biocomputing</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Manufacturing &amp; Robotics</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass Customization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nanotech</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micro-Machines</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smart Robots</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# The Cyber-Mental Age

<table>
<thead>
<tr>
<th>Focus</th>
<th>Innovations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result</td>
<td>Intelligent Machines</td>
</tr>
<tr>
<td>People</td>
<td>Knowledge Labor</td>
</tr>
</tbody>
</table>

The Futurist (Used with Permission)

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10/09 U.S. Unemployment Rate = 10.2%

<table>
<thead>
<tr>
<th>Talent Level</th>
<th>Unemployment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.A. or higher</td>
<td>4.7%</td>
</tr>
<tr>
<td>A.A., Certificate, Apprentice</td>
<td>9.0%</td>
</tr>
<tr>
<td></td>
<td>6.85%</td>
</tr>
</tbody>
</table>

↑ High-Pay/High Skills = 62% of all U.S. Jobs

↓ Low-Pay/Low Skills = 38% of all U.S. Jobs

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High School only</td>
<td>11.2%</td>
</tr>
<tr>
<td>Dropouts</td>
<td>15.5%</td>
</tr>
<tr>
<td></td>
<td>13.35%</td>
</tr>
</tbody>
</table>
The Dawn of the Postliterate Age

The Futurist, 2009 (Used with Permission)

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## National Adult Literacy Assessments
### 1992/2003 Prose Results Compared

<table>
<thead>
<tr>
<th>Categories</th>
<th>’92%/'03%</th>
<th>Total 222 Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Below Basic</td>
<td>14/14</td>
<td>31M</td>
</tr>
<tr>
<td>II. Basic</td>
<td>28/29</td>
<td>64M (95M)</td>
</tr>
<tr>
<td>III. Intermediate</td>
<td>43/44</td>
<td>98M</td>
</tr>
<tr>
<td>(Moderately Challenging)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV. Proficient</td>
<td>15/13</td>
<td>29M</td>
</tr>
</tbody>
</table>

Source: U.S. Department of Education
# National Assessment of Educational Progress (NAEP)

## 2005 Reading Achievement Scores

<table>
<thead>
<tr>
<th>Levels</th>
<th>Below Basic</th>
<th>Basic</th>
<th>Proficient</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>29%</td>
<td>39% (68%)</td>
<td>29%</td>
<td>3%</td>
</tr>
<tr>
<td>MI</td>
<td>27%</td>
<td>42% (69%)</td>
<td>29%</td>
<td>2%</td>
</tr>
<tr>
<td>WI</td>
<td>23%</td>
<td>39% (62%)</td>
<td>35%</td>
<td>3%</td>
</tr>
<tr>
<td>IL</td>
<td>25%</td>
<td>41% (66%)</td>
<td>31%</td>
<td>3%</td>
</tr>
<tr>
<td>NY</td>
<td>25%</td>
<td>38% (63%)</td>
<td>34%</td>
<td>3%</td>
</tr>
<tr>
<td>OH</td>
<td>23%</td>
<td>38% (61%)</td>
<td>36%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Source: National Center for Education Statistics, 2007
## U.S. Workforce Talent

### The Technology Paradox

<table>
<thead>
<tr>
<th>Category</th>
<th>2010</th>
<th>%</th>
<th>2020</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Techno-Peasants</td>
<td>75M</td>
<td>48</td>
<td>82M</td>
<td>50</td>
</tr>
<tr>
<td>2. Walking Dead</td>
<td>40M</td>
<td>25</td>
<td>42M</td>
<td>25</td>
</tr>
<tr>
<td>3. Smart People</td>
<td>43M</td>
<td>27</td>
<td>42M</td>
<td>25</td>
</tr>
</tbody>
</table>

Total Potential Labor Pool: 180M in 2010, 200M in 2020
Issues

II. People Paradox
## Ratio of Population Aged 65 & Over to the Labor Force by 2020

<table>
<thead>
<tr>
<th>Country</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>55%</td>
</tr>
<tr>
<td>France</td>
<td>51%</td>
</tr>
<tr>
<td>Japan</td>
<td>51%</td>
</tr>
<tr>
<td>Germany</td>
<td>45%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>39%</td>
</tr>
<tr>
<td>United States</td>
<td>29%</td>
</tr>
</tbody>
</table>

Source: OEDC Factbook 2006
## Annual Population Declines

<table>
<thead>
<tr>
<th>Country</th>
<th>Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russia</td>
<td>-700,000</td>
</tr>
<tr>
<td>Germany</td>
<td>-100,000</td>
</tr>
<tr>
<td>Italy</td>
<td>-100,000</td>
</tr>
<tr>
<td>Japan</td>
<td>-50,000</td>
</tr>
<tr>
<td>South Korea</td>
<td>-50,000</td>
</tr>
</tbody>
</table>
U.S. Workforce between 2010 & 2025

- **Baby Boomers** – 79 million Americans born 1946-64 retire
- **Generation X** – 40 million Americans born 1965-77 – Less job ready than baby boomers
- **Generation Y** – 70 million Americans born 1977-95 – Less job ready than prior generations
The People Paradox

*For the First Time in American History*

the generation retiring is better educated

than the generation that follows.
Issues

III. Globalization Paradox

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Talent Safety Valve:
1. H-1B Visa
Importing High-Skill Workers
China

- **600,000** Annual Engineering Graduates
- **60,000** Meet Western Professional Standards

Source: McKinsey Global Institute
India

- **500,000** Annual Engineering Graduates
  **100,000** Employable

- **3 Million** Annual College Graduates
  **10 to 15%** Suitable for a Modern Business
  **17.2%** College Graduate Unemployment

Talent Safety Valves:
2. Outsourcing &
3. Foreign Direct Investment (FDI)
Exporting Low- & High-Skill Jobs
U.S. H1-B Visa Allocation Recap

- 2010 Fiscal Year, 72% filled after 211 days
- 2009 Fiscal Year, All slots filled in one day
- 2008 Fiscal Year, All slots filled in two days

Source: Wall Street Journal, 10/29/09
U.S. Manufacturing FDI

Source: U.S. Bureau of Economic Analysis, 2008
Advanced Micro Devices (AMD)
Dresden, Germany
4,000 High-Skill, High-Pay Jobs
$4 Billion Investment
Germany 2008

- 400,000 Vacant Positions
- Shortage of 75,000 to 95,000 Engineers
- By 2014 projected shortage 160,000
# U.S. Labor Market Jobs 2006-2016

<table>
<thead>
<tr>
<th>Category</th>
<th>New</th>
<th>Replacement</th>
<th>% of Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Jobs</td>
<td>17.4M</td>
<td>33.4M</td>
<td>66%</td>
<td>50.8M</td>
</tr>
<tr>
<td>Computer Industry</td>
<td>822K</td>
<td>746K</td>
<td>48%</td>
<td>1,568M</td>
</tr>
<tr>
<td>Engineers</td>
<td>160K</td>
<td>345K</td>
<td>68%</td>
<td>505K</td>
</tr>
<tr>
<td>Skilled Trades</td>
<td>622K</td>
<td>1.1M</td>
<td>64%</td>
<td>1.7M</td>
</tr>
<tr>
<td>Teachers K-12</td>
<td>1.24M</td>
<td>1.66M</td>
<td>57%</td>
<td>2.9M</td>
</tr>
</tbody>
</table>

# U.S. Labor Market Jobs 2006-2016

<table>
<thead>
<tr>
<th>Category</th>
<th>New</th>
<th>Replacement</th>
<th>% of Total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses</td>
<td>647K</td>
<td>206K</td>
<td>24%</td>
<td>853K</td>
</tr>
<tr>
<td>MDs</td>
<td>90K</td>
<td>114K</td>
<td>59%</td>
<td>204K</td>
</tr>
<tr>
<td>Dentists</td>
<td>15K</td>
<td>31K</td>
<td>67%</td>
<td>46K</td>
</tr>
<tr>
<td>Health Techs</td>
<td>482K</td>
<td>518K</td>
<td>52%</td>
<td>1.0M</td>
</tr>
</tbody>
</table>

# U.S. Labor Market
## Talent Shortages 2010-2020

<table>
<thead>
<tr>
<th>Category</th>
<th>Shortfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Jobs</td>
<td>3M-6.1M</td>
</tr>
<tr>
<td>Nurses</td>
<td>340K-1M</td>
</tr>
<tr>
<td>Doctors</td>
<td>55K-200K</td>
</tr>
<tr>
<td>Health Technicians</td>
<td>200K-400K</td>
</tr>
<tr>
<td>Information Technology</td>
<td>500K-1M</td>
</tr>
<tr>
<td>Engineers</td>
<td>50K-250K</td>
</tr>
<tr>
<td>Teachers</td>
<td>500K-1M</td>
</tr>
<tr>
<td>Scientists</td>
<td>100K-200K</td>
</tr>
</tbody>
</table>

Sources: Bureau of Labor Statistics & Professional Associations

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Vacant Jobs 2009

• United States  +2 Million
• European Union  2.3 Million

Source: Manpower Inc.
U.S. Talent Shortage 2010-2020
12-24 Million Jobs will be Vacant

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U.S. Education’s Critical Mass Will No Longer Support An Advanced Tech Economy
The Globalization Paradox
The Global Education-to-Employment System is 

broken worldwide
Global Talent Enigma

Technology

Globalization

People

Education and Career Skills

Employment
High Wage/High Skill
or
Low/Wage/Low Skill

Economy
Expands or Contracts
Part II: Solutions

I. Business Sustainability
II. Rebuilding the Pipelines
III. Predictions for a Decade of Opportunity
## I. Business Sustainability

### Work-Life Balance Participation

<table>
<thead>
<tr>
<th>Flex Benefits</th>
<th>% Offering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flextime</td>
<td>54%</td>
</tr>
<tr>
<td>Telecommuting on ad hoc basis</td>
<td>45%</td>
</tr>
<tr>
<td>Compressed work week</td>
<td>37%</td>
</tr>
<tr>
<td>Telecommuting, part-time</td>
<td>34%</td>
</tr>
<tr>
<td>Shift flexibility</td>
<td>21%</td>
</tr>
<tr>
<td>Telecommuting, full-time</td>
<td>19%</td>
</tr>
</tbody>
</table>

Source: SHRM 2009 Employee Benefits Survey
Business Sustainability
U.S. Untapped Talent Pool 2010-2020

- Sequencing Mothers 27M
- Boomers 26M
- Physically/Mentally Challenged 20M
- People Exiting Criminal Justice System 3M

Total 76M
Business Requires:

• Capitalizing physical capital investment – plants and equipment
• Capitalizing human capital investment – training and education
Credit Flow to
Small & Medium-Sized Businesses
Necessary for
Investment in Human Capital
U.S. Job Cuts August 2009

• 116,000  Small Businesses
• 122,000  Medium-Sized Business
• 60,000  Large Businesses

Source: U.S. Department of Labor
Federal Reserve Stimulus Funds

Directed to:
• Local 504s
• Micro-Loan Groups
SBA Administered
Funds Deposited in Local Banks
U.S. Economic Growth 2010-2020

• Exports
• Tech Innovations
Science
Technology
Engineering
Mathematics

STEM Related Careers
Job Openings by Skill Level, 2004-2014

Bachelor's or Above 33%
High School or Dropout 22%
AA, Cert. or Apprentice 45%

Source: Holzer & Lerman, Brookings Institute, 2009
The New “System” for the 21st Century OPEN Education-to-Employment Model

I. Education

- Schools K-12
  - Children & Adolescents (6-18)
    - Multiple Curricula & Teaching Methods
    - Tutor Coaches
    - Career Information & Exploration
    - Multiple Aptitude & Interest Focus
    - Liberal Arts Career Academies
    - No Drop Outs
  - All Move on to Some “College” Option

II. Career Prep

- Young Adults 19-22
  - "College" Options
    - Degrees
      - 4 Yr.
      - 2 Yr.
    - Certificates
      - 2 Yr.
    - Apprenticeships
      - 1 Yr.
  - Specializations
    - Liberal Arts
    - Professional
    - Science/Technical
    - Business
  - All Graduate
  - Back & Forth Movement As Careers & Jobs Change

III. Employment

- Careers Adults (22 to 70+)
  - Innovation Becomes Job Focus
  - CONSTANT TALENT UPDATES FOR ALL
    - Internal Updates
      - Professional Education
      - Training
      - Development
    - External Updates
      - Post College Attendance

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1. Education

Schools K-12
Children & Adolescents 6-18

- Multiple Curricula & Teaching Methods
- Tutor Coaches
- Career Information & Exploration
- Multiple Aptitude & Interest Focus
- Liberal Arts Career Academies
- No Dropouts
## 2. Career Prep

**Young Adults 19-22**

<table>
<thead>
<tr>
<th>Degrees</th>
<th>“College” Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Yr.</td>
<td><strong>Devi</strong></td>
</tr>
<tr>
<td>2 Yr.</td>
<td>2 Yr. 2 to 4 Yr.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specializations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liberal Arts</td>
</tr>
<tr>
<td>Professional</td>
</tr>
<tr>
<td>Science/Technical</td>
</tr>
<tr>
<td>Business</td>
</tr>
</tbody>
</table>

**All Graduate**
3. Employment

**Careers**

Adults 22 to 70+

- Innovation Becomes Job Focus

**CONSTANT TALENT UPDATES FOR ALL**

**Internal Updates**

- Professional Education
- Training
- Development

**External Updates**

- Post-College Attendance
II. Rebuilding the Pipeline
“Gateways to the Future”

- Santa Ana, CA
- Fargo, ND
- Mansfield, OH
- Danville, IL
- Philadelphia Academies, Inc.
- Chicago Manufacturing Renaissance Council
- Cleveland Clinic
- North Carolina Bio Network
Santa Ana,
California
Greater Santa Ana Business Alliance

- High School, Inc.
- English Works
- Workforce Education
- Quarterly R & D Reports
- 300 Business Partners
Community-Based Organizations (CBOs) or Non-Governmental Organizations (NGOs)
Q. What is a CBO or NGO?
A. An intermediary agency that builds a network of business partnerships with community organizations. They are a neutral civic space.
Building a Network

CBO/NGO

- Regional Job/Career/Education Information & Dissemination
- Regional Incumbent Worker Continuing Training & Education
- Regional Career Information & Education K-12
III. Prediction for a Decade of Opportunity
2010-2020 Talent Creation
2010 & 2020 U.S. Talent Showdown

Unless New System Adopted

2010
62% of Jobs = High Pay/High Skill
97M Needed  43M Qualified
38% of Jobs = Lower Pay/Lower Skill
61M Needed  115M Available

2020
74% of Jobs = High Pay/High Skill
123M Needed  43M Qualified
26% of Jobs = Lower Pay/Lower Skill
44M Needed  142M Available

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U.S. & Global Talent Creation
Talent Creation & the Wealth of Nations
I Want YOU

For

The Global Talent Revolution

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A New Beginning