



WICHITA STATE  
UNIVERSITY

# The Aging Workforce in Manufacturing

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# Agenda

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- Background of aging
- Aging and its global business implications
- Emergent themes in aging
- Managing the process
- Aging's effect on manufacturing
- Company findings
- Implications for Kansas

# Aging globally

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- The world stands on the threshold of a major demographic transformation brought about by declining birthrates and rising life expectancies.
- Together, these trends have contributed to a dramatic and unprecedented aging of populations worldwide. The aging of the world's population will bring changes in the global economic environment, creating unique challenges and opportunities for businesses worldwide.
- Among developed countries the median age rose from 29 in 1950 to 40 in 2009, and is forecasted to rise to 46 by 2050.
- The corresponding figures for the world as a whole are 23.9 in 1950, 28.1 in 2010, and 37.8 in 2050.

# Aging globally

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- The pace of aging is expected to accelerate in the 21st century, and the absolute numbers of seniors in developing countries are predicted to outstrip those in developed countries by 2025.
- By 2050, the worldwide population of people over 60 will reach 2 billion, of which three-fourths will be residents of developing countries

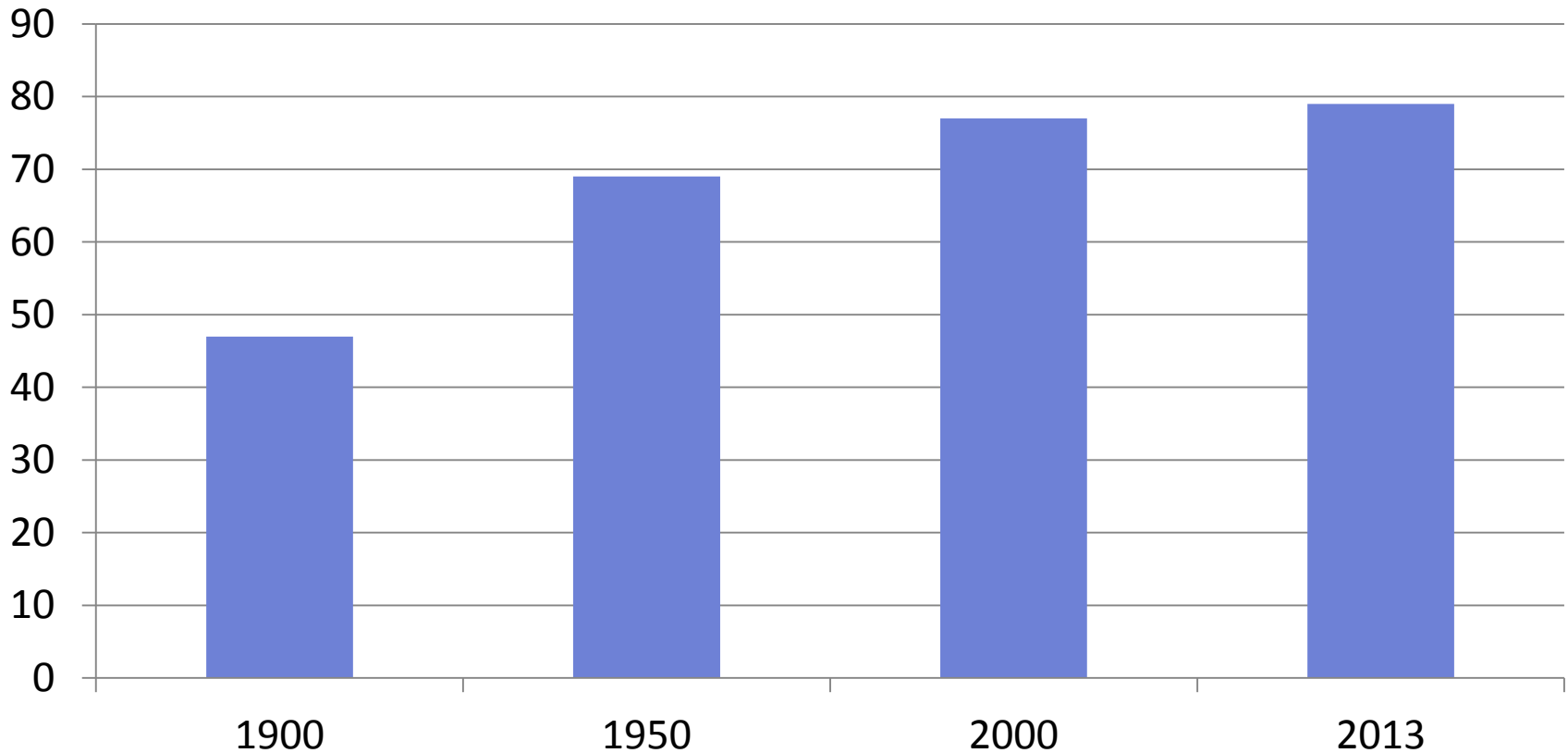
# Aging globally

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- According to an estimate by the National Intelligence Council (2012), aging has been identified as one of the four key ‘megatrends’ that will shape the world in 2030.
- This assertion is in line with the alarm raised by the World Economic Forum’s 2013 Global Risks Report, which identified the inability to properly manage aging populations as one of the five major global risks in the coming decade (World Economic Forum, 2013).

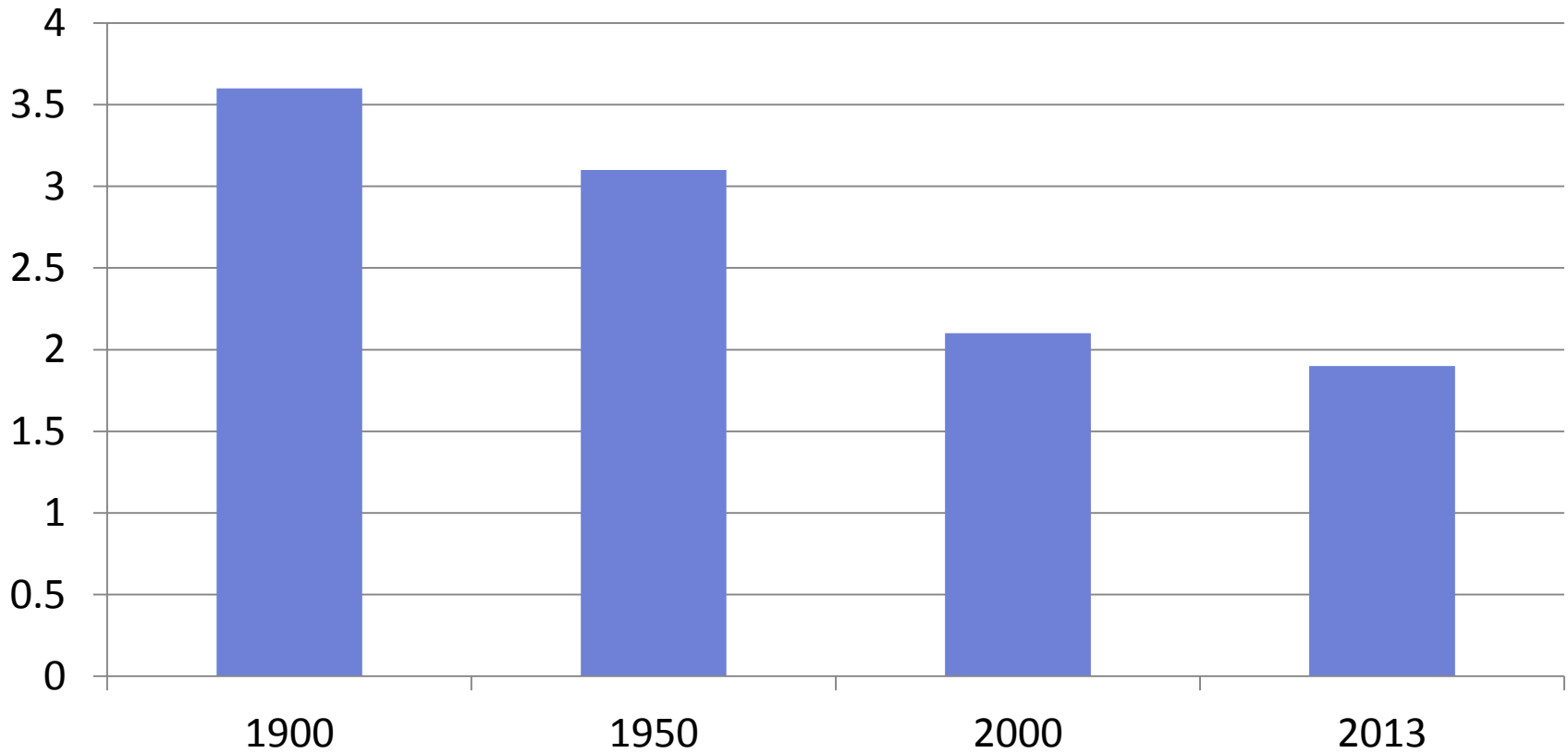
# U.S. Life Expectancy 1900-2013

U.S. Life Expectancy

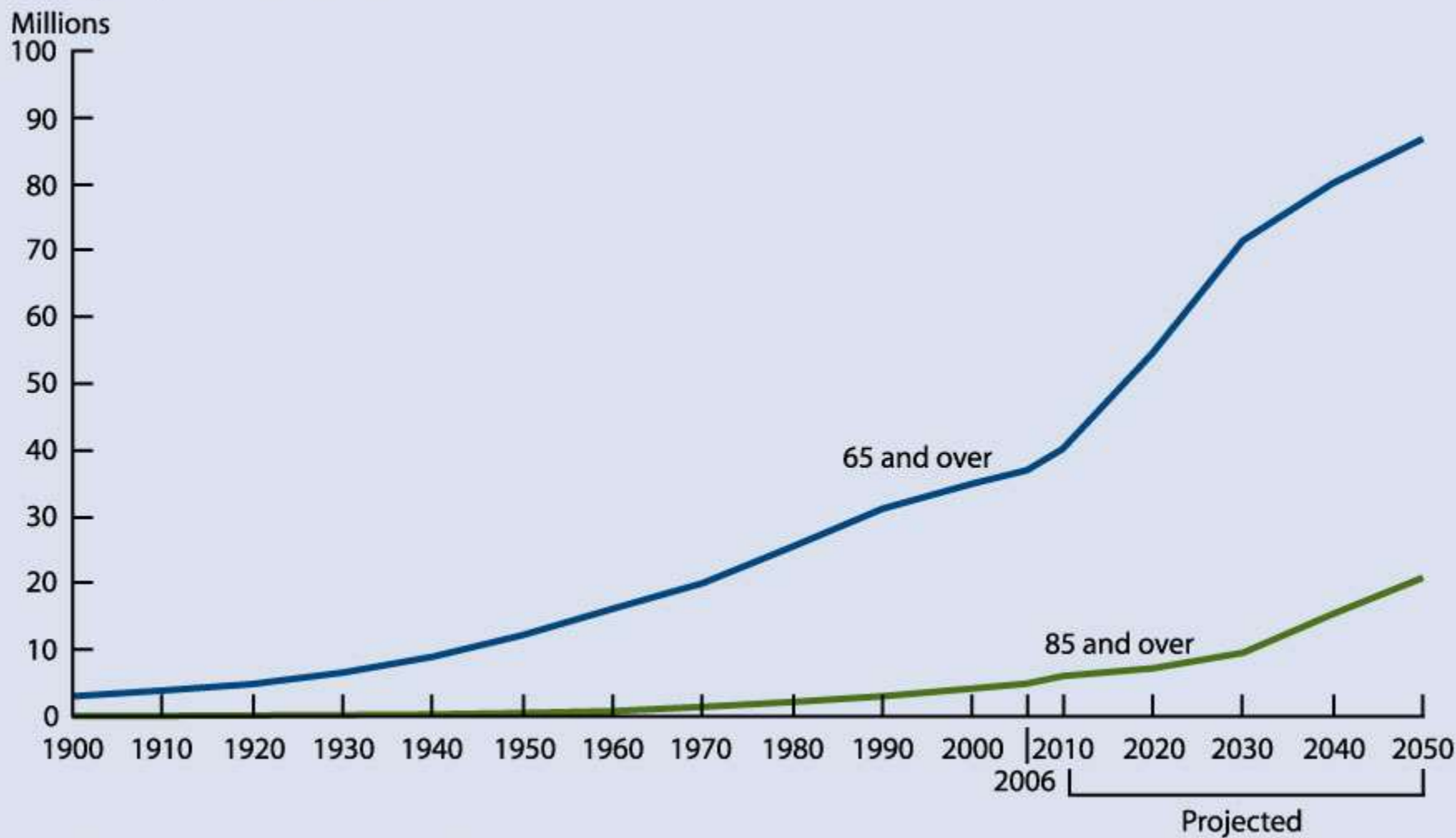


# U.S. Fertility Rates 1900-2013

U.S. Fertility Rate



## Number of people age 65 and over, by age group, selected years 1900–2006 and projected 2010–2050



Note: Data for 2010–2050 are projections of the population.

Reference population: These data refer to the resident population.

Source: U.S. Census Bureau, Decennial Census, Population Estimates and Projections.



# Aging across countries

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- The situation is complicated by the fact that among the fastest aging countries, we see not just industrialized western countries, but a number of NIES and even emerging economies.
- Singapore, South Korea, and China are aging rapidly
- By 2050, in some fast-aging European countries such as Germany, Spain, and Italy, the share of the elderly population will be over 35%.
- In Japan, South Korea, and Singapore, it will approach or exceed 40%
- (Center for Strategic & International Studies, 2011; WEF, 2012).

# Aging across countries

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- If current demographic trends continue, by 2050, Mexico will be nearly as old as the U.S.
- China will be older than the U.S. (46 v 41)
- Fertility rates across select countries:
  - US – 1.9
  - China 1.6
  - Russia 1.5
  - Germany- 1.4
  - Greece – 1.4
  - Japan 1.4
  - Singapore 1.2

# Aging in Kansas

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- Kansas has not been immune to this global trend. Demographic trends in Kansas include population concentration, slowing population growth, increasing population diversity, and aging of the overall population.
- These trends are similar to what is experienced across the Midwest.
- The increasing global integration of rural America is resulting in gradual demographic convergence where general trends will be more and more applicable to Kansas as well.
- While aging is occurring throughout Kansas, it is more visible in the rural parts.

# Aging in Kansas

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- The median age in Kansas was 36 in 2010, up from 35.2 in 2000.
- Kansas will continue to see an increasingly aging population, rural-area population loss and diversity in highly concentrated
- Kansas' overall population grew by 6% during 2000-10, up about 165,000 from 2.69 million in 2000. About 80 % of the state's counties had fewer residents in 2010 than in 2000.
- The population fell by more than 10% in 23 of the state's 105 counties.
- Most of that increase occurred in Johnson County and counties in the Wichita area (Kulcsar, 2011).

# Aging's Effect on Global Business

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- Slower economic growth
- Changing product usage
- Poverty among the elderly and generational equity issues
- Inefficient labor markets
- Unsustainable public transfer systems

# Potential Effects of Falling Fertility Rates on Public Policy

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- Low fertility rates below replacement level of 2.1
- Decline of working age population over time
- Rising dependency ratio
- Higher wealth transfers from the working population
- Policy Choices: higher taxes, reduced pensions and health benefits for elderly, higher retirement ages

# Emerging themes in global aging

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- An increasingly elderly population coupled with a reduction in a working age population
- Divergence in fertility rates across the EU, leading to EU viability issues
- Possible end of American demographic exceptionalism
- Intensification of the global war for talent
- BRIC countries need to balance economic growth with a rapidly aging population
- The rise and decline of certain industries

# Dealing with aging

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- Scandinavian countries
- Germany
- Russia
- Japan
- Singapore
- China



# Importance of aging in manufacturing

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- In the case of manufacturing, studying and understanding aging is of vital importance for three main reasons.
- First, as societies age, the median age of the country rises, and older consumers will have different demand patterns (e.g. older passengers might require more specialized seats on average than younger passengers, demand different services, or more high end products).

# Importance of aging in manufacturing

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- Second, an older population will lead to an older workforce, which often has different needs
- Younger workers are more ready for change, more eager to learn, more capable with modern technology, physically stronger and more creative.
- However, older workers have skills and competencies often lacking among the young—the older workers are typically more engaged, loyal, client-focused and accurate, and they have better social skills (Schippers, 2011).
- Manufacturing companies might need to reconsider the age mix of their workforce, along with the different challenges and opportunities that this brings.

# Importance of aging to aerospace industry

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- Third, an aging population can often change national goals. Rising pension and health-care care costs can place intense pressure on government budgets at the expense of spending on other priorities
- Given the close relationship that exists between the government and certain industrial sectors (for example, aerospace) in most countries, these changes in priorities are important for industry to analyze and prepare for.

# Company A

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- 10,000 -20,000 employees
- Median age 45-50
- 6% are 65+
- Finding talent is increasing difficult
- Engineers retiring at rapid rate, trying to entice some back
- Aging of workforce is seen as serious issue by HR

# Company A

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- Value differences: Old feel more entitled to jobs, but have better work ethic
- Young more flexible work schedules, but poor people skills
- Older workers feel the young ask too many questions; younger workers feel the old do not ask enough
- Plans include
  - knowledge transfer systems for retiring individuals,
  - more linkages with community colleges and WSU
  - emphasizing continuing education for all employees

# Company A

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- Programs in place
  - Voluntary retirement incentives for some
  - Continuous education opportunities
  - Encouraging cross training
  - Knowledge transfer programs

# Company B

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- Company B- About 100-500 workers
- Median age 45-50 years
- 10% 60 +
- 60% between 41-60
- 30% between 18-40
- Workforce age over 10 years has been the same on average, however, this includes voluntary retirements of many older workers
- HR considers aging a major issue

# Company B

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- Emphasizes cross training across functions
- To attract and retain workers, pays for corporate training and college university courses
- Covers full costs at Butler College and Wichita State University
- Wage boost for finishing certificates/ hours
- Value differences: Sense of entitlement for young vs unwillingness to do anything new for old



# Possible implications for Kansas

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- Need to make manufacturing workspace more elderly friendly, especially for the highly skilled
- Investigate making markets more enticing in less rapidly aging markets
- Provide incentives for companies that adopt best practices for continuous education and cross training
- Learn from best practices in other countries

# Global companies at the forefront of managing aging populations

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- Lanxess
- IBM
- 3M Europe
- Public Utilities Board
- Foxconn

# Conclusion

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- Aging is a global phenomenon. Fastest growing regions most affected
- Manufacturing growth could potentially be affected, especially in fastest growing regions
- Need to think of what the aging population wants as consumers and as workers
- Manufacturing companies need to attract and retain older workers, and understand their specific needs
- Possible ways could be cross training, mentoring, and continuous training and development of workforce
- Closer collaboration between industry, academics and policy makers