

Preparing for Future Workforce Needs
Summit on Educational and Economic Synthesis
Education Council
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- My assignment is to give the economic context for our work.
 - I will do this by discussing two shifts that we need to focus on: a shift in the workforce itself and a shift in the skills that employers will need that workforce to have.
 - I will also discuss the industry sectors that are key drivers of the regional economy.

- THE FIRST SHIFT: Shift in workforce growth and composition.
 - Upcoming demographic changes are not our friend. They will lead to a significant decline in the supply of working-age adults in the Columbus MSA in coming years.
 - Look at Figure 1:
 - ◇ Between 2000 and 2005, the prime working-age population (20-60) grew 1.2% per year. Between 2010 and 2015, growth will be exactly half that – 0.6% per year. Between 2020 and 2025, we will be down to less than 0.4% per year.
 - ◇ The trend for the 35-54 age group is even worse. These are experienced workers who have not yet started retiring. Growth

between 2000 and 2005: 1.0% per year. Between 2010 and 2015: a decline of 0.6% per year and zero the next five years.

- This implies a serious crunch in the supply of skilled workers, of entrepreneurs, and of community leadership.
- We are not alone in this: national-level stats are even worse.
- Thus, it is vital for our community to attract young professionals to Columbus and keep the ones we already have here.
 - People who are 25-34 now will be in that prime group ten years from now. Need to capture them now while they are at their most mobile.
 - ◇ The competition for young professionals is already starting to get fierce. We need to work on attracting them now. Ten years from now – after our workforce growth slows – will be too late.
 - This 25-34 age group is the key to a region’s success in an economy that creates ideas and information.
 - ◇ Joseph Cortright, in a paper for CEOs for Cities, calls these “the young and restless.” A key component of Richard Florida’s “creative class.”
 - ◇ They are the most mobile and the most entrepreneurial component of the U.S. population, and far more ethnically diverse.

- ◇ This is the first generation in which women are as a group better-educated than men. Thus, women are key to attracting a strong base of talent.
- The key reality: Place matters as never before.
 - ◇ Technology means that people can work anywhere, but that doesn't mean that they will work just anywhere.
 - * Richard Florida argues that the world is not flat (as Thomas Friedman would have it), it is spiky.
 - ◇ The young and restless are gravitating to larger metro areas (i.e., those of a million or more) – but not all of them, and not necessarily the ones you would expect.
 - * Of the 50 largest metros, Austin ranked first in the percentage of 25 to 34-year-olds, and Atlanta was second.
 - * But we were eighth. Seattle was 15th, Minneapolis was 16th, Chicago was 23rd, Cincinnati was 36th, and Cleveland was 44th.
- Just because we are doing well does not mean we can't do better. Indeed, we must do better.
 - ◇ Our community's response: the Attract and Retain Talent Initiative. Originally Mayor Coleman's idea, but he asked the Columbus Chamber to lead the effort.

- ◇ This includes efforts:
 - * To keep as many of our 110,000 college students here as possible.
 - * To attract young professionals to Columbus and keep the ones we already have.
 - * And to help local HR professionals be effective ambassadors for the region in their talent recruitment efforts.
- THE SECOND SHIFT: Shift in necessary workplace skills.
 - If I tell you that the workplace is becoming more technology-driven and more demanding, I am not telling you anything new. But I want to give you an illustration of how fast things are changing and what it means for the region.
 - To do so, I will focus on the one of the key sectors of the Columbus regional economy: manufacturing.
 - ◇ That may surprise you: Manufacturing is unimportant to Columbus. We are not a “manufacturing town,” right?
 - ◇ That is actually one of two bits of conventional wisdom that are simply wrong. The second is that manufacturing has all been outsourced to China, what little hasn’t been so far soon will be, and nobody in their right mind would want to turn to it for a career.

- The manufacturing employment trend is certainly scary: Figure 2.
 - ◇ This compares cumulative percentage changes in the region, the state, and nationally, with everybody set to 100.0 in 1990.
 - ◇ Unlike other sectors, manufacturing has continued to shed jobs despite the economic recovery after 2001. We have lost 23,000 manufacturing jobs since 2000. The state has lost 224,000, and the U.S. has lost 3.1 million.
 - * The Chamber's economic forecast for Columbus predicts a loss of 400 more jobs this year.
- But look at Figure 3: Despite the sharp decline in manufacturing employment, manufacturing output rose 14.1% nationally and 11.6% in Ohio between 2001 and 2005. My own estimates show a 14% increase in Columbus output just between 2001 and 2004.
 - ◇ In each case, this was greater than the output increase for the total economy. So manufacturing hasn't been pulling overall economic output down, it has been pulling it up.
 - ◇ That's why outsourcing isn't the key reason why manufacturing jobs have disappeared. If that were true, output would have declined. The key reason is increasing efficiency, so you don't need as many people to produce the same level of output – or in this case, even more output.

- You show increasing efficiency by dividing output by employment to get output per worker – very important number.
- ◇ Look at Figure 4. The gains have been amazing. Between 2001 and 2005, output per worker has grown 32% nationally, 31% in Ohio.
 - * Stop and think about that: in 2005, a typical manufacturing worker in Ohio generated \$104,200 in output. Only four years earlier, he or she generated only \$79,700. And that excludes inflation. Staggering!
 - * The Columbus numbers are my own estimates, and only go up to 2004 at this point, but these show a rise of 33.5% just through 2004. The 2004 average is \$119,000 – 15% higher than the national and state averages.
- The increasing reliance on technology implies that manufacturers will need their workers to be far more skilled to begin with, and far more adaptable as technology changes.
 - ◇ My work suggests that manufacturers' needs for people with minimal skills will decline over the coming years, while the need for people with associate and bachelors degrees will increase.
 - ◇ Herein lies a marketing problem: there will be a need for skilled manufacturing workers who are comfortable with technology. But

- if manufacturing has the awful image that it does, these will be hard to attract.
- As I hinted earlier, manufacturing is a lot more important to Columbus than most of us think.
 - ◇ Recall that the typical manufacturing worker here produces a lot more output than his or her counterparts elsewhere. So even though regional manufacturing employment is 20% below the national average, manufacturing's share of total output is slightly above. 8.5% of the region's workforce produces 14% of the region's output.
 - * Of all major sectors in Columbus, manufacturing's total output is second only to financial activities.
 - I spent lots of time on manufacturing because the story is so much different from what most people think. But there are four other key sectors that will continue to drive the local economy. These are less surprising.
 - Distribution and logistics.
 - These are two closely-related industries that are a major contributor to increases in manufacturing efficiency. Distribution is moving boxes (including transportation and warehousing); logistics is deciding how boxes are to be moved.

- ◇ Because logistics relies on statistical modeling and lots of number-crunching, it is a very high-skill field. OSU has master's and doctoral programs – one of the top ten programs nationally.
- A major sector in Columbus with employment 36% greater than average. Employment in the sector grew 21% nationally between 1990 and 2006, but 143% here.
- Our location is a major factor: 46% of the U.S. population and 50+% of the Canadian population are within 500 miles – a one-day, one-way truck drive. Perhaps the best reach in the nation.
- Business services.
 - Includes law offices; accountants' offices; architects, engineers, and designers; R&D (like Battelle); IT services; advertising agencies; corporate headquarters; and temp agencies – among other things.
 - This is another sector that is far bigger here than the typical metro our size; we have close to 20% more jobs in this sector than average.
 - ◇ This is because these companies serve businesses outside the metro area, and because we have the workforce and the infrastructure to help these activities thrive here.
 - This has also been one of our strongest sectors: 68% growth since 1990; more than 7% since 2001.

- Healthcare.
 - Another strong sector that will only get stronger as we all age.
 - Growth in this sector has been – and will be – driven by regional population growth.
 - ◇ Third fastest-growing major metro in the Midwest, with 400,000 more expected over the next 20 years, putting us up to 2.1 million. (The entire city of Cleveland moving here.)
 - But the really important thing here is the research muscle: OSU is a national center for clinical trials, the James Cancer Hospital is the only free-standing cancer hospital in the Midwest. Children's is a major center for pediatric research
- Financial activities.
 - Includes banking and finance, insurance, real estate, and all forms of rental and leasing – from cars to industrial equipment to DVDs.
 - This has been a primary focus for our region for decades – at least initially because of the major companies that grew up here.
 - ◇ Nationwide.
 - ◇ City National Bank that became Bank One and was an early credit card provider.

- ◇ Huntington and Grange.
- But these companies have stayed and grown here for the same reason that business services do: workforce, infrastructure, and cost of doing business.
- ◇ We have passed Chicago as J.P. Morgan Chase's second-largest employment center, gaining 2,000 jobs since the merger. The operation at Polaris is their largest facility under one roof in the world – 2 million square feet, equal to the Empire State Building.
- But financial activities as a whole has been struggling a bit lately: employment 4% less than six years ago (with the national average 9% higher). The lousy Ohio economy is probably a factor.
- Figure 5 is the state's projection of the 75 occupations with the most openings per year between 2004 and 2004.
 - Many of these are in the driver industry sectors.
 - Some aren't expected to have much total growth, but still lots of openings at any one time because they are entry-level positions that allow new workers to gain experience and move up.