

Navigating the Path Into a 21st Century Workforce

Domenic Giandomenico
Director, Education and Workforce Programs
Institute for a Competitive Workforce

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Global Competitiveness

- If India and China successfully train 1% of their population, their skilled workforce would be nearly equal to our entire workforce
- Proliferation of Internet, communications makes doing business possible from anywhere on earth

An Aging Workforce

- **150 million** Americans currently in the workforce
- **77 million** 'Baby Boomers' nearing retirement
- Only **40 million** Gen X'ers and Y'ers available to replace them
- **More than a third** of our workforce will be older than 50 before President Obama's first term is over.

Current and Future Opportunities

- Common thread among them: Many, many skilled workers will be needed
- Among top needs will be engineers, energy technicians, welders, mechanics, computer system techs
- Already a shortage of skilled workers in all of these fields, in addition to pending retirements

Current and Future Opportunities

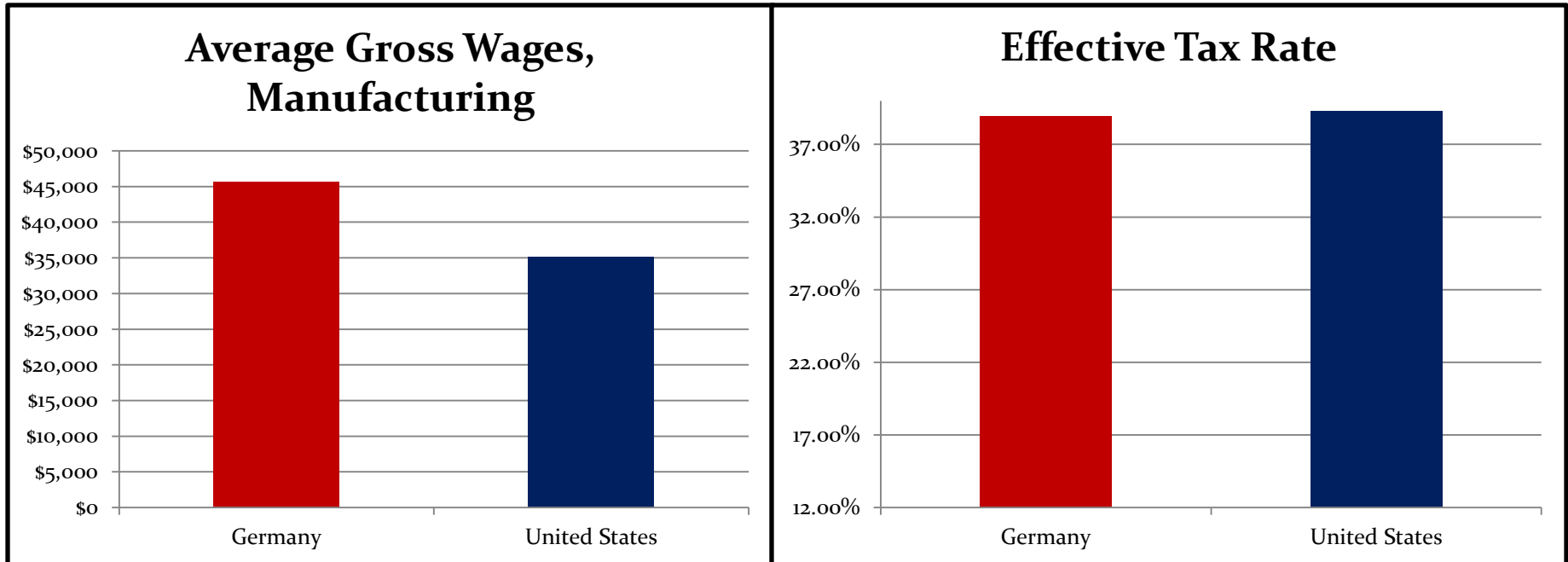
- The new “green” economy
 - Strong focus will be on changing energy systems, retrofitting existing buildings for better efficiency, new energy pipelines, etc.
- What are these “green” jobs, really?
 - Many of these jobs will require new skills, but will ultimately be absorbed by existing jobs (electricians will be proficient in green tech)
 - Green tech manufacturing?

Green Tech Manufacturing

- Many American companies are outsourcing production of goods such as solar panels
 - Most of these facilities are located in Germany and China
 - Why not here in the U.S. with all of our available workers?

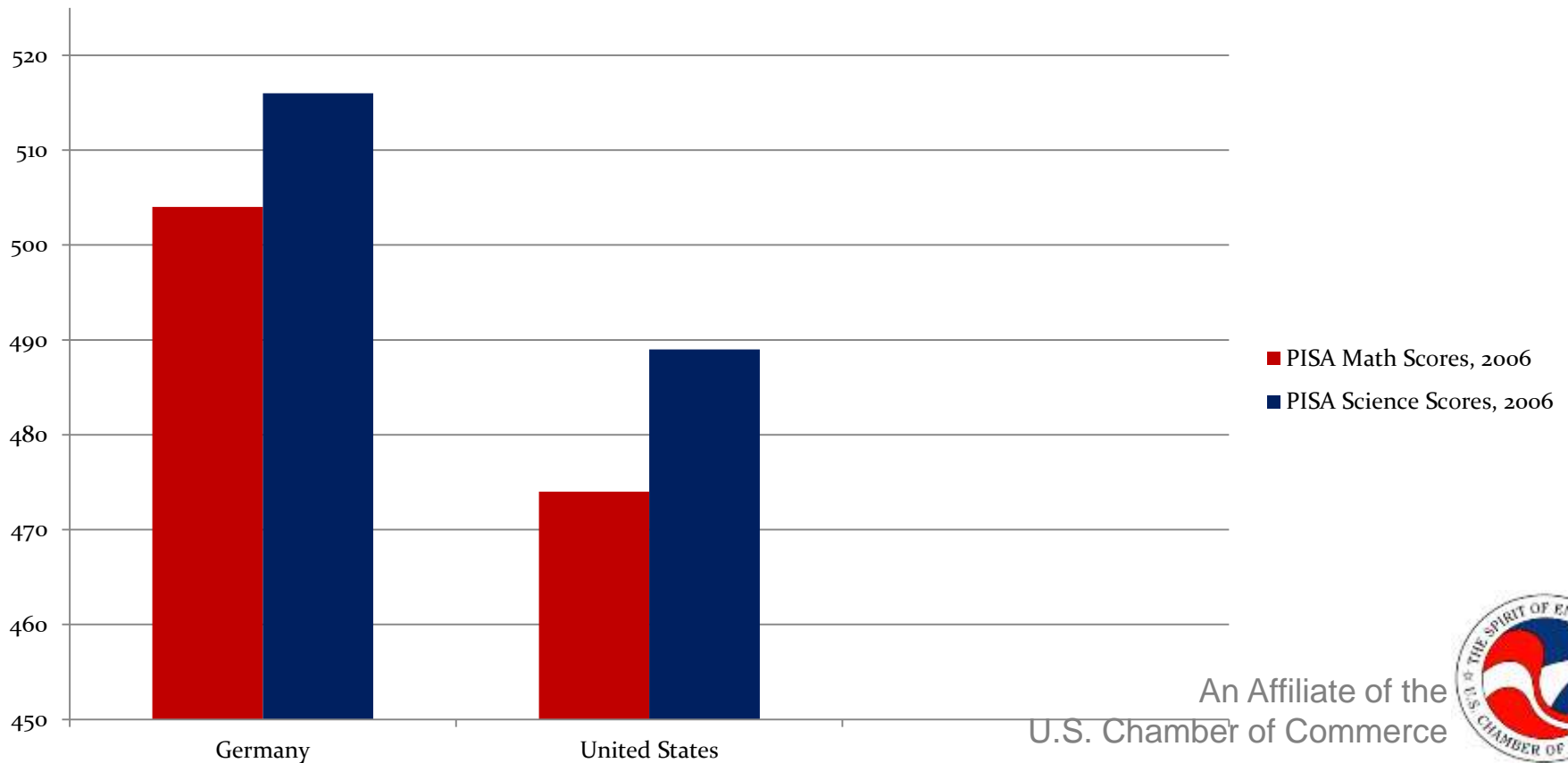
Green Tech Manufacturing

- Germany is currently one of the world leaders in solar panel manufacturing



Green Tech Manufacturing

2006 PISA Scores



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The Jobs of the Future

- Obama Administration: 3 million jobs currently unable to be filled due to lack of skilled workers.
- “Help Wanted: Projection of Jobs and Education Requirements Through 2018”
 - Georgetown Center on Education and the Workforce (<http://cew.georgetown.edu>)
 - **63% of all jobs will require some college education or better by 2018.**

Navigating into a 21st Century Workforce

- The old paradigm:
 - College is entirely optional – only a HS diploma is necessary.
 - Pre-existing skills unnecessary – on the job training all that's needed.
 - No real need for ongoing education.
 - Lots of physical work available.

Navigating into a 21st Century Workforce

- The new paradigm:
 - Must have some kind of credential beyond a high school diploma.
 - Must have skills before entering workforce – on the job training will fill in finer details only.
 - Must be willing to keep up-to-date.
 - Lots of artisanal, creative, and intellectual work available.

Opportunities for Disabled Workers

- First and foremost, little distinction is made between abilities of non-disabled and disabled workers
 - 2/3 of accommodations cost less than \$500
 - 1/4 cost nothing at all
 - With many valuable workers reaching older age, many such accommodations seen as necessary anyway to prevent brain drain

Opportunities for Disabled Workers

- Gap between available jobs and available skilled workers growing to 35 million or more in 5 years.
- With the looming retirements of Baby Boomers, if you have the skills, you are needed
 - 50 million disabled Americans provides companies with a vast, underutilized resource of workers









Opportunities for Disabled Workers

- Most companies have already made accommodations simply to keep existing older workers.
- Telecommunications make it possible to work from anywhere.
- A greater variety of job types means that there are opportunities for people of all capabilities.

Nation's Top Growth Occupations

- Health
 - Registered Nurses
 - Mental Health Counselors
 - Dental Hygienists
- Education
 - Elementary Teachers
 - Postsecondary Teachers
- Tech and Engineering
 - Network Systems and Data Communications
 - Computer Software Engineers
 - Computer Systems Analysts

What CTE Can Offer

- Health
 - Registered Nurses 
 - Mental Health Counselors 
 - Dental Hygienists 
- Education
 - Elementary Teachers 
 - Postsecondary Teachers 
- Tech and Engineering
 - Network Systems and Data Communications 
 - Computer Software Engineers 
 - Computer Systems Analysts 

Careers in Automation

- Manufacturing incorrectly seen as a dead career choice by many
 - Is manufacturing down in the U.S.? Yes, but not as much as you'd think
 - Still world's 2nd largest exporter of goods
 - 61% of all exports are manufactured goods – double the rate from 10 years ago

Careers in Automation

- So where are the jobs?
 - Fewer unskilled jobs, yes
 - As old assembly lines gave way to automation, U.S. manufacturing now requires many more skilled workers
 - Manufacturing really is just like every other industry – if you are skilled, you can find work

Automation Opportunities for Disabled Workers

- Engineering and design
 - Nearly 10% of engineers have disabilities
- Computer systems analysts
 - Highly accessible jobs for all Americans
- Sales engineers
 - Diagnose a company's needs and match them to the right products

Role of CTE in Economic and Workforce Development

- CTE reinforces student interest in high need occupations
 - Work-based learning opportunities give students a sense of investment in a career
- CTE improves performances in core curriculum
 - Integrated learning opportunities shown to improve NCLB test scores

Role of CTE in Economic and Workforce Development

- CTE constantly adapts to the needs to state and national economic/workforce needs
 - Mandated by law to provide programs for high skill, high wage, and high demand occupations
- CTE increases high school graduation rates
 - By providing relevancy in education, students are more likely to stay in school

Role of CTE in Economic and Workforce Development

- Provides training for all of the programs under the High Growth Job Training Initiative
- Enhances student engagement and retention in science, technology, engineering and math (STEM) fields

Career Clusters

- Nationally, there are 16 career clusters leading to over 80 different careers
 - Offerings different from state to state, school to school
- Clusters are programs of study that include seamless connections between high school and college
 - Often include articulation agreements for college credit in HS

Career Clusters

- Concept: Clusters provide broad knowledge and skills that are applicable to any of the careers within the cluster
- Provides students with the ability to change their mind about their goals without having to start over

Important Notes About CTE

- CTE is NOT a separate track!
- CTE has entry points for learners of all levels – adults are welcome too!
- CTE students are expected to go on to postsecondary education

Disabled Students and CTE

- Many advocates worry that increased accountability and rigor in Perkins IV will limit access for disabled students
- Many great examples of students with all varieties of disabilities thriving in CTE
- If you have concerns, talk with your superintendent or state CTE officials – they will work with you

Summary

- ~~Even~~ Especially in a tough economy, if you have skills, you can find work
- All Americans will need some form of postsecondary education
- CTE is a fantastic way for all Americans to obtain the skills they need to succeed
- CTE is a solid pathway to accessible occupations

Education Resources

National Career Pathways Network

www.NCPN.org

Association for Career and Technical Education
(ACTE)

www.ACTEonline.org

National Association of State Directors of Career
Technical Education Consortium (NASDCTEc)

www.careertech.org

Resources

- ICW's page on Workers with Disabilities:
<http://www.uschamber.com/icw/strategies/disabilityemployment.htm>
- CTE Robotics Competition:
<http://www.popularmechanics.com/science/robotics/4298356.html>
- Why Disabled Techies Rock:
http://money.cnn.com/2008/09/11/smallbusiness/disabled_techies_rock.fsb/index.htm
- Scientists and Engineers with Disabilities:
<http://www.cpst.org/hrdata/documents/pwm13s/C444Do22.pdf>

J. Domenic Giandomenico
Director, Education and Workforce Programs
Institute for a Competitive Workforce
U.S. Chamber of Commerce
1615 H Street, NW
Washington, DC 20062
domenic@uschamber.com
www.uschamber.com/icw