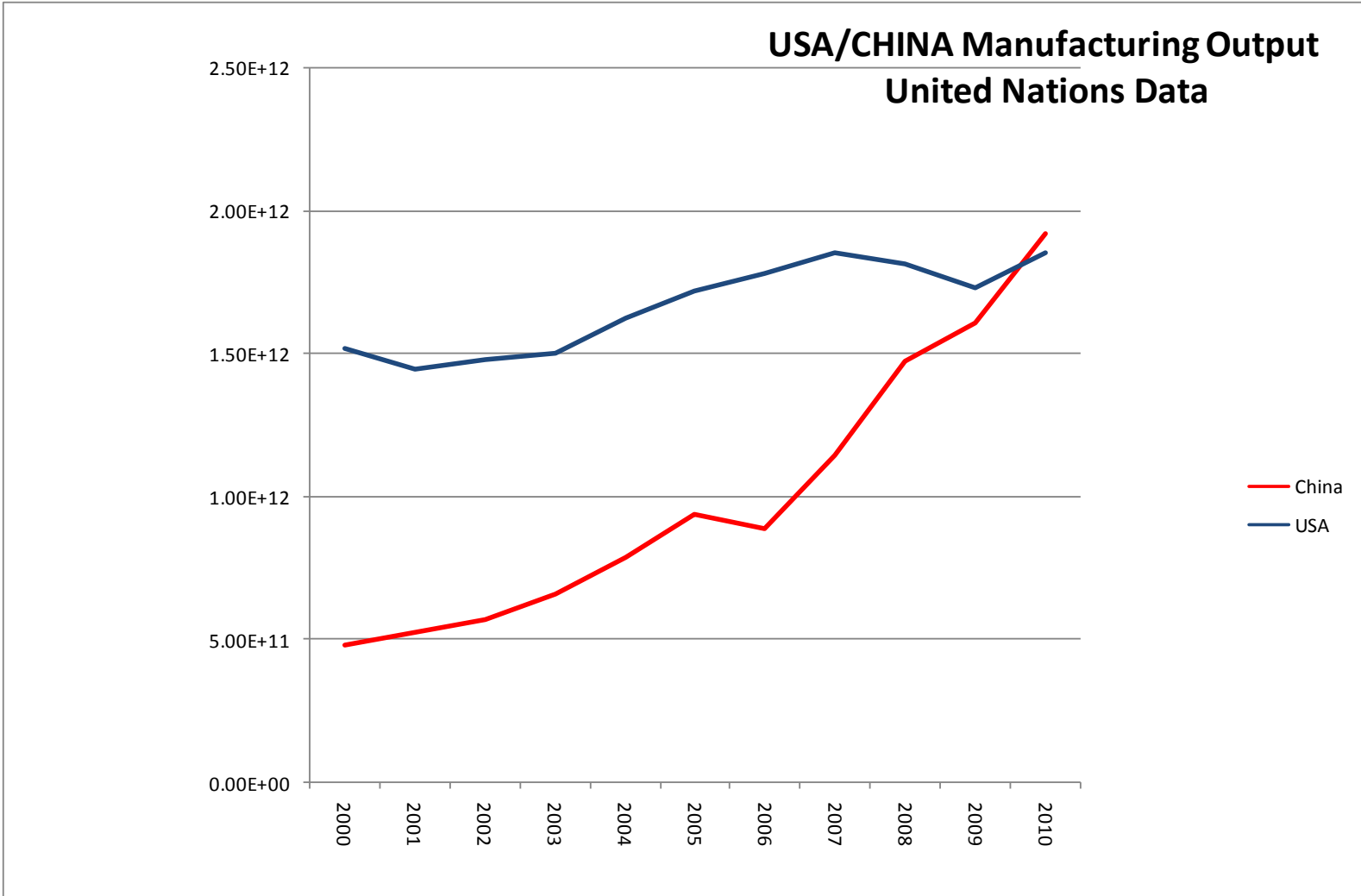




## 2012 PITTSBURG ECONOMIC OUTLOOK CONFERENCE

# MANUFACTURING







*“The rest of the story...”*

China Manufacturing output      1.9 trillion

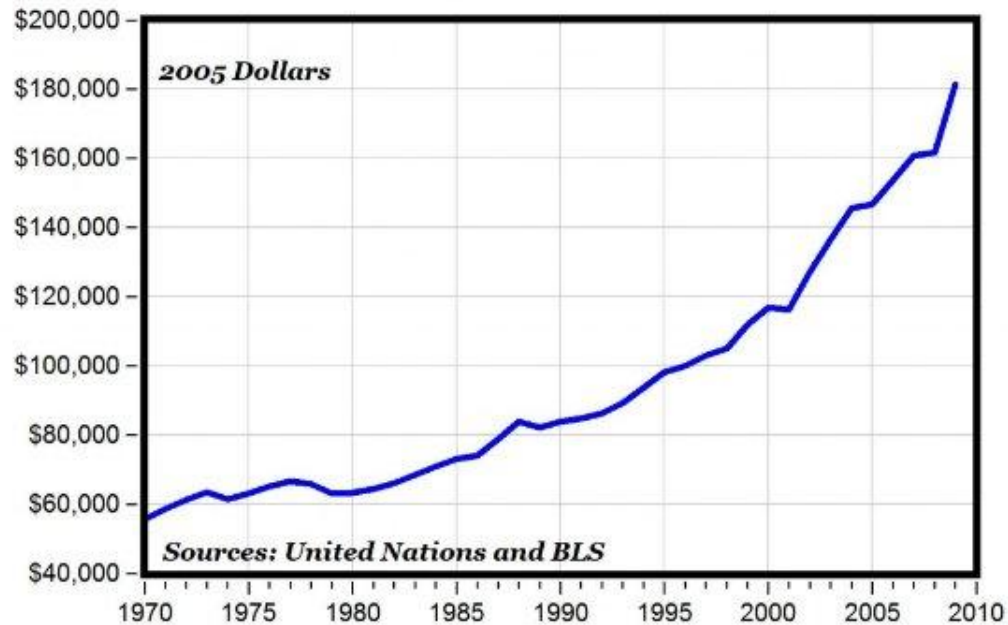
Chinese employees                      100 million

USA Manufacturing output      1.85 trillion

USA employees                      11.5 million



## Manufacturing Output Per U.S. Worker 1970 to 2009



*How?*



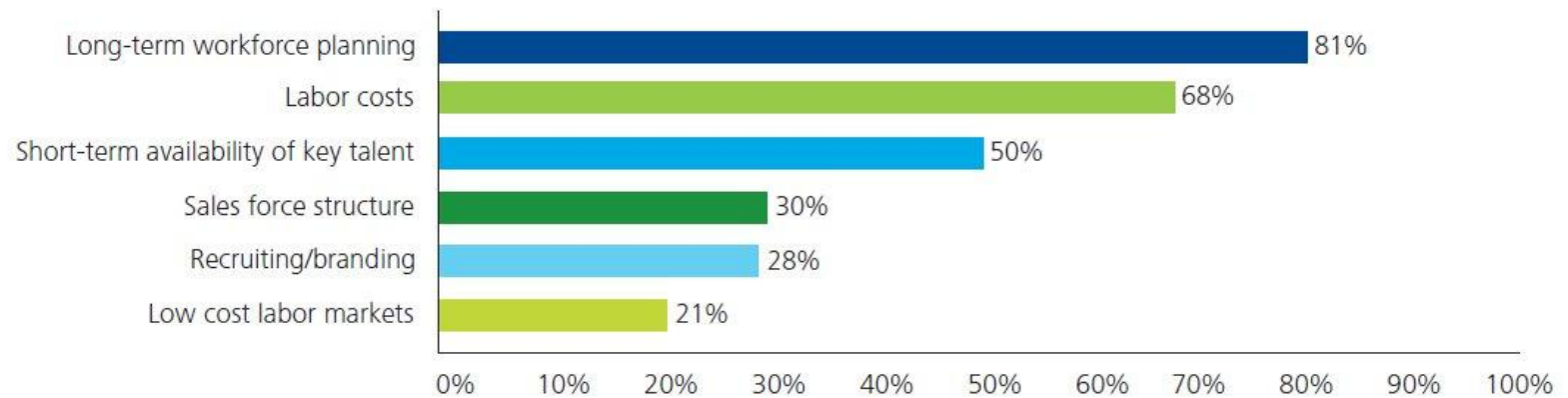
*"Advanced manufacturing is a family of activities that (a) depend on the use and coordination of information, automation, computation, software, sensing, and networking, and/or (b) make use of cutting edge materials and emerging capabilities enabled by the physical and biological sciences, for example nanotechnology, chemistry, and biology. It involves both new ways to manufacture existing products, and the manufacture of new products emerging from new advanced technologies."*

*—President's Council of Advisors on Science and Technology  
Report to the President on Ensuring  
American Leadership in Advanced Manufacturing,*

It involves both new ways to manufacture existing products, and the manufacture of new products emerging from new advanced technologies.



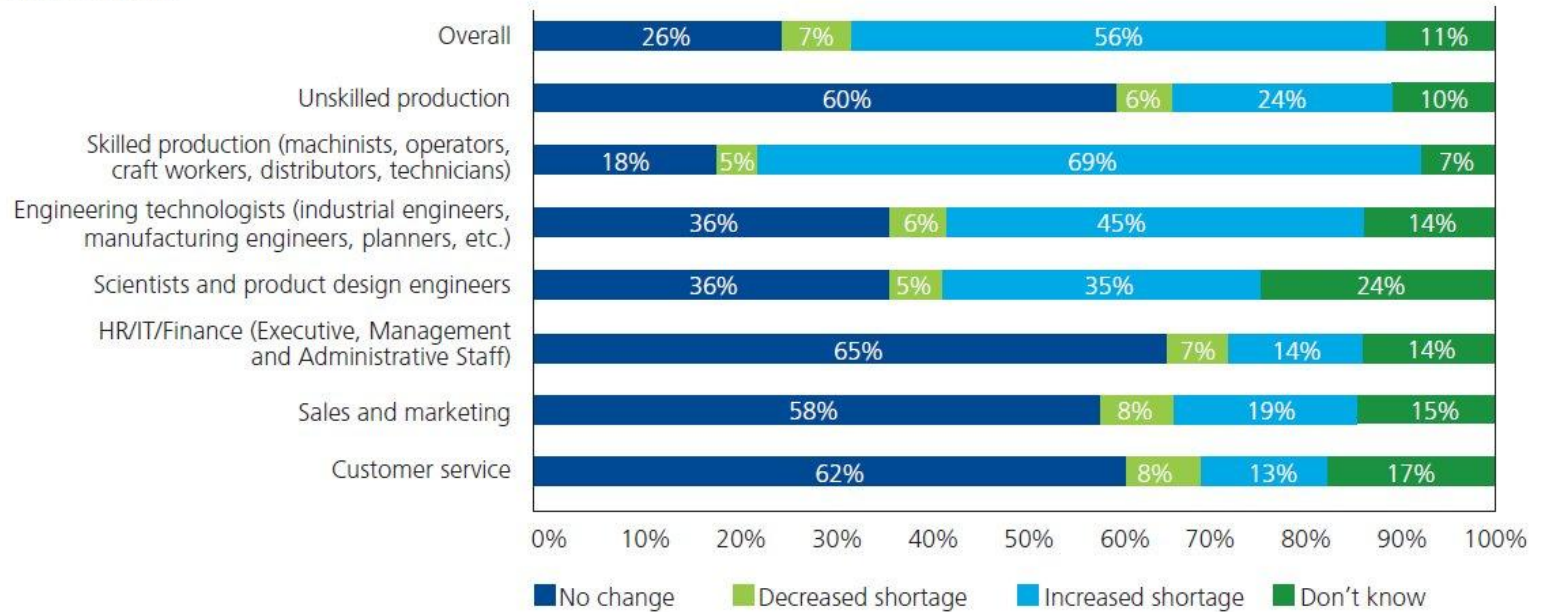
**Figure 1: What workforce-related factors do you consider when setting your corporate strategy?**



Note: This is a multiple selection question, percentages may not add to 100%. Base used is 1123.



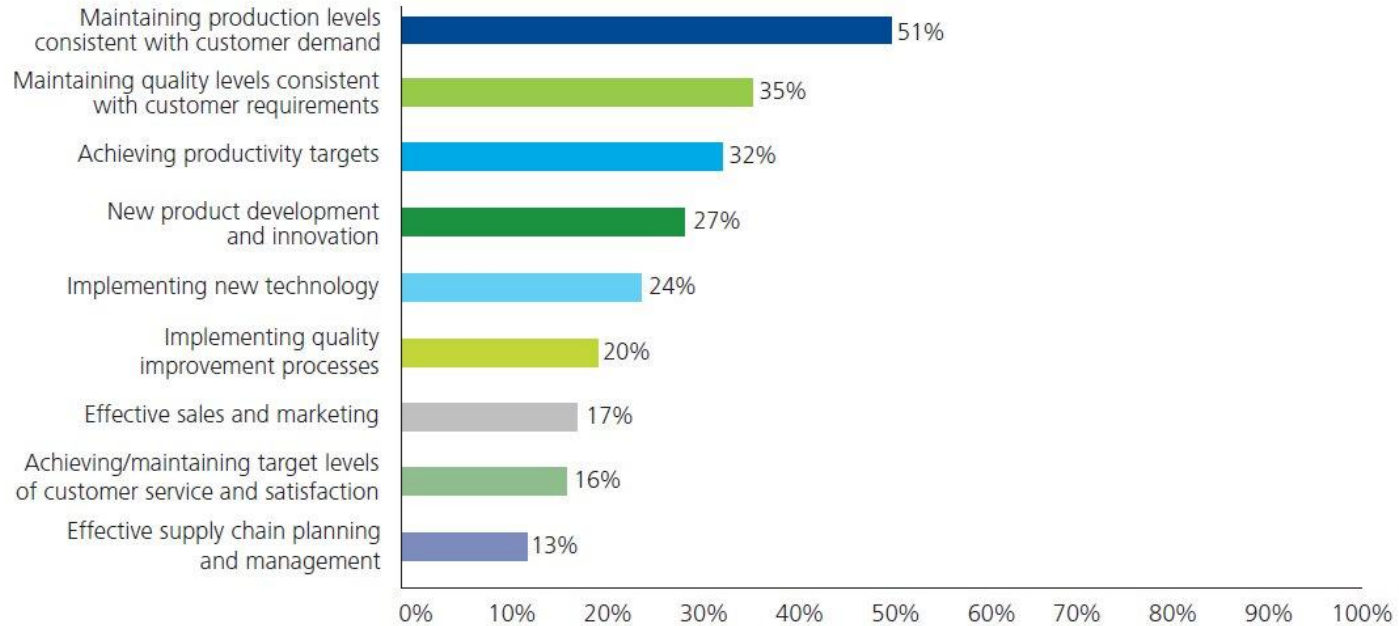
Next 3-5 years



Expectation of the availability of qualified workers



**Figure 2: In which of the following operational areas has your company experienced the most difficulty due to workforce shortages or employee skill deficiencies?**

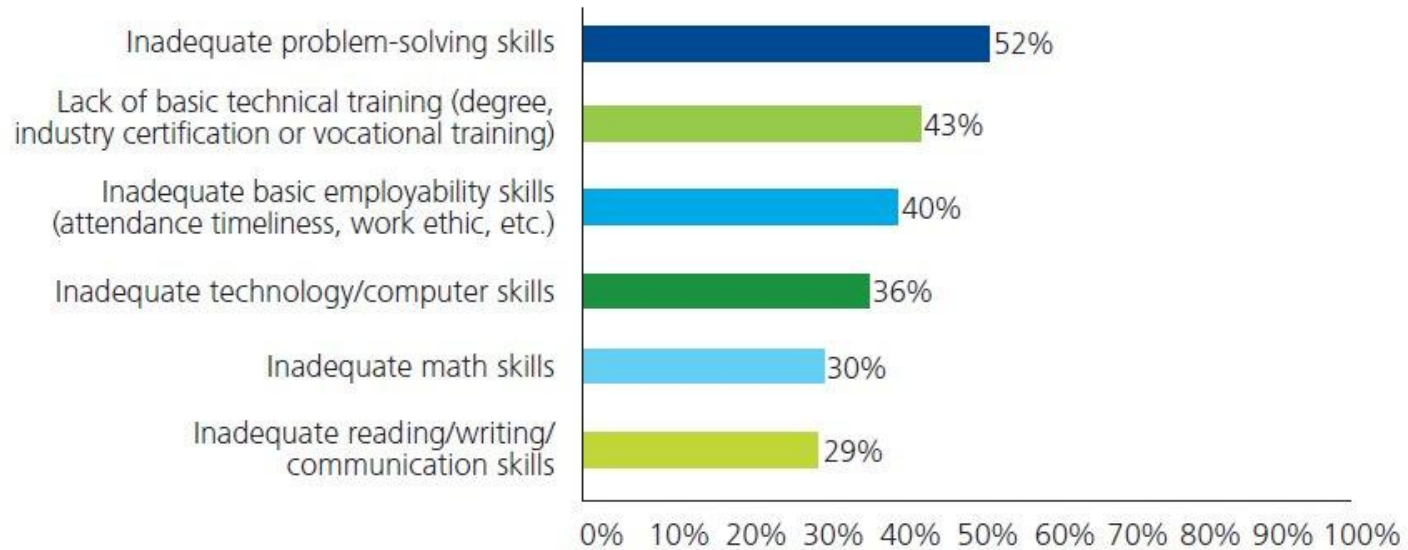


Note: This is a multiple selection question, percentages may not add to 100%. Base used is 1123.



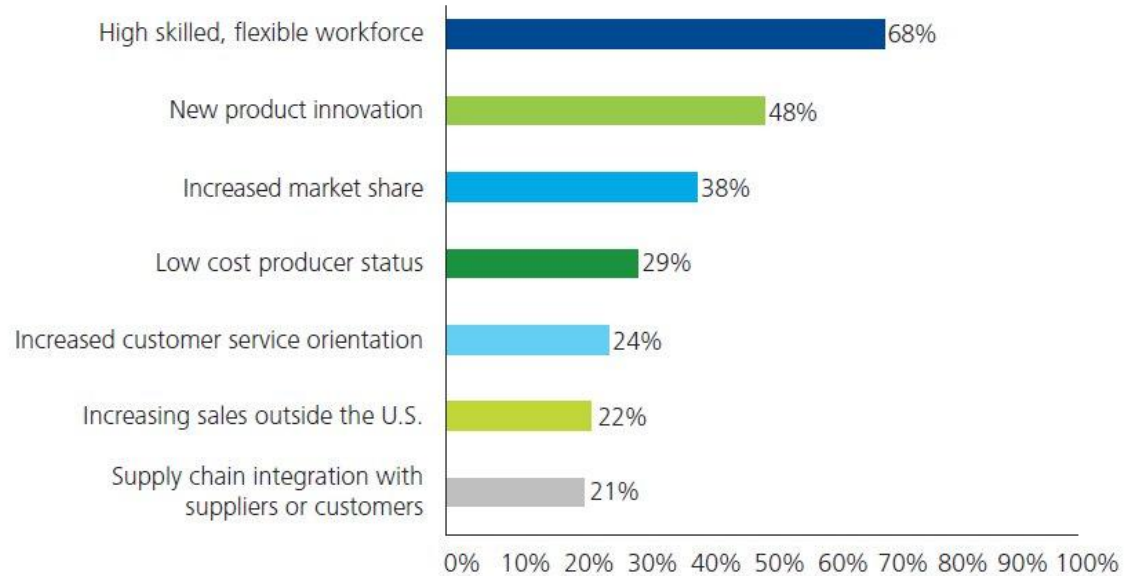


**Figure 9: What are the most serious skill deficiencies in your current employees?**



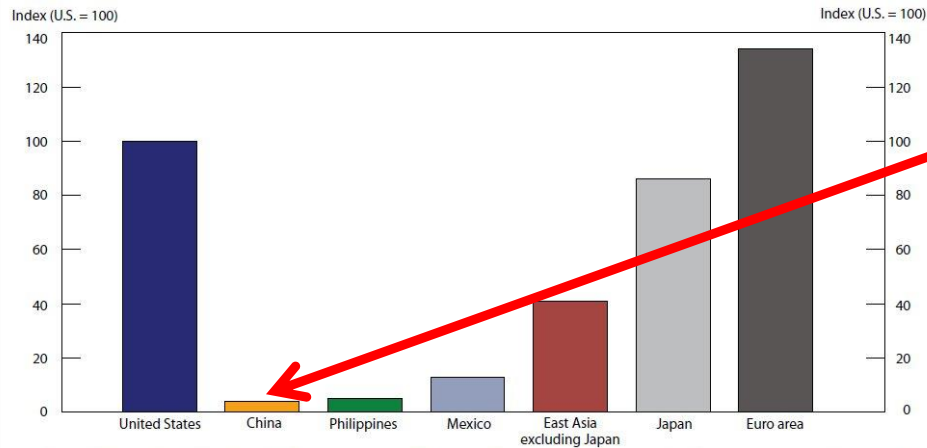


**Figure 10: Given the change in the economy and business environment, which of the following will be most important to your company's future business success during the next 3-5 years?**





**Chart 3. Index of hourly compensation costs in manufacturing, selected countries and areas, 2008**



When you multiply this by 9

NOTE: Data are not strictly comparable. Direct comparisons should be made with caution.  
SOURCES: Data for China are from table 4 of this article. Data for other countries and areas are from *International comparisons of hourly compensation costs in manufacturing, 2008*, USDL 10-1173 (Bureau of Labor Statistics), Aug. 26, 2010.

The future of manufacturing will not be won by low labor costs. The future will be won by the best work force using advanced manufacturing techniques.



# MANUFACTURING ★ *in America* ★

## ECONOMIC AND INNOVATION SUCCESS



FOR EVERY \$1 OF GOODS PRODUCED, MANUFACTURING GENERATES AN ADDITIONAL \$1.43 FOR THE ECONOMY



IN JUST 5 STATES MANUFACTURING ADDS OVER HALF A TRILLION DOLLARS TO THE ECONOMY



MANUFACTURERS ARE RESPONSIBLE FOR ALMOST TWO-THIRDS OF ALL PRIVATE SECTOR R&D



EACH MANUFACTURING JOB CREATES AT LEAST 2.91 MORE JOBS IN OTHER SECTORS



## THE DISCONNECT BETWEEN PERCEPTION & FACTS

WHILE MANUFACTURING IS FILLED WITH HIGH PAYING JOBS, PEOPLE AREN'T JOINING THE FIELD.



OVER 70% OF AMERICANS VIEW MANUFACTURING AS THE MOST IMPORTANT INDUSTRY FOR A STRONG ECONOMY AND NATIONAL DEFENSE

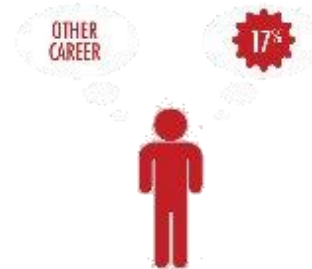
**BUT...**



77% OF AMERICANS FEAR THE LOSS OF DOMESTIC MANUFACTURING JOBS TO OTHER NATIONS



ONLY 30% OF PARENTS ENCOURAGE THEIR KIDS TO ENTER MANUFACTURING



ONLY 17% OF PEOPLE VIEW MANUFACTURING AS A TOP CAREER CHOICE



## IN REALITY...



**MORE THAN \$77K: ANNUAL  
AVERAGE SALARY OF  
MANUFACTURING  
WORKERS**



**NEARLY \$60K: ANNUAL  
SALARY OF ENTRY-LEVEL  
MANUFACTURING  
ENGINEERS**



**HIGHEST PAID NEW COLLEGE  
GRADUATES ARE CHEMICAL  
MANUFACTURING ENGINEERS**



**MANUFACTURING  
WORKERS HAVE HIGHEST  
JOB TENURE IN PRIVATE  
SECTOR**



**90% OF MANUFACTURING  
WORKERS HAVE MEDICAL  
BENEFITS**



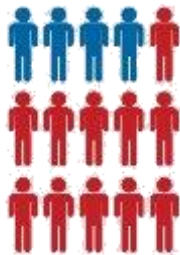
**78% OF MANUFACTURING  
WORKERS GET RETIREMENT  
CONTRIBUTIONS FROM  
EMPLOYERS**



MANUFACTURING DEPENDS ON A SKILLED WORKFORCE, BUT COMPANIES HAVE JOBS THEY CAN'T FILL. THIS HAS CAUSED A SKILLS GAP.

## SKILLED WORKERS NEEDED!

A 2011 SKILLS GAP REPORT FROM THE NATIONAL ASSOCIATION OF MANUFACTURERS SHOWS...



67%

REPORTED A MODERATE TO SEVERE SHORTAGE OF AVAILABLE, QUALIFIED WORKERS

56%

ANTICIPATE THE SHORTAGE TO GROW WORSE IN THE NEXT THREE TO FIVE YEARS





## WHY IS THERE A PROBLEM?



BY 2030, 77% OF SKILLED BABY BOOMERS WILL HAVE LEFT THE WORKFORCE

CURRENT WORKFORCE LACKS TECHNICAL SKILLS NEEDED  
(INDUSTRY CERTIFICATION OR VOCATIONAL TRAINING)



83% OF MANUFACTURERS SAY THE LACK OF SKILLED WORKERS HURTS THEIR BUSINESS

ECONOMIC GROWTH DEPENDS ON MANUFACTURING GROWTH. THE  
FUTURE OF U.S. MANUFACTURING RELIES ON A SKILLED, TALENTED WORKFORCE.

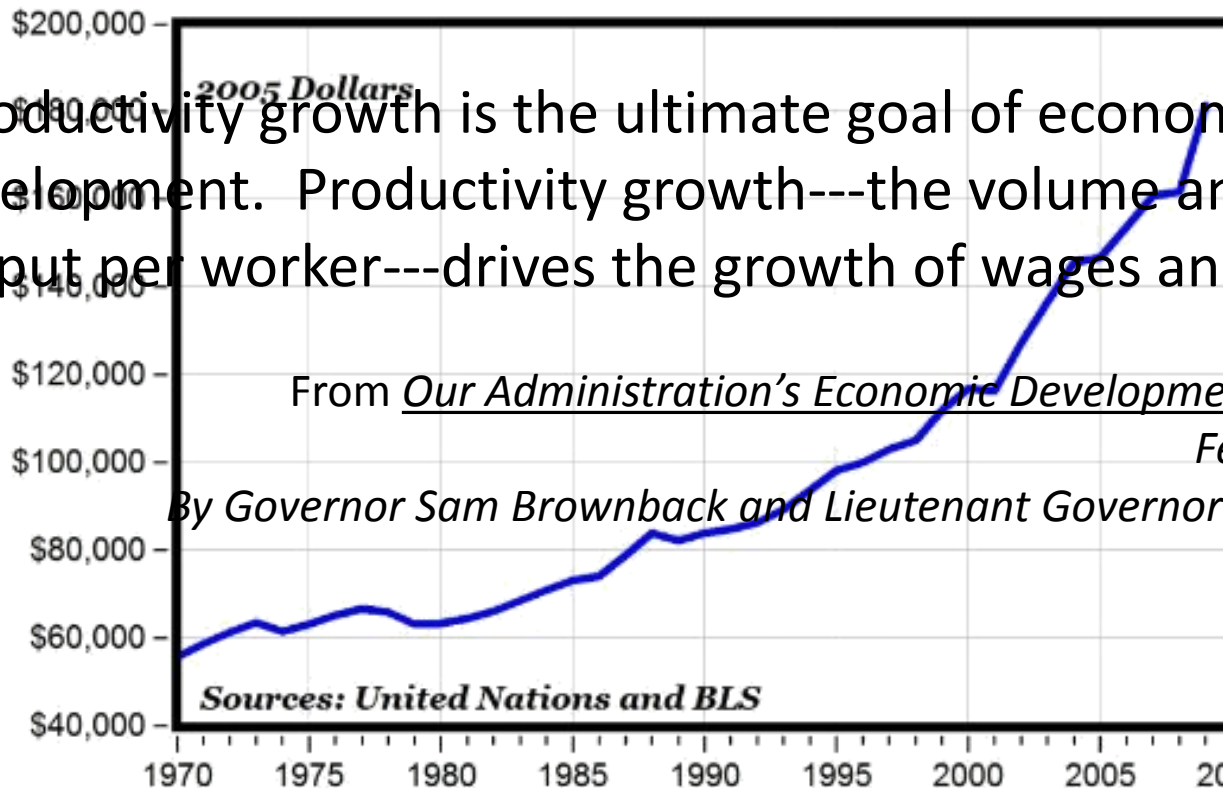




# Manufacturing Output Per U.S. Worker 1970 to 2009

In February, 2011 Governor Brownback and Lt. Gov. Colyer confirmed in their Administration's Economic Development Strategic Plan:

“Productivity growth is the ultimate goal of economic development. Productivity growth---the volume and value of output per worker---drives the growth of wages and wealth”



From Our Administration's Economic Development Strategic Plan  
February 10, 2011  
By Governor Sam Brownback and Lieutenant Governor Jeff Colyer, M.D.

Sources: United Nations and BLS



Our challenge, then...

